UNIVERSITY OF SOUTHAMPTON

Exploring, Measuring and Explaining Negative Attitudes to own Future Old Age

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This thesis is dedicated to my father Terence O'Hanlon, and to my brother John.

"(Older people) ... have gone before us along a road which we must all travel .. and it is good that we should ask them the nature of that road"

Socrates cited by Plato

'while performing his daily routine of cello practice, the 91-year-old Casals was asked by one of his students, 'Master, why do you continue to practice?'; Casals answered, 'Because I am making progress'.

(cited in Baltes 1991: 837)

'We will have to enlist the elders, who have traditionally been the wardens of culture, to help and guide us in the vital processes of reversing deculturation and of crafting the new myths on which recultuation can be based. We owe this redemption not only to our aging parents. We also owe it to the oncoming generations of children'

(Gutmann 1987:253).

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ABSTRACT

FACILITY OF SOCIAL SCIENCES

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EXPLORING, MEASURING AND EXPLAINING NEGATIVE ATTITUDES TO OWN FUTURE OLD AGE

by Angela Ann O'Hanlon

There is an urgent need to understand the factors that can influence health and well-being in later years; one such factor is the level of unfavourability adults associate with their own ageing and future old age. Given the potential for age-associated attitudes to impact adversely on health, particularly when negative, it was surprising that so little research has been carried out in this field. This thesis contributes to current knowledge in three main ways: by exploring, measuring and explaining adults' attitudes to potentially negative and threatening aspects of their own ageing and future old age. Empirical research is reported from four main studies involving more than 3000 participants, including samples recruited personally from major cities in both the UK and the US. In exploring age-associated attitudes, results suggest: a) that negative attitudes can be understood in relation to the level of threat adults associate with their own future old age, b) that those threats cross physical, social and psychological aspects of later life, and c) that such threats can be further understood in terms of the ability of the individual to minimise losses, manage constraints and create positive gains. Replicated across sample groups, results also indicate that the ten new measures developed through this thesis do make a valuable contribution to the current field because: 1) a number of researchers have noted the paucity and inadequacy of measures in this field (e.g. Wullschleger et al, 1996), 2) the newly developed measures are short, easy to score and simple to interpret, and 3) replicated across sample groups, these measures have good psychometric properties, including good internal reliability and validity. Finally, results indicate that attachment-related variables provided the best explanation for age-associated attitudes; specifically, a model is proposed consistent with the view that experiences in early relationships influence current representations of self and others and current coping strategies, which in turn influence negative age-associated attitudes. Rival variables such as neuroticism and expected financial status did not add to the fit of the model. Although more work in this area is needed, this thesis contributes to the development of the current field by examining negative age-associated attitudes in the context of threat, by placing age-associated attitudes in the wider framework of close relationships, and by offering a range of measures which can facilitate further research in this field.

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Main Articles[1] and Chapters

Coleman, P. G., O'Hanlon, A. & Ruth, J-E (in press). Ageing and Development: Theory and Research. Arnold Books.

Coleman, P. G. & O'Hanlon, A. (in press). Facing the challenges of ageing; development, coping and meaning in later life. In J. F. Nussbaum & J. Coupland (Eds.) *Handbook of Communication and Aging Research.* Second Edition. Lawrence Erlbaum Associates.

O'Hanlon, A. & Coleman, P. G. (submitted). The General Attitudes to Ageing Scale. *The Gerontologist*

O'Hanlon, A. & Coleman, P. G. (in prep). A cross cultural study of general and specific attitudes to own old age. *Ageing and Society*

O'Hanlon, A. & Coleman, P. G. (in prep). Managing age-associated challenges. *Psychology and Health*

O'Hanlon, A. & Coleman, P. G. (in prep). Growing older, not old; Exploring and measuring generative identities into later life. *Psychology and Aging*

O'Hanlon, A. & Coleman, P. G. (in prep). The influence of attachment relationships on general attitudes to own old age. *Journal of Personality and Social Psychology*

Main Conference Presentations {in chronological order}

O'Hanlon, A. (1999). *Ageing and later life: a cause for concern?* Poster presentation at the Annual Postgraduate Social Science Conference, March 23rd, University of Southampton, UK.

O'Hanlon, A. (1999). *Images of ageing* (Chair). British Society of Gerontology Annual Conference, 17-19th September, Bournemouth.

O'Hanlon, A. (1999). *Developing the Ageing Stress Questionnaire.* Paper presentation at the British Society of Gerontology Annual Conference, 17-19th September, Bournemouth.

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O'Hanlon, A. & Coleman, P. G. (2000). *Exploring attitudes to own old age via the world wide web.* Paper presentation at the British Society of Gerontology Annual Conference, September, 8-10th September, Oxford, UK.

O'Hanlon, A. & Coleman, P. G. (2000). *The General Attitudes to Ageing Scale: Getting old or growing older?* Poster presentation at the 53rd Annual Scientific Meeting of the Gerontological Society of America, 17-21st November, Washington, DC. USA.

O'Hanlon, A. & Coleman, P. G. (2000). *Exploring attitudes to own old age via the world wide web.* Poster presentation at the 53rd Annual Scientific Meeting of the Gerontological Society of America, 17-21st November, Washington, DC. USA.

O'Hanlon, A. & Coleman, P. G. (2001). *Exploring attitudes to own old age in the United States and the United Kingdom.* Poster presentation at the International Association for Cross-Cultural Psychology UK Regional Congress, 7-11th July, Winchester, UK.

O'Hanlon, A. & Coleman, P. G. (2001)[1]. *Exploring the joys and pleasures of later life.* Paper presentation at the Annual Conference of the British Society of Gerontology, 31st August-3rd September, University of Stirling, Scotland.

O'Hanlon, A. & Coleman, P. G. (2001). *Organisational responses to age-associated challenges.* Poster presentation at the Annual Conference of the European Health Psychology Society (EHPS) and the Division of Health Psychology of the British Psychological Society, 5-8th September, University of St-Andrews, Scotland.

O'Hanlon, A. & Coleman, P. G. (2001). *Using the world wide web as a means of data collection.* Paper presentation at the British Psychological Society Wessex & Wight Branch Centenary Event – Psychology and the Internet: A European Perspective, 7-9th November, Farnborough.

O'Hanlon, A. & Coleman, P. G. (2001). *Methodological issues involved in cross cultural research on ageing.* Invited paper presentation at Researching Ageing and the Life-course Conference, 12th November, Sociology Dept., University of Surrey, UK.

O'Hanlon, A. & Coleman, P. G. (2001). *A cross cultural study of general and specific attitudes to own prospective old age.* Paper presentation at the 54th Annual Scientific Meeting of the Gerontological Society of America, 17-21st November, Chicago, USA.

[1] Stirling Shield and cash prize awarded for best postgraduate paper at the BSG 2001 annual conference

Coleman, P. G. & O'Hanlon, A. (2002). *Relationships, quality of life and health into later years.* Convenors of invited symposium at the British Psychological Society Annual Conference, March, 13-16th March, Blackpool, UK.

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O'Hanlon, A. (2002). *Getting over getting older: Adapting to developmental challenges associated with own future old age.* Paper presentation at the British Psychological Society Annual Conference, 13-16th March, Blackpool, UK.

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O'Hanlon, A. (abstract accepted). *Relationships in later life: Susan.* Paper presentation on the clinical implications of attachment. Meeting organised by the Family Relations Institute, Miami and the University of Bologna, Italy, October 21-26th October, Bertinoro, Italy.

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Chapter One

Old Age: A Threatening Experience?

"I am terrified of getting older, not only for health reasons or for financial reasons, but because of so much loss - of loved ones and just about everything else" (Martha, age 57, O'Hanlon, in prep) [1]

1.1 Introduction and Overview

For the first time in the history of human development, old age is now a normal human expectation. This century alone has seen an increase of thirty years in the average life expectancy at birth, from 47 years in 1900 to 77 years today. Similarly, the number of people in England and Wales aged over 70 years is continuing to rise from just 1 in 36 at the turn of the century, to 1 in 8 in 1991 (OPCS, 1901; 1991). With these demographic changes however comes a more urgent need to identify the factors likely to influence health, autonomy and well-being in later years. One such factor is the way individuals have 'of making sense of the world' (Marshall, 1990; p 29), i.e. their attitudes, particularly their attitudes about their own ageing and future old age. In this thesis it is argued that a greater understanding of adults' attitudes to their own prospective old age can have theoretical and applied value, particularly in helping to bring greater quality of life and health to more people for longer in later life.

One of the most widely used definitions of attitudes in the current literature is that of Eagly & Chaiken (1993): these authors define attitudes as multi-dimensional constructs, reflecting 'a psychological tendency that is expressed by evaluating a particular entity, object or experience with some degree of favour or disfavor' (p1). Attitudes have been further divided into beliefs, feelings and behaviours; these sub-categories can exist on a continuum from very positive to very negative and all are believed to be distinct from each other. The subdivision of attitudes into beliefs, feelings and behaviours can offer useful insights about the nature of adults' attitudes and, as discussed in the section to follow, their impact on later health and behaviour. However uncertainty remains about the nature and origins of these evaluations, the ways they evolve, and the relative importance or contribution of each attitudinal subcomponent in influencing later behaviour and health. To address these gaps in the current literature the current study sought to explore, measure and explain adults' attitudes towards their own ageing and future old age.

[1] Martha and others cited at the beginning of the chapters to follow are participants recruited from the web pilot study reported in Chapter 3.

1.1.1 Rationale for Research Exploring, Measuring and Explaining Attitudes

The aims of the research within this thesis were to explore, measure and explain adults' attitudes to their own future old age.

1.1.1.1 The Rationale for Exploring Adults' Attitudes to Ageing

Work exploring the subjective experience of own future old age was based within the context of attitudes, in part because the attitudinal field is such a dynamic and important area of study. Attitudes for instance have been described as an indispensable concept in social psychology (e.g. Allport, 1935, cited in Eagly & Chaiken, 1993), central to mental health including self-esteem (e.g. Rosenberg, 1965) and fundamental to our social lives given that relationships and interactions are often initiated and sustained between people with similar attitudes and outlooks. Attitudes can also influence the ways people process information about events and experiences, as the strategies involved in these processes are often congruent with our own expectations and evaluations (e.g. see Bohner & Wänke, 2002). In addition, while people can have some social concerns about expressing anxiety or fear about a given entity or experience, adults are usually happy to discuss their attitudes, even when negative. Indeed in some social instances, evaluating a given entity or experience negatively can be interpreted as reflecting a greater degree of critical awareness and insight by comparison with others who have more positive attitudes. This willingness to discuss one's own attitudes is especially important in the field of age-associated evaluations, when there may be social desirability biases against expressing negative affect about one's own ageing and future old age. For instance adults may have concerns about appearing foolish, even to themselves, about expressing anxiety or fear around a normative and typically inescapable reality such as one's own future old age. Consequently, although some researchers have examined anxiety and fear about one's own ageing (e.g. Lasher & Faulkender, 1993, Wullschleger, Lund, Caserta & Wright, 1996), there is a possibility that the evaluative component inherent in attitudinal research can access useful information which is not necessarily available to purely affectively orientated researchers.

Within the specific context of ageing, it is important to explore adults' age-associated attitudes, because attitudes, particularly when negative, have the potential to impair health and quality of life. In part, this is because the prospect of one's own ageing and future old age can be a significant and worrying issue for many adults (e.g. see Brandtstädter, Rothermund & Schmitz, 1998; Brandtstädter & Wentura, 1999; de Beauvoir, 1970). In a study with a group of nurses for instance, Bernard (1998) found that many of the nurses viewed their own ageing with 'trepidation' (p 637) and particularly as bringing about aversive changes to identity, appearance and their ability to exercise control and choice. Ardelt (1985) also found that many of the respondents in her study

turned 'bitter and bewailed the decline of their (perceived) physical abilities and social significance' (p 15). The following quote by the gerontologist Patrick Rabbitt (1999) provides further evidence that later life can be evaluated in very negative ways; 'early recognition that ageing is not at all a benevolent process compelled me to realise that a determination to stress any possible (positive) aspect of this condition ... is a betrayal of science and of responsibility. All of us who are lucky must put up with ageing as best we can, but to do anything useful about it we must recognise and understand all of the extraordinary unpleasant things that it does to us and the ways in which these contract the scope of our lives'. ... Ageing is 'an unpleasant condition that, if we are lucky, we will all experience at first hand' (Rabbitt, 1999: 180 – 181).

It is also important to understand the nature of adults' age-associated attitudes because it is not yet clear what it means to hold a given attitude. For instance, when attitudes to ageing are very negative, it is not yet clear whether these evaluations are based on erroneous information about later life; a pragmatic realism; or other variables such as current mood state or neuroticism. It is also unclear what it means to hold a positive attitude about one's own ageing and future old age. Such attitudes may reflect a naiveté about potential problems; an awareness of potential problems but the use of certain coping strategies still to be documented; a strategic and conscious bias in attention to more positive attributes and experiences; or even genuine growth and wisdom earned through any number of mechanisms still to be understood. (The latter mechanisms could include positive relationships and role models for later life and/or an internal process of reflection leading to integrity, insight and acceptance.)

In addition, it is important to explore age-associated attitudes because these can have negative effects on later health. Very negative attitudes for instance may mean that adults do not feel a sense of control, predictability and safety about their futures; yet these same attributes are central to many definitions of mental health (e.g. see Jahoda, 1958; Ryff, 1991). In addition, negative attitudes may be related to anxiety about ageing which in turn has the potential to directly impair the quality of relationships adults have with others. This may have serious consequences for family functioning, particularly given the important role that older adults can play in the lives of their children (Gutmann, 1987; 1997) and grandchildren (e.g. Lavers & Sonuga-Barke, 1999). Evaluating old age negatively is also likely to have an indirect effect on health and well-being through physical lifestyle choices. For instance although little research yet exists in this area, future studies may find that adults with more negative attitudes are less likely to engage in travel or educational opportunities in their later years; they may erroneously view education and travel as

issues only appropriate for younger generations. Adults with more negative age-associated attitudes may also be less motivated to prepare financially, or to engage in more healthy lifestyle choices including exercise and diet behaviours (the relationship between attitudes and health behaviours is examined in Study 4 of this thesis).

Surprisingly, despite the potential significance of research addressing the subjective experience of ageing and old age, a number of researchers have noted the paucity of studies in this area (e.g. Biggs, 1993; Coleman, 1993; de Beauvoir, 1970; Quirouette & Pushkar, 1999; Rothenberg, Lentzner & Parker, 1991). For instance according to Treharne (1990) "little research is published in this country about the social and psychological issues faced by the elderly" (780). Similarly, sociologists Thompson (1992) conclude that his book on the experience of ageing stands 'strangely alone' (p 26). One reason for this paucity of research may be because researchers and gerontologists themselves view old age in negative and aversive ways. For instance, according to Bernard (1998) 'if we indeed are so afraid to ask it of ourselves (old age), then perhaps this helps explain why we have so little research on this issue' (p 635). As discussed next however, an alternative explanation for the lack of insights and research on age-associated attitudes is because there are simply too few measures available for researchers in this field.

1.1.1.2 Rationale for Research Developing New Measures of Adults' Attitudes to Ageing

The second main aim of the research within this thesis was to develop a range of new and short measures which would not only have good psychometric properties, but which would also give researchers real choices about the nature and focus of their work. For instance, measures can address very different components of attitudes to own ageing and future old age (e.g. cognitive or affective evaluative evaluations about either general or specific aspects of later years). Yet by having a greater range of measures that reflect these different dimensions, researchers can have more choices about the type of measures they use, and more sophistication in the types of questions being posed. A greater range of rigorous instruments could also offer more detailed insights into the complex and multifaceted nature of attitudes, including the mechanisms through which these may influence later behaviour, development and health. This is especially important when attitudes are very negative and targeted interventions are desirable to alleviate anxiety and improve general quality of life (for further information on quality of life, see Browne, McGee & O'Boyle, 1997). In addition, for researchers adapting a positivistic perspective, new measures with good psychometric properties can make a significant contribution to the current field where rigorous (i.e. reliable and valid) methods of assessment are crucial.

Surprisingly, a number of researchers have noted the paucity of sound measures in this field (e.g. see Duerson, Thomas, Chang & Stevens, 1992; Norris et al., 1987; Wullschleger et al., 1996). For instance a scale often used in this area is the Facts on Aging Quiz, developed by Palmore (1977); yet many researchers have reported concerns about the psychometric properties for this scale (e.g. see O'Hanlon, Camp & Osofsky, 1993; Norris et al., 1987). Not only does this scale have low internal reliability scores, but with items like 'all old people are senile', parts of Palmore's scale is negative and even derogatory in it's wording. Phrasing is an important factor to consider in scales because it can impact adversely on the ways people respond to the scale items (e.g. see Stuart-Hamilton, 1999). Despite these and other criticisms, many researchers (e.g. Duerson, Thomas, Chang and Stevens, 1992) defend their use of this tool in part because it is the only available one of reasonable length. Another scale often used by researchers in this field is the Opinions About People Scale from the Ontario Welfare Council (1971). Although noting the problems with this scale (e.g. low Cronbach's alpha score), Wullschleger et al. (1996) defend their use of this scale by stating that this scale is 'more recent than the Tuckman-Lorge Questionnaire (1953) and Kogan's Old people Scale (1961)' (p7).

The new scales developed in this thesis could be used by gerontologists from many disciplines including psychology, geography, sociology and medicine. As the proposed new measures will be very short (typically 5 – 7 items), they could also be used by researchers in a wide range of non-gerontological fields. For example, researchers in sports psychology could include some of these short measures in their questionnaire packs to examine the relationship between attitudes to one's own ageing and engagement in exercise or a healthy diet. Similarly, researchers in the fields of management or finances could include one of these short measures to examine the relationship between attitudes to own future old age and financial preparation and pension provision. A third example could be researchers in the field of education who by including a new attitudinal measure in their questionnaire packs could examine the relationship between attitudes to ageing and later engagement and uptake of educational opportunities, especially among mid-life and older adults. To summarise, new measures with good psychometric properties can make a significant contribution to the current field by facilitating much more research on adults' age-associated attitudes, and their impact on later health and psychosocial well-being.

1.1.1.3 Rationale for Research Explaining Adults' Attitudes to Ageing

It is likely that adults can hold given attitudes to ageing for a number of reasons including current mood state, neuroticism, or a lack of information about the true nature of later life. Even if one finds significant relationships between these variables however, it is important for theoretical and practical reasons to explain why these relationships are there and why they have the effects on later development and health that they do (e.g. for information on the effects of attitudes on health and longevity see Levy et al., 2002). As discussed next, such explanations are central to theory development and to interventions to alleviate the anxiety, worry or fear that adults can have about their own ageing and future old age; such interventions can be at an individual or group level (see Bengtson et al., 1999).

Research explaining adults' age-associated attitudes can have theoretical value, particularly in shedding light on the psychology of adult development and ageing; the psychology of ageing is defined by Birren & Schroots (1996) as the ability of the individual to adapt to changing circumstances post young adulthood. The theoretical value of research on this topic may be particularly salient given that attitudes, particularly where negative, are likely to develop over many decades as the following quote by Pearlin & McKean Skaff (1996) suggests: "Because stress processes and the changes they encompass may unfold over considerable spans of time along the life course, they become inherently intertwined with and indistinguishable from what we ordinarily think of development and ageing. Therefore, when we examine changes prompted by stress, we may at the same time be observing changes that can also be described as life-course developments" (Pearlin & McKean Skaff, 1996).

A better understanding of the factors explaining adults' age-associated attitudes can also have applied value when considering interventions (at an individual and policy level); this is especially the case when attitudes are so negative that quality of life and health are being impaired. For instance, there is evidence to suggest that the ways adults evaluate their own ageing can have significant consequences on their later health, behaviour and psychosocial well-being. Specifically, Coleman, Ivani-Chalian & Robinson (1993) found that age-associated attitudes were the best predictor of self-esteem over a thirteen-year period. In another longitudinal study, Levy, Slade, Kunkel & Kasl (2002) found that age-associated attitudes were strongly predictive of mortality rates up to 23 years later; these researchers also report that the effects of age-associated attitudes on mortality remained an even more significant predictor of mortality than not smoking or exercise behaviours. Levy, Ashman & Dror (1999-2000) also

found that age-associated attitudes were related to adults' later decision and will to live. (See research on self-fulfilling prophecies and the placebo effect for further evidence regarding the influence of attitudes on later behaviour and health.)

To begin to explain adults' age associated attitudes, the final study of this thesis tested the fit of multiple explanations for own attitudes; explanations examined included experiences in close relationships, and rival variables such as neuroticism and knowledge about ageing. Although rival variables were typically not unimportant in contributing to the variance in age-associated attitudinal scores, results from the final study indicated that experiences in close relationships provided the best fit for the data gathered. These findings suggest that interventions based on experiences in relationships (e.g. counselling following difficult early relationships) could have value in changing attitudes and thus improving health and quality of life.

1.1.2 Overview of Thesis

The thesis to follow is in three main sections. The first section reviews the literature to consider the nature of old age, and particularly to consider the nature and salience of age-associated challenges. Having established that later life can pose challenges for the self, Chapter 2 will then consider adults' attitudes towards the latter part of their own lives and age-associated challenges. In this second chapter it will be argued that the paucity of research exploring and measuring attitudes is at least in part, a consequence of there being so few measures available for gerontologists working in this field.

The second section of this thesis consists of three chapters and three studies, all of which aim to develop and test a range of new scales measuring different aspects of adults' attitudes to their own ageing and future old age. In an effort to be more specific about the nature of adults' attitudes, this second section also aims to examine the relationship between attitudes and a range of threat based measures. It will be argued that the new measures developed do have good psychometric properties. Within this section (and drawing on the findings from an early exploratory pilot study reported in Chapter 3) it will also be suggested that attitudes towards own future old age can best be understood in relation to the level of threat being associated with the latter part of the life course. In addition, it will be argued that further differentiations about age-associated threats can be made; these include age-associated losses, constraints, and challenges to positive experiences. This further differentiation may become important if future research finds that sub-components of attitudes have specific and unique effects on later health and well-being, e.g. if loss based threats have a stronger relationship to depression while age-associated constraints are more significant factors in the onset of anxiety.

The aim of the third and final section of this thesis was to examine the factors that can explain the variance in attitudes to ageing scores. Drawing on the initial pilot study data, as well as an increasingly detailed review of the literature, possible explanations included expected financial status, knowledge about later life, neuroticism, and attachment related variables; the latter consisted of self and other representations, and adults' use of organisational or coping strategies. It was expected that attitudes would be explained by the use of attachment related variables. Results with 324 community-based adults of all ages supported this expectation; in addition, these associations remained, even when rival variables were examined and controlled.

1.2 Old Age?

Old age and older adults are generally taken to refer to adults in the age period of about 70-75 years and upwards. Chronological postwar definitions of old age (at age 60 and 65 for men and women respectively) have been extended given that people are living longer and more healthy lives. Furthermore, gerontologists often make important distinctions between the 'young-old' and the 'old-old' who are in advanced old age i.e. adults respectively in the age period of between seventy and eight-four years, and adults aged about 85 years and over.

Chronological age remains an important social and personal marker of identity, behaviour and expectations. For instance, chronological age, even at a general level (e.g. people in their sixties) can be indicative of certain experiences and preferences. Adults in their seventies for instance have more life experience and can score more highly on measures of crystallised intelligence than adults in their twenties (e.g. for more information on wisdom see Ardelt, 1997; 2000; Baltes & Staudinger, 1993; 2000). Similarly, adults in mid- and later life are more likely to be generative than their younger counterparts; in fact although younger people can be altruistic they cannot be generative as it is only with experience and time that this vital role of teaching, guiding and supporting others can occur (e.g. see Erikson, 1950; McAdams et al., 1996).

Researchers have also noted significant age differences in a range of health and psychosocial variables. For instance, studies have found that older adults score lower on negative affect including worry and anxiety than their younger counterparts (e.g. see Folkman et al., 1987; Powers, Wisocki & Whitbourne, 1992). Older adults can also score more highly than younger adults on measures of agreeableness and consciousness (see McCrae et al., 1996). In research on psychosocial well-being, Ryff (1991) also notes significant age trends in psychosocial health; specifically, some aspects of well-being such as environmental mastery and autonomy are incrementally related to age up until mid-life. In addition, when considering anxiety about health,

there is evidence that older adults score more highly (e.g. see Martin et al., 2001). These findings again indicate the importance of chronological age as a variable, and the need to examine chronological age as a possible explanatory variable of age-associated attitudes. Other evidence regarding the value and role of chronology in gerontological research comes from work by Dittmann-Kohli (1990). In her research with adults of all ages, Dittmann-Kohli argues that chronological age is 'of high importance for the localization of the self and the lifeline: chronological age defines one's past (as the lifetime already realised) and one's future, as the lifetime not yet lived' (p281).

Nevertheless, definitions of old age based on chronology can also be problematic given that this marker may not be sufficiently complex to capture the heterogeneity that can occur between people in later life. For instance, an individual could be aged 85 chronologically, but have the energy, physique or health of someone aged about sixty. Similarly, chronology can also fail to recognise the variability or heterogeneity that occurs between people in terms of lifestyles, health and/or social support. For instance, in carrying out their research, Thompson et al. (1992) noted that while some respondents were both looking forward to visits from the researchers and reluctant to see them depart, others were so busy that the it was difficult for the researchers to book time with participants for the interviews to take place. This heterogeneity has several implications, including the need for sophisticated analyses to better understand the ways in which people are living and experiencing their lives.

Chronology may also be less than helpful given the growing recognition by many researchers that there can occur a blurring of the life course (Biggs, 1997; 2000; Kaufman, 1986). Psychosocially for instance, older adults are not necessarily a unique group of adults qualitatively different from other age groups. This is because many of the issues often associated with later life are issues pertinent at any age throughout the life course, e.g. the need to maintain a balance between autonomy and dependence, and the need for secure, warm and accepting relationships with others. Furthermore, although old age is noted as a time for increasing losses and constraints on development, Coleman (1993b) reminds us that losses and threats occur throughout the life-course and not just old age. For these and other reasons, it can be argued that old age itself no longer has clearly defined boundaries beginning for instance at about age 75. Given this issue, it can also be said that old age is also a process that has many of its antecedents in earlier life experiences, choices and processes. Antecedents to the experience of ageing can include demographic, economic and psychosocial variables. Other antecedents to adults' age-associated attitudes can include adults'

experiences in close attachment relationships given that it is within these close relationships that adults continue to learn about the world and about themselves. By examining these variables the heterogeneity known to occur between adults can be better appreciated and the similarities better understood.

To summarise, in the research to follow, old age is assumed to begin at around mid-seventies and upwards. Nevertheless, although chronological definitions of old age offer a useful starting point for thinking about later life, chronological definitions are not unproblematic as definitions of old age based on chronology offers few insights about the nature of later life or the heterogeneity known to occur between people. The discussion about the nature of later life continues in the section to follow with more consideration of age-associated challenges.

1.3 Age-Associated Challenges

Although many positive attributes and experiences can occur in later years, the following section will argue that later life does pose challenges and problems. This argument is based on three separate models; a) ageism, i.e. old age as physical decline and loss, b) social role and relationship changes, and also c) psychological stress model, i.e. that as people move towards the latter part of the life course they experience many chronic stressors, often in quick succession which can place the self under much strain. These models are now discussed briefly.

1.3.1 Ageism Model; Ageing as Physical Decline and Loss

Biologically or physically, old age has been associated with multiple aversive and unfavourable experiences, which can pose a serious challenge to the self. Bromley (1988) for instance, defines ageing as 'a complex, cumulative, time-related process of psychobiological deterioration occupying the post-developmental (adult) phase of life" (p 30). Similarly, images of ageing and later life on greeting cards and on books can portray later life in very negative ways (e.g. de Beauvoir, 1972). There is evidence to support such stereotypes. In explaining why we age, Cristofalo et al. (1999) discuss stochastic theories of ageing within which 'insults' from the environment eventually reach a level incompatible with life. As an example, radiation can lead to cell mutation that in turn can mean that somatic cells eventually fail and so the life-course is reduced. In contrast, developmental programmed theories of senescence assume that ageing is a continuation of development. Within this framework and towards the latter part of the life-course, problems can occur such as telemetric shortening on chromosomes, or damage to proteins caused by free radicals which in turn can cause vision for instance to deteriorate.

Many researchers have argued however, for an important distinction to be made between normal, pathological and successful old age (e.g. Baltes & Baltes, 1990; Rowe & Kahn, 1987). Normal ageing refers to the experience of ageing without any significant physical or mental health problems occurring. In contrast, optimal ageing refers to the most favourable health possible for the self in later life, i.e. the experience of old age within which health, energy and fitness are higher than that found within the normative range. Finally, pathological ageing refers to a process of ageing where there is clear evidence of physical or mental deterioration. These concepts of normal, pathological or successful ageing offer very different pictures of later life. On one hand, an optimal view of old age assumes that adults can live healthy, independent and active lives in advanced old age. The alternate model is that of a pathological old age; within this model adults are seen as being highly dependent on others for help in meeting physical, social and emotional needs.

Researchers within the context of optimal or successful old age are looking not only for ways in which adults might off-set problems or challenges to the physical self, but also, ways in which adults can function positively and optimally in advanced old age (Baltes, 1987; Baltes & Baltes, 1990). An optimal outcome for the physical self in later life is one in which health and vigor remains high, and ill-health is compressed to a very short period at the end of the life-course. Good physical health is one of a number of key components for a successful or optimal old age (Baltes, 1987; Baltes & Baltes, 1990; Rowe & Kahn, 1987). For instance, Valiant (1991) carried out a study, within which good physical health (defined in terms of longevity and biological heath) was the outcome measure of successful old age. In contrast to Hall's hill metaphor of ageing, this model of ageing assumes a gradual assent to young adulthood and then a plateau to advanced old age without any protracted biological decline or physical health problems is known as the square wave trajectory model of ageing (Eisdorfer, 1983). Within this model the goal of many health professionals is to compress morbidity to the very end of the life-course, achievable for instance by more healthy and active life-styles. Kirkwood (1999) also argues that the period of ill health or disability before the point of death is continually getting much shorter as the life-course increases. This is reason for optimism.

Even when pathology occurs, many researchers have argued that this is not an innate part of the ageing process (e.g. Coleman, 1993b; Rowe & Kahn, 1987). Instead, they argue that health in later life can be influenced by a range of factors not intrinsic to the process of ageing, e.g. diet, exercise, and social support. Other factors that can influence the experience of later life can include geographical location and treatment availability. Furthermore, researchers need to be

increasingly alert to the factors which might impact upon health in later life, e.g. it is known that married men are less prone to poor health and stress than married women, or single people (see brief review of the literature on marital status in Chapter 6). This type of research highlights the need for researchers to become increasingly critical and demanding in their approach to research and to develop progressively more sophisticated models of behaviour and functioning with consideration for the context within which those behaviours or expectations occur. Only by first challenging negative age-associated assumptions and identifying the potential for development and well-being in later years, can health professionals and others consider effective ways to facilitate positive attributes and experiences in the latter part of the life-course.

However, old age can hold some serious potential challenges for the physical self that can impact adversely on health and psychosocial well-being. Specifically, although advancements in science and medicine have increased the life-span, this has only extended what is genetically pre-determined, i.e. as noted by (Fries, 1983) few people have lived beyond the age of 85 years irrespective of the quantity of vitamins or exercise taken. Consequently, the potential threat and the sad reality is that physical health will decline in advanced old age, and that ultimately, all human beings will die. Yet as will be discussed in the chapter to follow, it is currently unknown how adults view this reality, or even under which conditions/contexts physical declines are viewed in aversive or even self-threatening ways. Nor is it yet known what effect such evaluations might have on other aspects of health and well-being. These gaps in current understanding are addressed in the current thesis.

Many researchers have also sought to challenge ageist stereotypes by arguing for continued development and growth in later life. For example, within Tornstam's (1996) theory of gerotranscendence, gerotranscendent adults are hypothesised to lose their fears about death and decline. Specifically, within this theory, it is argued that there is a qualitative shift in adults' perspectives when development continues away from a materialistic view of the world and towards a transcendent view with associated increases in life satisfaction. Signs of gerotranscendence are said to include an increased feeling of affinity with past and coming generations, a feeling of communion with the world, and a redefinition of time, space and objectives such that it is not the individual life, but the general flow of human life that retains importance. However although this shift in perspective can lead to a decreased fear of death and a greater prioritising of experiences other than one's own, it is also true that many people may not reach this state of gerotranscendence; this may be a consequence at least in part of there

being so little research on the positive aspects of development and growth in later years, and the factors that can facilitate these.

A number of postmodern researchers have also tired to challenge ageist stereotypes by arguing that general consumerism within a postmodern world offers new opportunities for a reinvention of the physical self in later life. For instance, Featherstone & Hepworth (1989 cited in Biggs, 1997) argue that the rejection of negative and fatalistic images of later life within postmodernism offers the potential for viewing older adults as consumers of lifestyles more typical of younger adults. Specifically, basic requirements can be purchased enabling many older adults not only to wield a lot of power and influence in society, but also to live more active and productive lives for much longer. In addition, the growing use of the world wide web through telephones and televisions means that many more older adults will have more opportunities to create identities for themselves in cyberspace or virtual worlds where changes in physical appearance, increasing physical frailty or even immobility have less relevance. On one hand, the use of computers and other technological aids may mean that we are moving towards a society in which roles for older people can be created and their expertise and strengths recognised and utilised. At the same time however, many people neither use nor enjoy technology; also, consumerism does not remove the reality that people do become more frail and poorly in later years. Furthermore, with cohorts of adults becoming increasingly heterogeneous in the latter part of the life course, many people are likely to be without the support, the knowledge or the economic resources to benefit from possible consumerist advantages.

To summarise, although ageist stereotypes do urgently need to be challenged, there is evidence to indicate that challenges and problems can occur to the physical self in later life. For instance, although physical health can be related to a wide range of factors not intrinsic to the process of ageing (e.g. diet, social support), health problems are more likely in later years and pathology does occur for many adults. It is reasonable to assume that potential and actual physical health problems are a significant source of distress and challenge to adults. However there is little research in this area to date and there is currently little insight available about the nature of adults' age-associated evaluations, the ways these develop, or the mechanisms through which these can influence later health and development. This gap in the current field is addressed in this thesis when attempts are made to explore, measure and explain adults' attitudes towards their own ageing and future old age.

1.3.2 The Social Self in Old Age: Aversive Relationship and Role Changes

As social beings, most adults need to be in close relationships with other people, for enjoyment, for meaning and purpose in life, for work and as a means of learning more about ourselves and the world in which we live. Warm and close relationships with other people have been described as being a healthy necessity from 'the cradle to the grave' (Bowlby, 1979: 129). As older adults need support from younger generations, younger adults also benefit from the experience and support of older adults. This point is made strongly by Gutmann (1987) who draws on ethnographic, cross-cultural and anthropological data to argue that as a consequence of maturation and experience, older adults have their own unique strengths and talents which should be used, particularly in helping, supporting and teaching the next generation. Gutmann takes this perspective, particularly in light of the 'parental emergency' (p 7), i.e. the difficulties and problems involved in raising emotionally healthy children without the support of extended family and friends. In this way, Gutmann (1987) echoes Erikson's notion of generativity, i.e. the need many adults have to care, guide and support the next generation (Erikson et al., 1986).

In thinking about one's own ageing and future old age however, many adults may be concerned that relationships in later life can be lost, constrained or impaired. In later life for instance, adult children may divorce and separate so that older people may lose generative links with younger family members (e.g. Drew & Smith, 1999). Similarly, in later life adults are more likely to experience the loss of parents, spouses and/or other close relationships through bereavements. Personal work roles too that the individual had and enjoyed, may no longer be salient or relevant such as when children are grown up and leave home. Furthermore, given compulsory retirement, one's work friends and acquaintances may have to be surrendered.

One could argue that many losses and constraints in later life relationships are not challenging because these are a consequence of interactions and expectations of others, rather than being intrinsic to the ageing process. Society for instance can impose constraints on relationships in later life in terms of compulsory retirement, or disfavour about the aptness of certain sexual relationships for older adults (Hepworth, 1999). (Evidence examining the ways in which older adults are viewed by society is mixed. For instance, while some researchers have found that many older people are viewed in very negative ways, e.g. Bytheway & Johnson, 1990; Cohen, 1996; Kogan, 1961; Palmore, 1981, others have found that findings are related to the specific attributes and measures being assessed. For instance, the physical attributes of older adults can often be viewed more negatively than psychosocial attributes, e.g. see Slotterback & Saarnio, 1996.) Similarly, some social losses and threats in later life which assume crises in mid- and later life

(e.g. 'empty nest syndrome') have little empirical evidence to support them (Hunter & Sundel, 1989); a contrasting view is that there are challenges associated with each age period around which adults must adapt.

Nevertheless, although the experiences people have in relationships can be influenced by a range of external factors, the potential or actual loss of a valued relationship is likely to be a source of challenge and even threat for many people. Although losses or constraints in relationships can occur at any time through the life course, these are more likely to occur in late life and their loss can be very painful as the following quote indicates; "My wife of 53 years passed away in September of 1999. ... I was not sorry to see her go in that I knew that she would be going to a better place, but from a selfish viewpoint, I would gladly have tended to her for the next twenty years just to be able to hug and kiss her, and have her hug and kiss me back. I think of her every day. ... I shall be most happy to meet her when I cross over, and I pray to God that this is what happens. I know that I loved her for more than 53 years while she was on earth, but I don't think I ever realised just how much, until I knew she was going to die" (Jack, aged 78, O'Hanlon, in prep).

One could suggest that expectations generally change over time so that most older adults are prepared for the loss of close relationships. This is not always the case however because evidence suggests that adults typically do not tend to see themselves as being old (and so downwards shifts in expectations may not occur, although future research should examine this issue further). Kaufman (1986) for instance found that participants in her research were surprised to have reached their seventies and eighties. One participant, Sara age 81 says 'to tell you the truth I never noticed (I was getting older) until I had to use the cane. I never really noticed it. I didn't realise I was getting older' (p 10). Karp (1988) also found that many of his participants expressed surprise at their own ageing; Karp goes on to say, 'the fact of ageing seems to be one of life's great surprises' (p 729). Similarly, according to Trotsky (1935, cited in Ellard, 1988) 'old age is the most unexpected of things that happen to a man' (p 71).

To summarise, relationships and roles can be an intense source of pleasure, meaning and enjoyment for many people; although the experience of relationships in later life can be influenced by a range of external factors not intrinsic to the process of ageing, relationship losses and constraints are more likely to occur in later life. It seems reasonable to assume that the actual or perceived loss of a valued relationship is a significant source of challenge and threat to most adults, and one that influences they way they view their own ageing and their own prospective old

age. However as discussed in the chapter to follow, little research has been carried out to date exploring or examining adults' general attitudes to ageing and their own future old age; even less research has taken place examining the constituent factors that contribute to those general evaluations. This gap in the current field is addressed in this thesis that attempts to explore, measure and explain adults' attitudes to their own ageing and own future old age.

1.3.3 The Psychological Self to Old Age: Responses to Threat

The psychological stress model assumes that later life can be evaluated and experienced in negative and challenging ways given multiple age-associated losses and challenges that can pose a strain on individuals' identity and health. This is especially likely if challenges and problems occur in relative quick succession. According to Brandtstädter & Greve (1994a) for instance, age-assisted losses do impose considerable strain on adults' construction of themselves. Potential age-associated physical and social challenges of late life have already been discussed; although there has been little systematic work in this field, additional challenges and problems in later life can include anxiety about the finite nature of time, identity changes and/or psychological conflicts including the reconciliation of past choices and relationships.

Unlike models of ageism, the psychological stress model is more complex, and includes consideration for the factors which can mediate or moderate the effects of stress on the self; these effects could include gender, finances, education, neuroticism, or experiences in close relationships. (The relationship between these variables and attitudes to ageing is examined in the final study of this thesis.) As such, rather than assuming a direct relationship between given experiences such as role loss and later health, the psychological stress model assumes variability between different groups of adults, or within adults at different time points. Within this framework, researchers attempt to identify the conditions and circumstances under which stress can lead to subsequent pathological outcomes.

Nevertheless, although serious problems and challenges can occur in later life as throughout life, older adults are typically highly competent and creative in managing age-associated problems and constraints (see Freund & Baltes, 1998; Wrosch et al., 2000). One such strategy used is selective optimisation with compensation (Baltes & Baltes, 1990). Within this model, Paul Baltes & colleagues (Baltes, 1987; 1997; Baltes & Baltes, 1990; Baltes et al., 1998; Freund & Baltes, 1998; Marsiske et al., 1995) have outlined a useful theory for adaptation to constraints, and also the development of more favourable outcomes for the self. This theory has three components, selection, optimisation and compensation. Selection involves a narrowing of

one's goals and a shift in attention to the experiences or activities that are most important to individuals and which give them the greatest enjoyment and pleasure. In contrast, optimisation refers to the strategies the individual uses to modify the environment both to create more desired outcomes for the self and also to meet the continual challenges and changes being experienced in daily life. Strategies of optimisation can include engagement in exercise or other health behaviours, or getting additional support from others for certain activities. When some capacities are reduced or lost however, the third principle of compensation is hypothesised to occur to aid adaptation and quality of life. In the face of problems, this strategy involves using the use of alternate ways to reach goals and to continue to function at desired levels, e.g. using hearing aids, glasses or walking sticks. (Other theories of adaptation are discussed briefly in the chapter to follow.)

Under certain conditions, successful management and adaptation around age-associated challenges and problems can lead to further positive development and growth. In later life for instance, Erikson and colleagues (Erikson et al., 1986) describe adults struggling 'to accept the inalterability of the past and the unknowability of the future, to acknowledge possible mistakes and omissions, and to balance consequent despair with the sense of overall integrity that is essential to carrying on. Perhaps for the first time, they find themselves recognizing that death may come sooner rather than later' (Erikson et al., 1986; p 56). Addressing these conflicts and threats can lead to further genuine development and growth and particularly towards the positive attributes often associated with later life such as wisdom and maturity. It is possible that conflicts in later life have their origins in experiences earlier in the life course. For instance, some adults in later life may not have fully resolved conflicts of trust or identity from childhood and adolescence respectively. However, with added time in later life following retirement, and in the context of physically and psychologically safe conditions, it is possible that adults can rethink earlier experiences and integrate them in more complex ways, i.e. with tolerance for uncertainty and ambiguity yet with more mature emotions like compassion and empathy for other people involved.

To summarise, the psychological stress model assumes that later life can pose challenges that can be a source of stress for individuals. Although there is little research to date documenting the nature of adults' concerns and fears for their own ageing and future old age (or the probability of these occurring in later life), the empirical work reported in this thesis will address these gaps in the current literature. As noted already, research exploring, measuring and explaining adults' attitudes towards their own ageing and future old age can have much theoretical and applied value.

1.4 General Summary and Discussion

Although many of the negative stereotypes of later life do need to be challenged, later life does pose challenges that have the potential to impact adversely on health and psychosocial well-being. Late life challenges can include declines in physical health, losses in close relationships, and ultimately the death of close others and the self. The ways adults view the latter part of their own lives is examined in the chapter to follow.

Chapter 2
Exploring Attitudes to own Prospective Old Age

"How do I feel about getting older? Anxious. Worried. Afraid. ... I dread old age with a phobia that nearly consumes me at times" (Sally, age 40, O'Hanlon, in prep).

2.1 Introduction and Overview

Having established that later life does have the potential for negative and aversive experiences (see Chapter 1), the main aim of the current chapter was to review the literature to better understand adults' attitudes towards those experiences. Also of interest in this review were the nature and adequacy of the measures being used by researchers to examine age-associated attitudes. To review the relevant literature several databases were searched for both quantitative and qualitative studies published between 1981 and 1999; a second search using the same key words was carried out in December 2001 to identify articles published between 2000 and 2001 inclusive. Attempts were made to trace additional studies not necessarily in the public domain; conference abstracts were studied, reference lists in published papers were examined, and personal contact was made with researchers in the field requesting any available manuscripts, internal reports and pre/re-prints.

In this chapter it is argued: 1) that there is a paucity of research exploring or examining the subjective experience of own ageing and future old age, and 2) that there is an urgent need for more scales measuring adults' age-associated attitudes. In reviewing this literature nearly forty studies were identified; however of these, only ten papers were of some direct relevance to the aims of this chapter. In reviewing available quantitative measures it will be argued: a) that there is still remarkably 'little progress' in this area (e.g. see criticisms by Coleman, 1987, p 8; Wullschleger *et al.*, 1996), b) that the measures being used are often just single item (e.g. the worry scale in Mosher-Ashley & Ball, 1999), and c) that many current measures have poor psychometric properties (e.g. see the low internal reliability scores for the Ageing Anxiety Measure, Kafer et al., 1980) including uncertainty about their validity (e.g. see criticisms of Norris et al., 1987 in relation to the Facts on Ageing Quiz).

2.2 Identifying Articles for Review

The literature review to follow had two aims: to identify research exploring or examining the ways in which adults evaluated their own ageing and future old age, and 2) to identify and review the measures being used in this research. To identify relevant articles for review, several databases were examined including the Web of Science Social Science Citations Index (WOS, SSCI,), Medline and BIDS Psychological Abstracts Database (PsycINFO). Key words used in this search can be seen in Table 2.1, along with the number of articles retrieved and imported to Reference Manager. In this first stage of the analysis, the acceptance criteria was not yet clear, so the search criteria was generous to reduce the likelihood that any relevant articles would be omitted erroneously. Abstracts of interest were diverse and included papers on attitudes towards a range of people and experiences including the elderly, bereavement, exercise, medication, living wills and pensions.

In the second stage of analysis however, the search criteria became more refined, and abstracts were re-analysed, this time for relevance. Using a key word search in Reference Manager, articles were identified and then coded for relevance along several criteria: a) studies which were future orientated, b) studies which focused on normal rather than optimal or pathological old age, and c) studies which addressed psychological attributes (attitudes, beliefs, feelings, expectations or understanding) regarding general physical, social or psychological aspects of own future old age. (Specific domain studies, including papers about body image and death, were used later but excluded in this Chapter 2 review, as were studies relating to sociological/social policy age-associated issues.) In addition, of interest were adults' attitudes and so studies had to involve participants aged at least 18 years. Nearly forty articles were identified which fulfilled the above relevance criteria (see Tables 2.2-2.4). A random selection of twenty abstracts were independently re-coded by an undergraduate psychology student to check that there were no biases in deciding which articles should be included in the second stage of paper selection; agreement was high at 98%.

2.3 Reviewing Literature on Age-Associated Negative Attitudes

In examining age-associated attitudes, three sets of papers relating to the cognitive, affective and behavioural (coping) aspects of age-associated attitudes were identified. In this section it is argued that there is little research in this field, and as such there are currently few insights about the nature of age-associated attitudes, their origins, or their consequences on health and psychosocial functioning. Other researchers have also noted the paucity of research in this

field (e.g. see Bernard, 1998; Biggs, 1993; Coleman, 1993; Quirouette & Pushkar, 1999; Thompson et al., 1992).

Table 2.1
Main Word Search Terms used in Web of Science, Social Science Citations Index

No.	Database	Years Searched	Search Word/Phrase	Hits	Articles For Review
1	Soc. Sci.	1981 – 1999	'Attitudes'	27 082	-
2	Soc. Sci.	1981 – 1999	'Aging'	10 671	-
3	Soc. Sci.	1981 – 1999	'Attitudes' & 'Aging'	238	238
4	Soc. Sci.	1981 – 1999	'Attitudes to Aging'	52	52
5	Soc. Sci.	1981 – 1999	'Attitudes to Ageing'	8	8
6	Soc. Sci.	1981 – 1999	'Experience of Ageing'	8	8
7	Soc. Sci.	1981 – 1999	'Knowledge'	36 139	-
8	Soc. Sci.	1981 – 1999	'Knowledge' & 'Aging'	303	303
9	Soc. Sci.	1981 – 1999	'Perceptions of Aging'	15	15
10	Soc. Sci.	1981 – 1999	'Perceptions of Ageing'	0	0
11	Soc. Sci.	1981 – 1999	'Feelings about Aging'	0	0
12	Soc. Sci.	1981 – 1999	'Feelings about Ageing'	1	1
13	Soc. Sci.	1981 – 1999	'Experience of Aging'	21	21
14	Soc. Sci.	1981 – 1999	'Experience of Ageing'	8	8
15	Soc. Sci.	1981 – 1999	'Facts on Aging'	35	35
16	Soc. Sci.	1981 – 1999	'Getting Old'	6	6
17	Soc. Sci.	1981 – 1999	'Getting Older'	19	19
18	Soc. Sci.	1981 – 1999	'Growing Older'	48	48
19	Soc. Sci.	1981 – 1999	'Feeling Old'	1	1
20	Soc. Sci.	1981 – 1999	'Experience of Later life'	7	7
21	Soc. Sci.	1981 – 1999	'Own Aging'	19	19
22	Soc. Sci.	1981 – 1999	'Own Ageing'	2	2
23	Soc. Sci.	1981 – 1999	'Anxiety about Aging'	3	3
24	Soc. Sci.	1981 – 1999	'Anxiety about Ageing'	0	0
25	Soc. Sci.	1981 – 1999	'Fears about Aging'	1	1
26	Soc. Sci.	1981 – 1999	'Fears about Ageing'	0	0
27	Soc. Sci.	1981 – 1999	'Old Age'	2 627	-
28	Soc. Sci.	1981 – 1999	'Fears'	1 749	-
29	Soc. Sci.	1981 – 1999	'Old Age' & 'Fears'	6	6
30	Soc. Sci.	1981 – 1999	'Aging Worries'	0	0

* As of 17th November 1999.

2.3.1 Beliefs and Expectations about One's own Future Old Age

There has been little research exploring or examining the beliefs and expectations that adults have with regard to the latter part of their own lives. Evidence from studies to date however indicates that adults' beliefs and expectations can change from expectations of improvement and growth, to expectations of decline and loss (e.g. see Table 2.2). Downward expectations and beliefs can cross many areas of functioning including personality (e.g. Fleeson & Heckhausen, 1997; Heckhausen & Baltes, 1991; Krueger & Heckhausen, 1993), physical health (e.g. Ardelt, 1997; Keller, Leventhal & Larson, 1989; Rabbitt, 1999), social relationships (e.g. Quam & Whitford, 1992) and enjoyed physical activities (e.g. Stuart-Hamilton, 1998). For instance, Keller et al. (1989) carried out a study with 32 community-based adults aged fifty to eighty years. Although participants did associate their later years with some positive attributes, the changes they expected were described as being 'uniformly negative' (p 67). Similarly, in a study involving 37 Finns aged 73 – 83 years, Ruth & Öberg (1996) found that a proportion of respondents viewed the latter part of their lives as being a time of problems, powerlessness and lost control.

Further evidence that adults can have negative beliefs about later life comes from research by Heckhausen *et al.* (1989). In this study participants were recruited via newspapers and grouped into three cohorts: young adults (age 20-36), mid-life adults (aged 40-55) and older adults (aged 60-85 years). In two separate group sessions, participants were asked to rate a number of adjectives (e.g. intelligent, absent-minded, patient, wise) in terms of their desirably (very undesirable – very desirable), the chronological age at which the attribute was believed first likely to occur, and the age at which the attribute was believed to finish. Participants were also asked to rate a list of attributes in terms of their controllability and significance. The researchers found that participants in each of the three age groups generally reported similar expectations and beliefs. Specifically, although some positive attributes were also expected results indicated that more losses and fewer gains were generally associated with the latter part of the life-course; furthermore, in advanced old age (over age 80 years) losses were thought to outnumber gains.

There is also evidence to indicate that adults' beliefs and expectations can be negative for their own ageing and future old age (rather than ageing for people generally). For instance, Gething, Fethney, McKee, Goff, Churchill & Matthews (2002) examined nurses' attitudes towards their own ageing and stereotypes of older adults; they found that participants' views were 'in the main ... negative' (p74). Similarly, in a study examining adults' expectations for

health and well-being ten to fifteen years ahead, Ryff (1991) found that older adults expected declines on all dimensions of their own functioning including self-acceptance, autonomy, positive relationships with others, and purpose in life. (The young and mid-life adults in this study foresaw improvement, but they were describing their future selves in early or late mid-life rather than in old age.) A factor motivating this study by Ryff is the often-overlooked reality that positive mental health includes an evaluation about the present, and an evaluation that similar well-being will be maintained in the future.

Although the studies summarised above and in Table 2.2 offer useful insights about age-associated beliefs and expectations, they offer few insights about the ways those experiences are being interpreted, evaluated and experienced. For instance, although people recognise declines and losses occurring, it is not always clear whether these are being viewed in unfavourable or debilitating ways. Specifically, slowing down is realistic in later years, as is less good health; nevertheless, the conditions/contexts are not yet clear under which these pragmatic realities can have adverse consequences on later health and psychosocial well-being. For instance, although there is little research on attitudes to own ageing, a number of factors have been identified as impacting significantly on adults' attitudes towards older adults; these include current health (e.g. see Ryff, 1991; Thompson *et al.*, 1990) and self-efficacy (Lasher & Faulkender, 1993). Similarly, in his study with older adults, Coleman (1986) found that having a confidant was an influential factor in the maintenance of self-esteem in later life. In the final study of this thesis (see Chapters 6-9) the influence of contextual factors on age-associated attitudes will be examined; these include education, gender, health and neuroticism. Additionally, more research is needed examining the nature of the problems and challenges being associated with later life; for instance it is not yet clear whether negative attitudes are a consequence of perceived problems and challenges in later life or the absence of positive experiences. These questions will be addressed in the studies to follow.

To summarise, although there is little research exploring or examining attitudes to one's own ageing or future old age, evidence was found to indicate that adults can hold negative beliefs and expectations for the latter part of their lives. However, for reasons given in Chapter 1, much more research is urgently needed to understand these beliefs and expectations in more detail, the ways they manifest themselves, and their possible impact on psychosocial well-being.

2.3.2 Age-Associated Attitudes: Fears and Worries

As can be seen in Table 2.3, evidence was found to indicate that people can experience the latter part of their own lives with some degree of worry and anxiety. In a study with a group of nurses for instance, Bernard (1998) found that many respondents were highly anxious about their own ageing and future old age and viewed their later years with 'trepidation' (p637). The quote to follow by de Beauvoir (1970) provides further evidence that later life can be a significant source of threat at a societal level; 'Acknowledging that I was on the threshold of old age was tantamount to saying that old age was *lying there in wait* (italics added) for every woman, and that it had already laid hold upon many of them. Great numbers of people, particularly old people, told me kindly or angrily but always at great length and again and again, that old age simply did not exist! There were some who were less young then others and that was all it amounted to. Society looks upon old age as a kind of shameful secret that is unseemly to mention' (de Beauvoir 1970: 7- 8).

In a study examining the relationship between subjective age and fears about one's own ageing among 188 Boston-based participants, Montepare & Lachman (1989) found that fears about ageing were significantly related to discrepancies between the subjective and actual ages of individuals. Similarly, in a study examining anxiety about ageing, Lasher & Faulkender (1992) found that anxiety about one's own ageing was very salient for many adults; anxiety about ageing was also found to be significantly related to both self-efficacy and to knowledge about ageing. These authors also found a significant effect of gender on anxiety about ageing; specifically, men in this study were found to be more anxious than women about ageing.

Although many people do have fears and worries about the latter part of their lives, it should not be assumed that age-associated losses and constraints are always viewed in fearful and threatening ways, all the time. Not only can people cope well with problems and challenges (e.g. see Wrosch *et al.*, 2002; Freund & Baltes, 1998) but there is evidence from other disciplines including history and anthropology (e.g. Garliski 1975; De Vries 1995) that give testament to the enormous creativity and resilience of human beings, not only in overcoming adversity and threat but also in creating more favourable outcomes for the self and others. Nevertheless, as discussed next, it is surprising that adults do not experience the high levels of age-associated anxiety or depression that one might expect.

2.3.2.1 The Ageing-Health Paradox

Contrary to expectations there is evidence from a number of detailed, rigorous and sometimes multi-disciplinary studies, that self-esteem and well-being generally remain high in later life (e.g. see Baltes & Baltes, 1990; Carstensen, 1992; 1993; Coleman, Ivani-Chalian & Robinson, 1993; Coleman et al., 1998; Dietz, 1990; Dilling *et al.*, 1989; Dittmann-Kohli, 1990: Herzog & Rogers, 1981; Häfner *et al.*, 1989). For instance in the Southampton Ageing Study (Coleman *et al.*, 1993) participants were followed up longitudinally for up to thirteen years. Results from this research indicated 'remarkable stability' of self-esteem and well-being into later life, i.e. rather than becoming more anxious or depressed, participants in this study generally retained high levels of self-esteem and autonomy. Similarly, in a study carried out by Thompson and colleagues (Thompson, 1992; Thompson, Itzin & Abendstern, 1990) results indicated that participants generally had good health and a positive sense of identity. Further evidence that health generally remains high in mid- and later life comes from research by Freya Dittmann-Kohli (1990). Using sentence completion tests, Dittmann-Kohli (1990) explored the meaning being attributed to the self and life with both younger (mean age 24, n = 300) and older adults (mean age 74, n = 300). In her results she reports that older participants 'were more positive toward themselves than young subjects' (p 285). In addition, younger participants were typically more derogating and harsh towards themselves by comparison with their older counterparts.

In evaluating the above ageing/health paradox one must consider warnings given by a number of researchers about the dangers in relying solely on the use of self-report measures (e.g. see Baltes & Baltes 1990; Coleman, 1996; Ryff & Essex, 1992). For instance, participants may not wish to communicate their true thoughts or feelings, perhaps because they are concerned about being thought foolish by others. This issue is particularly crucial given the argument by Biggs (2000) that adults can use masquerades or personas to respond to questions in ways that are more favourable than participants actually feel. That researchers plan their studies so that participants feel sufficiently comfortable in expressing their thoughts and feelings is a crucial methodological issue in considering the validity of research findings.

However there is little evidence that these methodological issues were problematic in the above research. For instance, for one of the sub-samples in her research, Dittmann-Kohli recruited undergraduate psychology students (age 21 – 35 years). Although one might query whether this student sample were motivated to respond to their teachers in ways more positively than they actually felt, this does not seem to be the case. To the contrary, Dittmann-Kohli reports that the younger sample tended to respond in very negative ways about themselves. As an

example, in response to the sentence stem 'when I think about myself ...' Dittmann-Kohli reports the younger sample coming up with statements like 'I get nausea', 'I can only see my faults' and 'I have many doubts about myself'. In a similar way, Coleman (1986) used interviews and observational research to explore losses in health and adjustment with a group of adults aged 68 – 91 years living in sheltered accommodation. In carrying out this study the author reports taking time to build a close relationship with participants in order to encourage them to speak about 'matters that interested or concerned them' rather than the researcher having a preset agenda (p18). Given these realities, it seems unlikely that the ageing/health paradox can be explained by methodological limitations around the expression of negative affect.

An additional methodological issue to be considered when interpreting the ageing-health paradox is a possible bias with sample groups, particularly in qualitative studies. Specifically, although the use of interviews can lead to a detailed and a rich data-set, the generalisabilty of these interviews can sometimes be more limited, especially given that the numbers of participants in qualitative studies can often be small, and may be biased towards adults more altruistic, more healthy or with more positive age-associated attitudes. In the current research this potential problem of participant recruitment bias was addressed by offering participants incentives for their time and involvement. In addition, when questionnaires were returned participants were typically not asked for identifying information; in only one of the five studies in this thesis were participants asked to identify themselves if they wished. This strategy was used to lessen the probability that participants would respond in socially desirable ways. In terms of the ageing/health paradox above, other researchers have taken these and other steps that do increase the validity of the research findings.

Although much more research in this field is needed, and although suicide can be an increasingly common phenomenon for older people (e.g. see Gallagher-Thompson & Osgood, 1997; De Leo & Ormskerk, 1991; Pampel & Williamson, 2002) it would seem that the majority of adults in later life are not as anxious or distressed about their own prospective old age as might have been expected.

To reiterate, a second set of papers examining and exploring age-associated worries and fears were examined. Although there is limited research in this field, particularly with community based adults, there is evidence that people can experience anxiety and fear about their own ageing and future old age. Surprisingly however, there is little evidence to suggest that high levels of anxiety or depression into later years; although several methodological and theoretical explanations for the ageing health paradox were considered, a satisfactory explanation was not

found. Given that many people do have worries and fears about their own ageing and future old age, it may be that adults have developed strategies for managing this negative affect; possible adaptive strategies around age-associated constraints and challenges are considered briefly in the section to follow.

2.3.3 Age-Associated Attitudes: Coping Strategies

The ways adults experience and perceive problems associated with their own future old age will be influenced by the strategies they are using to manage or regulate those problems. For this reason, the final set of studies in this review (see Table 2.4) sought to examine strategies of adaptation around age-associated threats and worries; these papers do not reflect coping or adaptation generally, but instead strategies of adaptation around general losses and constraints associated with the experience of one's own ageing and future old age. As noted in Chapter 1, a better understanding of the skills and strategies older adults use to regulate age-associated challenges is information that can be used to help adults who are adapting less well, or to younger generations experiencing other psychosocial challenges. Furthermore, given that many positive attributes may only arise as a consequence of the successful management of age-associated challenges, a better understanding of these strategies of adaptation may also help to shed light on the many positive attributes that can also occur in more mature forms in later life such as wisdom, integrity, empathy and patience.

Researchers have identified a range of strategies used by older adults for managing age-associated challenges; these strategies include assimilation and accommodation to change the situation or alter the meaning (e.g. see Brandtstädter & Greve, 1994a; Brandtstädter & Greve, 1994b; Brandtstädter, Rothermund, & Schmitz, 1998; Keller et al., 1989; Wrosch, Heckhausen, & Lachman, 2000) and strategies of primary and secondary control (e.g. Heckhausen, 1997). Primary control strategies are thought to include strategies that can enable individuals to overcome obstacles and attain their chosen goals. Examples of primary control can include persistence, strategies of selection and optimisation, and tenacious goal pursuit. In contrast, secondary control strategies are hypothesised to include strategies that the individual uses to modify his/her goals or expectations in the face of obstacles and constraints. Secondary control strategies can include positive reappraisals, compensation, lowered goals and strategies of accommodation.

Other strategies of adaptation include strategies of selective optimisation with compensation (e.g. see Baltes & Baltes, 1990; M. Baltes & Carstensen, 1996; Freund & Baltes, 1998; Marsiske, Baltes, Baltes & Lang, 1995). Given that resources such as time and energy are

Table 2.2 Literature on Age-Associated Attitudes I: Beliefs and Expectations

Study	Basic Demogs.	R. Questions	Design	Measures	Outcomes	Comments
Karp (1988)	72 US profs. between 50 and 60 yrs, males=39	Sense of ageing? Ageing self-consciousness?	GT NTVS (90 mins+ each)	Tracing occupational route (e.g. job hist. Work sat., link betw. work and non-work)	Four reminders of ageing-self: body, generational, contextual (e.g. being oldest) and mortality salien.,	- Very rich descriptive data set - No systematic analysis about ways people feel re. reminders
Bearon (1989)	60 mid-life and older American women	Age-associated expectations for older women?	Interview Study	Wishes and hopes for future life satisfaction	Older women had hopes for health more frequently than any other issue and than mid-life women	- Age differences between mid-life and older adults in hopes and expectations
Heckhausen Dixon & Baltes (1989)	112 young (age 20-36), mid-life (40-55) and older Berliners (60-80)	Age-associated gains and losses by different age groups?	Cross sectional survey	Gough's Adjective Checklist (Gough 1960) rating for developmental increase, desirability, age onset and age closing	- High consensus about expected age-associated development - More losses and fewer gains associated with later life - OAs had most sophisticated and differentiated views of later life	- Incentives (20 DM) given for participant involvement - Ageing generally rather than own (future) old age - Unclear how losses evaluated
Heckhausen & Baltes (1991)	100 young (20-36 years), mid-life (40-55) and older West Berliners (60-85 years)	Beliefs about controllability of dev. changes in adulthood and later life?	Cross sectional survey	Rating psychological attributes (e.g. personality, social and intellectual, Gough, 1960) in terms of expected increases, controllability, desirability and timing	- Old age changes less controllable. than changes in young adulthood - More perceived control for desirable changes than undesirable - Anticip. changes into old age seen as being less desir. or controllable	- Payment of 20 DMs for time - No difference in IQ (vocab.) between age groups - Test-retest reliability data was collected 6 mths and 3 years post initial assessment
Ryff (1991)	308 young mild life and older Americans	Ways adults view personal progress or decline?	Survey	Psy. well-being (Ryff 1989) rated for current, ideal, past and future selves	- Y & ML adults exp. improvement, while older adults exp. decline. – More convergence with age betw. ideal and actual self-perceptions	- Useful and detailed - Possible rival factors not controlled, e.g. relationships with parents/grand parents
British Gas Report (1991)	764 Britons over age 55	Understanding attitudes to ageing	Survey	Questions incl. on hlth, +'ves about ageing, problems being faced, relationships & finances	Attitudes generally positive towards ageing Standards of living high	- Lack of detail on mechanism - Limited consideration of social desirability influences

Table 2.2 contd.

Heckhausen & Krueger (1993)	180 young (age 21-35), mid(40-55) & older (60 - 80) Berliners	Expectations for self and 'most other people	Survey	-Desirable and undesirable adjectives for five personality factors; ratings for expect. change, controllability, and self-relevance	- Optimism for self into later life - Yet, shift from high gains and few losses in young adulthood toward high losses and few gains in old age	- 30 DM to reduce samp. biases - Theoretical framework of 'ingroup' and 'outgroup' - Unclear how losses viewed
Fleeson & Heckhausen (1997)	398 Germans aged 26-64 years	Age diffs in personality traits (present, past, future, & ideal)	Cross sectional	-NEO –FFM (Costa & McCrae, 1991) -Well-being (Ryff 1989)	- Consistent and substantial changes - more loss into old age - Most losses in later life (although still gains in acceptance, rels. etc)	- Large sample size - Useful insights about development/convergence - Unclear how losses viewed
Keith & Wacker (1998)	146 guardians or legal carers (all male, aged 29-82) of adults age 60+	Influence of ward & guardian characteristics on attitudes to old age?	Survey	- Guardian self-efficacy and caring commitment? - Strain and support? - Views of old age (single item with 'yes' 'no' response)?	- With caring/guardianship, attitudes become more negative - Negative attitudes assoc. with support and family disagreements but not (ward) poor hlth. or finan.	- Interactions with aged does influence age-assoc. attitudes - Most of measures single items - Independent reporting would have been an adv. to the study
Quirouette & Pushkar (1999)	74 women alumni aged 45-65 years, without child (<18) living at home	Expectations and preparations for own future old age among prof. mid-life women?	Interviews and surveys	-Ageing qs about future health, relationships, finances, preparation and coping - Personality and health NEO, self-efficacy, dep., support	- Most women optimistic about own future old age and expected stability rather than change/improv. -Positive expectations associ. with satisfaction re self and past achiev.	- Future satisf. linked to current continuity– lifestory imp. -Expect. linked to behav & preps -Nice use of mixed methods with inter-rater relib. gained for ntvs
Martini & Dion (2001)	100 patrons at Ontario Science Centre (multi-cultural)	Expectations for personal changes for self and others?	Survey – betw. subjects design (BSD)	Ageing Semantic Differential Scale (Rosencranz & McNevin, 1969): six conditions of target evaluation (self or others) and target age (20, 45 or 70 years)	- Evaluations of self became more fav. with increasing target age - Evaluations of others become more negative with target age - Above self-enhancement bias not related to participants' age.	- Only one of a few studies on pers. change for self & others - Self-enhancing biases impor. - BSD can address potential neg. biases towards older adults

Table 2.3 Literature on Age-Associated Attitudes II: Fears and Worries

Study	Basic Demogs.	R. Questions	Design	Measures	Outcomes	Comments
Montepare & Lachman (1989)	188 Bostonians aged 15-83 years	Fears about own ageing? Sub. age id.?	Cross sectional (CS) survey	Ageing Opinion Survey (AOS, Kafer *et al.*, 1980) Ages - felt, looked, resembled activities, & would like to be	- Age-associated fears were related to discrepancies between subj. & actual ages for young adults only - Age discrepancies related to hlth.	- AOS had low alphas (.52-.60 for men and women respect.) - Confounding of age and cohort effects in CS design
Connidis (1989)	400 CB Canadians aged 65+ (60:40/M:F)	Factors linked with age-assoc. worries?	Interviews (105 mins)	What like and dislike about current age? Any worries or concerns about growing older?	- With age,came greater probability of liking nothing about old age - Negative view of ageing assoc. with greater age-related declines	- Rich data on +'ve & -'ve OA - Gen. considered in detail (incl. ed, property, health) -Causal relationships unclear
Pedersen (1992)	1200 Danes in three cohorts all aged 44 - 64 years	Attitudes to ageing and old age?	Interview survey	Economic situation in old age? Looking forward to retired life? Expect difficulty in killing time when retired? Fear of being lonely with age?	- Most participants unafraid of poverty or loneliness into later life - More than half of 40-44 year-olds (and 44% of pps 60-64 years) had given own old age no thought - Old age generally viewed as continuation of life inc. hobbies	- Large sample size - Pps optimistic for future - Attitudes not defined and confused with beliefs and/or knowledge about later life -Soc. desirability of responses not considered/controlled
Lasher & Faulkender (1993)	312 adults across total age range	Age-associated anxiety?	Cross sectional	Aging Anxiety Questionnaire Palmore (1977)	- Four main factors constitute ageing anxiety: fear of aged, psychological concerns, phys. appearance, and fear of loss.	- Systematic attempt to examine complex experience - No theoretical framework - No test-retest reliability
Hooker & Kaus (1994)	171 young (24 -39 years) and mid-life Americans (40-59 years)	Feared future representations? Their impact on health behaviours?	Survey	- Open-ended questionnaire for hoped-for possible self and feared possible selves (Cross & Markus, 1991)	- Health-related possible selves become predominant in mid-life and incorp. into self-identity - Regulatory process associated with feared health-related possible self predicted health behaviors - Cognition and emotion linked	- Both age groups found it easy to construct future self-images - Confounding of age and cohort - Limit. generalis.; homogenous sample & biased to high SES - Rival influ. not controlled e.g. social desirability, neurot.
Heikkinen (1996)	20 Finnish pps; aged 80 years (men = 10)	Age-associated fears?	Oral narratives stories	Experience of ageing? (Data analysed phenomenologically)	- Fears about future dependency post physical/mental impairment - Rels and culture imp. influ.	- Rich informative data - External validation of data (or the analyses) not sought

Table 2.4 Literature on Age-Associated Attitudes III: Coping Strategies

Study	Basic Demogs.	R. Questions	Design	Measures	Outcomes	Comments
Keller *et al.* (1989)	32 CB US pps (mean age 68.4 years, range 50-80, males = 8)	Experience of ageing? Copings strategies used?	Interviews	Signs of ageing in others and the self? Coping strategies and their effectiveness? Data analyzed thematically	- For majority ageing seen as natural, gradual episodic process - Signs; physical, social and psych. - Coping to change situation, alter meaning, or controlling stress	- Ageing experien. as process rather than chronic state - Self-selection from poster at senior citizens centre; no incentives for involvement
Dittmann-Kohli (1990)	300 young and 300 older Germans	Meaning of ageing for older participants?	Sentence stems	Sentence completion test: 'Later when I am older ... ' and 'In the next few years ...'	- Problems of late life seen (e.g. losses of health/time) but older pps more self-accepting by comparison with the young adults (<36 years)	- OEQs provided rich data - Coping strategies important - No inter-rater reliability - Unclear how losses eval.
Williams (1990)	70 Aberdonians aged 60 years+	Coping with phy. limitations and loss, including age-associated losses	In-depth interviews (about 2 hours each)	Household composition, job and living history, church membership, social and health history, expectations for future, including getting older (Data analysed thematically)	- 2 stages; retirement (setback but still active) & old age (dependence) - Late life stig. in negative, passive and pitied ways, and associ. with others rather than the self - Attitudes influ. by economic and religious history	- Good control of potential biases, e.g. actively recruiting more isolated individuals - Useful sociological rather than psychological data - Inter-rater reliability sought
Thompson *et al.* (1990)	55 British grandparents (Aged 60 to 80+)	How pps experience and manage latter part of their lives?	Life-story Interviews (3hrs +, ntvs 50-150 pages each)	'How do you think of yourself now?' 'Do you think of yourself as being old?'(p108), 'changes in appearance, with worries?', Health? Problems?	- Discrepancies between subjective and actual age equate with fearfulness about ageing - Unless ss were ill or feeling down, they did not feel old	- Rich detail from interviews - Representativeness of sample limited - only one minority family and all pps were married with children
Furstenberg (1994)	26 US-based older adults (mostly aged in 70s, men = 6)	Managing age-associated worries and concerns?	Ethnographic ntvs and 2 focus groups	- Pre-retirement careers, present activities and health? - Rules for ageing? (Grounded theory analysis)	- Strategies for resisting age, e.g. cliches, keeping phy & men. active - Accommodating strategies, e.g. accepting and facing inevitability - Strategies to avoid emotional distress & worry, e.g. distract., God - Attitudes do influ. later behaviour	- 3 beliefs re. old age; denial, acceptance, & distress avoid. - Attitudes. imp. infl on hlth - Recruitment convenience rather than systematic (self-selected via local care centers) - No inter-rater reliability

Table 2.4 contd.

Labouvie-Vief, *et al.*, (1995)	400 US pps grouped into seven age groups (10-70 years) in three income groups (H,M,L)	Representations of self (S-Rs) across the life-span?	2 3-hr testing sessions (survey, and both narrative & intelligence tests)	-Open-ended questions writing brief paragraph about self - California Psychological Inventory (Gough, 1987) - CES-D (Radloff, 1977) - Crystallized and fluid intelligence measures	- Middle age groups had most complex self-representations (S-Rs), but scores still typically low - More urgent time constraints may influ. re-org. of goals for older pps - Dep., fluid intellig. & personality also related to S-Rs for older pps	- $50 incentives to each pp -Sample bias tow'ds higher SES - Unclear if verbal responses would have produced more complex responses (validity?) - Confounding of age and cohort - Unclear how losses viewed
Kling, Ryff & Essex (1997)	Wisconsin-based study of 578 women aged 55+ mn age 71.4 yrs.	Changes in self-concept before, and 3 times after a relocation – at 1mth, 8 mths and 15 mths	Interviews (2 hrs. each), survey, and diary	- Self-evaluations in five domains inclu. health, family, economics and daily activities -Centrality/imp to self-concept - Psy. Health (Ryff 1989)	- Well-being maximized by increasing importance of life domains in which one is doing well and lowering importance of domains gong poorly	- Useful measures of future self - Sample biased towards more healthy pps & non-inst. settings - No payment/incentives to pps despite heavy demands
Moser-Ashley & Ball (1999)	119 students of diff. Disciplines and ages (18-22 & 23+, men=22)	Atts of students towards older adults and own future old age?	Survey adminis. at beginning of class	- Positive and negative attitudes measured by no. of positive and neg. respectively adjectives ticked on list	- Younger pps more worried - However, no age diffs. in number of (+'ve or –'ve) adjectives used to describe fut. self as an older person	- Own age-assoc. attitudes just measured by 1-item worry scale - Rival variables (e.g. neuroticism) not controlled
Unsworth, McKee & Mulligan (2001)	Two groups of young adults (YA, n = 152) and mid-life (n = 54) adults	The role of age-associated attitudes in age parameters?	Survey	- RAQ (Gething, 1994) incl. factors on optimism towards old age, worry about deterioration, dth frs. -Age parameters; when youth, mid-life and old age begins?	- Mid-life adults place old age further in the life-span than do YA - Mid-life pps. more optimistic in attitudes than younger adults which could account for above findings	- Evidence that optim. mediates relationship between age and age parameter placement - Biases in recruitment, incl. no incentives for participation

Note: CB= Community Bad, Qs = Questions, OEQs = open ended questions, young = less than age 35, older adults = age 65 upwards, AtA= Attitudes to ageing, PAD = Perceptions of Adult Development, PWB = Psychological Well-being (Ryff &

limited selection involves narrowing one's range of activities or goals to the domains perceived to be most important. In contrast, optimisation refers to strategies by which adults draw on personal reserves to maximise outcomes. Finally, when goals become less tenable, compensation strategies are proposed to counteract losses and constraints. (One of the aims of the final study reported in this thesis, was to examine the relationship between strategies of adaptation identified by both developmental and health psychologists; it is expected that this research will be submitted for publication post Ph.D.)

In exploring age-associated attitudes including adults' fears and hopes for the future, researchers have noted that even adults in advanced old age (e.g. adults aged 80s+) often distance themselves from the experience of old age; often they see ageing in other adults, but not in themselves (e.g. see Thompson et al., 1990; Williams, 1990). Researchers have also found that older adults do not typically think of a future that is problematic or distressing, but instead focus their attention on the present, and on maintaining current positive levels of functioning (e.g. see Furstenberg, 1994; Dittmann-Kohli, 1990). Differences in design and measures mean that it is difficult to make comparisons between participant groups. Nevertheless there are two issues of interest: 1) these strategies that enable adults to manage the latter part of their lives, and 2) these strategies assume that later life has challenges which need to be managed in order to maintain a sense of control, predictability and safety.

To reiterate, a third set of papers considering age-associated strategies of adaptation and coping were briefly examined; underpinning this research is the view that the latter part of the life-course has challenges that must be managed if individuals are to maintain health and well-being. It is surprising then to find so little systematic research exploring or examining strategies of adaptation around age-associated problems and challenges; this gap in the literature is addressed in the final study of this thesis when the relationship between attitudes to own ageing and strategies of adaptation are examined.

2.3.4 Summary of Literature on Age-Associated Attitudes

The diversity of key words used by researchers in this field means that a literature review on attitudes to own ageing cannot be conclusive; nevertheless, three sets of papers in this field were briefly reviewed. Evidence was presented which suggests; a) that people can hold very negative beliefs and expectations for the latter part of their own lives, b) that possible age-

associated challenges do cause people worry, and do necessitate effective strategies of adaptation, and 3) that despite the potential for age-associated worries and fears to impact adversely on health and well-being, there is a surprising lack of systematic research in this area. As discussed next, one reason for this lack of research may be because there are so few measures available in this field.

2.4 Reviewing Attitudinal Measures

As noted in the first Chapter of this thesis (see page 4) measures with good psychometric properties are crucial for researchers working within a positivist framework. The section to follow (section 2.4.1) will consider the criteria that can be used to evaluate the usefulness of measures; in section 2.4.2 this criteria will then be applied to a critique of several commonly used measures in the field of attitudes to ageing.

2.4.1 Criteria for Evaluating Attitudinal Measures

In evaluating attitudinal measures researchers make decisions about the appropriateness of given tools for use, and the value of some tools over others. As noted by Murphy and Davidshofer (1994) two vital criteria for evaluating measures are their reliability and validity. Reliability refers to the consistency and stability of a given measure; in contrast (and with many sub-components), validity essentially refers to the extent to which a given scale measures what it purports to measure. These are discussed more in the section to follow.

Internal Reliability: Reliability refers to the consistency and stability of a given measure, i.e. the extent to which items within a given scale are similar in content, and particularly, under similar conditions at different time points (Reber, 1985; Robson, 1995). An internal consistency estimate of reliability can by carried out on a single occasion using Cronbach's alpha; ideally Cronbach's alpha scores should have a value of .07 or above, however scores falling in the range of between .06 and .07 are not unacceptable. Cronbach's alpha scores of below .06 do not fulfill this criteria for adequate internal reliability; in these instances, there is no consistency between scores on a given test and the attribute being measured, i.e. it is not clear what the scale with low reliability is actually measuring.

Face validity: Face validity refers to a subjective assessment about the appropriateness of given items to a particular theme. This assessment can be important because respondents can feel angry or uncooperative if they believe scale items are illogical, unrelated to their attitudes or even misrepresentative of their attitudes. The latter can occur if a given scale is very negatively worded

or does not allow participants to express their views in the way they wish (e.g. with forced yes/no response formats, or without clarifying the context for a given attitude). However, it is also likely that there may be good grounds on occasion for not having face validity (e.g. in screening people for job interviews). Also, social threats to face validity can be 'hypothesis guessing' by participants, and their wish to be helpful to the project. Similarly, face validity can be imprecise in that what seems logical and coherent for one person, will not be the same for another person or even for the same person at another point in time. With these limitations in mind, one can conclude that face validity alone is not a sufficient way to evaluate a given scale; nevertheless, without some level of face validity, there may be a greater probability that other components of validity are compromised.

Content validity: Content validity is similar to face validity in that both are concerned with the way in which a given construct is operationalised; content validity however is more complex and refers to a judgment about the degree to which a given test adequately samples a particular experience or entity. According to Murphy & Davidshofer (1994) such judgments can be based on many factors including a description about a given domain and its boundaries, and an evaluation about the areas of the domain that are addressed and measured by the test items. These judgments imply a certain level of expertise in the field, i.e. that the individual is able to understand the issues that should be included or addressed in a particular scale, and have sufficient critical skills to make judgments about the ways in which the scale items relate to those criteria. Judgments can be at a quantitative or semantic level, but these judgments are not unproblematic; for one thing, experts can vary widely in their opinions about a given issue or experience. In addition, for many complex constructs (e.g. self-esteem or quality of life) it is not easy to decide on the criteria that will constitute the content domain. Nevertheless, by analysing attitudinal measures for their content coverage one can better understand the nature of these measures and the ways in which attitudes are being defined and understood; the identification of shortcomings in content coverage can also provide a base for the development of new measures.

Concurrent validity: Concurrent validity is one way in which the researcher can check the operationalisation of a given construct against other validated scales: these analyses can be carried out using either Pearson's or Spearman's correlations. For two scales to be significantly correlated with each other, the 'p' value needs to be below .05. In addition, the product moment correlation coefficient (r) indicates the degree to which two variables are linearly related; as such, the higher this value, the stronger the linear relationship. Although judgments about acceptable or strong levels of association can be influenced by a range of factors (including the standards

already set in a given field), Green, Salkind & Akey (2000) note that correlation coefficient values of about .10, .30 and .50 can be taken to represent small, medium and large effect sizes respectively. (The assumptions underpinning correlational analyses are discussed in the chapter to follow.)

Predictive validity: Although the ability of a given scale to predict scores or performance on other measures can be useful way to examine validity, this aspects of validity is not examined in this section because almost no quantitative studies have been carried out measuring attitudes to ageing over time.

Convergent and discriminant validity; These two forms of validity provide other ways for the researcher to evaluate the usefulness of given measures; in these tests the performance of scales is compared with external criteria. In the specific content of convergent validity, a given scale should be able to make distinctions between groups where one would theoretically expect it to be able to make these distinctions; in the case of discriminant validity the issue of interest for the researcher is the degree to which a given scale is not similar to other scales where one would not expect similarities to be found.

2.4.2. Evaluating Commonly Used Attitudes to Ageing Measures

Drawing on the above criteria, attitudinal measures currently in use will be evaluated. In this section, it will be argued that this issue of measurement within the context of attitudes to ageing is a very under developed field of research. It will also be argued that there is an urgent need for more measures on attitudes to ageing; to facilitate further research in this important field these measures need to be diverse, short, and with good psychometric properties.

2.4.2.1 Facts on Ageing Quiz (Palmore, 1977)

Palmore (1977; 1981) developed two Facts on Aging Quizs to address limitations in measures on ageing which he argues have tended to be both long (40-50 items) and imprecise with factual and attitudinal statements confused. Palmore sought to address these limitations by developing a range of items that measure the level of knowledge people have about facts associated with later life and older adults. Palmore goes to a lot of trouble to document the factual statements in the literature, so that the reader can judge for him/herself the validity and accuracy of each statement item. Palmore argues that these quiz items cover three areas of knowledge about later life: physical, mental and social. Random items from this scale include 'most old people have no interest in, or capacity for, sexual relations', 'most old people are set in

their ways and unable to change' and 'the majority of old people are socially isolated and lonely'. For both quizzes, Palmore (1977; 1980; 1981, 1988) argues that his scales can be useful as a stimulus for group discussion and the clarification of misconceptions. He also argues that his scales can be used to measure the level of information people have about ageing, any biases present towards older adults, and as a form of auditing of lectures or courses by comparing responses on this quiz before and after the training experiences.

Although many researchers do not report internal reliability scores for this scale (e.g. see Knox, Gekoski, & Johnson, 1986), researchers have found that this scale does not have good internal reliability. For instance, Norris and colleagues caution people against using the FAQ saying 'the Facts on Aging Quiz is *not* a true psychometric or research tool. ... (Our) findings, combined with the results of the limited reliability and validity analysis, suggested that the FAQ would be best used in the classroom and not in rigorous gerontological research' (Norris *et al.* 1987: 676). Despite these criticisms, Duerson, Thomas, Chang and Stevens (1992) defend their use of this tool in part because it is the only available one of reasonable length. In response to these psychometric criticisms, Palmore argues that the use of modern statistical methods are inappropriate for use with his scale given that the these quizzes were designed 'to examine performance in terms of current knowledge or skill rather than in relation to others within the group'. In addition, he argues (1980; 1981) that people can be knowledgeable about only some areas of ageing (e.g. physical v. economic) and so one should expect little correlations between items. He also argues, that to omit certain items from the quiz would increase reliability at the expense of omitting important items that address frequent misconceptions and a range of experiences in later life. Palmore's defense as some merit if it were not for other difficulties with these measures as summarised next.

The face validity of the FAQs is problematic, mainly because some of the items are very negatively worded and even offensive, e.g. 'the vast majority of old people are senile'. These negatively worded statements are particularly problematic in that participants are not oblivious to the tone of a given questionnaire and consequently, may respond, even unwittingly, in ways they might think was helpful for the researcher. Many researchers (e.g. Kremer, 1988; Stuart-Hamilton (1999) have argued that negative phrasing and information can adversely influence the ways in which respondents answer remaining questionnaire items. In the empirical studies carried out in the current thesis, care was taken to avoid the questions being overly positive or overly negative. For instance, rather than taking a very positive (e.g. how do you feel about

growing older?) or a very negative perspective (e.g. how do you feel about getting old?) attempts were made to keep questions linguistically neutral (e.g. how do you feel about getting older?).

In terms of the scale's content validity, Palmore attempted to document his factual statements in empirical literature which is a very useful strategy for the reader. However despite Palmore's attempts to the contrary, Miller & Dodder (1980) argue that the scale still confuses attitudinal (subjective) and factual (objective) statements through the use of imprecise language (e.g. 'the majority of old people are socially isolated and lonely' rather than 'the majority of old people *say* they are socially isolated and lonely'). When the latter rephrasing was made, Miller & Dodder note the 'considerable increase in correct responses' (p678) when participants were made aware they were rating self-reported facts rather than objective facts. Norris et al (1987) also note that Palmore does not discuss the way in which the scale items were derived, how the above categories emerged or what the focus or theoretical rationale was behind these questions. Furthermore, in understanding health and well-being particularly, it is likely that some facts are more important than others. For instance, it is possible that facts relating to danger and threat will have more significance in contributing to people's beliefs and behaviour by comparison with other facts such as whether or not a person's height declines with age. (In the final study of this thesis attempts were made to develop a new knowledge based scale that drew on some of the strengths of Palmore's work such as documenting facts in the literature, but also addressed its limitations, i.e. which measured the level of knowledge adults had about threats and dangers often associated with one's own ageing and future old age.)

Concurrent validity is a way to test the extent to which a given scale is related to other scales that have already been validated. For this measure to have concurrent validity, one would expect the FAQ to correlate with other knowledge-based measures. However, this does not always seem to be the case. Specifically, a number of researchers have found that the FAQ does not correlate with other knowledge-based measures (e.g. see O'Hanlon, Camp & Osofsky, 1993; Norris *et al.* 1987). Seufert & Carrozza (in press) also examined the relationship between the two quizzes developed by Palmore (1977; 1981), but found that they were not similar as has been argued by Palmore. Specifically, in using both scales with groups of nurses Suefert & Carrozza found that the performance of the nurses 'varied significantly' for both quizzes, with the sample getting more correct answers for the second quiz that for the first. Nevertheless, in a further test of concurrent validity, one would expect that the levels of knowledge people have about ageing

would improve after training; there is evidence by Palmore himself that this is the case. For instance, Palmore (1980) argues that people who have been trained in gerontology should and do score more highly on the FAQs than do others without such training.

In examining convergent validity, of interest is the degree to which a given scale is similar with other scales where similarities would be expected. One might expect the FAQ to be correlated with worries about ageing, i.e. adults who are more informed about issues to do with ageing and later years would have significantly less worries about the latter part of their lives. Evidence to support this relationship came from Neikrug (1998) who found that the FAQ correlated in the expected direction with worries about finances ($r = -.26$, $p < .01$), worries about health ($r = -.18$, $p < .01$), and worries about social relationships ($r = -.27$, $p < .01$). However, if either of the FAQs have convergent validity, one would also expect that people who had more contact with older adults would score more highly (be more knowledgeable) about aspects of later life; however Knox et al (1986) report only 'modest' (p312) relationships between these variables.

In the case of discriminant validity, one would not expect to find gender differences on the FAQ. Although there is evidence in the literature that women can score more negatively on a range of negative affective scales (e.g. Croake, Myers & Singh, 1988; Lasher & Faulkender, 1992; however see also Gething et al., 2002), neither gender should be more knowledgeable about ageing. Evidence to indicate the lack of gender differences again comes from Neikrug (1998); although women in this study score more negatively on worries, no significant gender differences were found for the FAQ.

Although having many strengths (e.g. each statement documented with empirical evidence), much more research is necessary on these two knowledge based quizzes. For instance, the majority of studies noted above which examine the psychometric properties of the FAQ are carried out with a narrow range of people; these include students (Knox et al., 1986; Luszcz, 1982; Norris et al., 1987) and/or adults based within the United States (e.g. Miller & Dodder, 1980; however for exception see Luszcz, 1982; Romeis & Sussman, 1982). Consequently, given these limitations, more research is needed in this field, with adults of different age bands and different socio-economic groups; to address this gap in the literature and because the FAQ has some strengths, the FAQ was used in studies through this thesis. This research is especially urgent, if the knowledge and information we gain is related to the resources and opportunities available.

2.4.2.2 The Attitudes to Ageing Scale of the Ageing Opinion Survey (Kafer et al., 1980)

The Attitudes to Ageing Scale of the Ageing Opinion Survey (Kafer et al., 1980) sets out to measure personal anxiety towards ageing. Anxiety can be understood in terms of an affective response to actual or perceived threats that elicits self-protective behaviours (Bowlby 1973; Crittenden 1997). Anxiety about own ageing particularly has been defined in terms of 'apprehension, regret, or general negativism toward the aging process and what lies ahead' (Wullschleger et al 1996: 4). The Attitudes to Ageing Scale of the Ageing Opinion Survey (Kafer et al., 1980) has just five items, which makes it very convenient for researchers to use, especially the case given the space constraints often present in questionnaire packs. In this scale, respondents are asked to rate each item on a five point Likert-type scale from strongly disagree (1) to strongly agree (5). Items for this measure include: 'I always dreaded the day I would look in the mirror and find a gray hair', 'I fear that when I'm older all my friends will be gone', 'The thought of outliving my spouse frightens me' and 'the older I become the more anxious I am about the future'.

The Attitudes to Ageing Scale of the Ageing Opinion Survey (Kafer et al., 1980) reports just moderate internal reliability scores (Cronbach's alpha of .65). Similar results have been found by other researchers. For instance, in a study with 188 Bostonians aged 14 – 83 years, Montepare & Lachman (1989) used this scale to examine the fears participants had for their own ageing and future old age; however internal reliability scores for this measure were just .52 and .60 for men and women respectively. Many other researchers however (e.g. Treharne, 1990) have used this scale and but have not reported its psychometric properties.

Face validity considers the appropriateness of given items to a theme. For the Ageing Opinion Survey (Kafer et al., 1980) self-report items measuring anxiety can be problematic however, because they generally necessitate asking participants to think about the topic that is causing them distress which in turn may cause some participants to feel anxious. This issue will be of particular concern to health professionals when considering the welfare of more vulnerable adults, and when considering the focus of the anxiety such as own future old age, which is typically inescapable, unavoidable, and some people may be a major and debilitating source of negative affect. Anxiety around own ageing may be transitory, or it may continue for some people long after the questionnaire has been returned. This issue is particularly problematic because currently it is unclear what percentage of adults are likely to view their own prospective old age in such negative ways. Nevertheless given the importance of research on negative age-associated affect, and the potentially useful starting point that this scale represents, researchers as in the

current thesis, can consider using this scale with non-vulnerable socially active adults who are in good health and with wide social networks. A second possibility, would be to gather data on this scale while safeguarding the interests of respondents by administering this scale by interview rather than by self-report.

The content validity of the Ageing Opinion Survey (Kafer et al., 1980) is difficult to assess because it is not yet clear how anxiety about own ageing and future old age manifests itself. For instance, as Crittenden (2000) notes anxiety can manifest itself in a wide range of complex ways: in disparaging or mocking humour; in derogation of the self or others; in avoidance (or clinginess) within relationships; in memory lapses where important information is excluded from conscious awareness; in exaggerated negative affect (i.e. anger, fear, or desire for comfort), and/or in disarming affect involving the inappropriate use of positive affect such as the functional use of laughter when telling a poignant story. Anxiety about ageing may manifest itself similarly, e.g. derogation of the self as an older person, selective (positive or negative) processing of information about the nature of getting older, or exaggerated affect including defensive laughter, around the experience of ageing and one's own future old age. Other researchers have also noted that anxiety in later life may manifest itself in somatic or behavioural problems (Coleman 1993b; Hanley & Baikie 1984). Furthermore, for certain groups of adults sometimes called repressors, anxiety may not manifest itself using direct conventional affective measures. The complexity of the emotion anxiety, coupled with the surprising lack of basic exploratory research on this topic, means that the content validity of the Anxiety about Ageing Scale remains doubtful, but difficult to determine. This is especially the case given that these researchers typically do not outline in any detail the theoretical or empirical basis for the subcomponents of their scale, nor are items typically derived empirically. Furthermore, these researchers do not tend to review the latest findings and achievements about anxiety research from other disciplines (e.g. from clinical psychology, or from over sixty years of research in the field of anxious attachment in close relationships).

Little data is also available about the concurrent, predictive or convergent validity of the Ageing Opinion Survey (Kafer et al., 1980). Nevertheless, there are some difficulties with this measure, particularly the fact that some of the items on this short measure ignore certain group of the population. For instance, the item 'the thought of outliving my spouse frightens me' is one which is redundant for respondents without spouses; similarly, the item 'the older I become the more anxious I am about the future' may be one which is biased towards adults who score on the higher points of a neuroticism continuum. Similarly, another of the items is 'I have always

dreaded the day I would look in the mirror and find a gray hair' ,yet there is no evidence that people's worries and anxiety about ageing and later life center around their hair changing colour. One of the most serious difficulties however is the lack of longitudinal research for examining and determining the predicative validity of given measures. With only some exceptions (e.g. see Coleman et al., 1993b; Levy et al., 2002) there is a tragic paucity of longitudinal studies in gerontology.

2.4.2.3 The Anxiety About Ageing Scale (Lasher & Faulkender, 1992)

Like the Ageing Opinion Survey (Kafer et al., 1980), the Anxiety About Ageing Scale (Lasher & Faulkender, 1992) sets out to examine the level of anxiety adults feel towards their own ageing and future old age. In addition to a measure of general anxiety about ageing, this scale also has four subscales: 1) fear of older adults (e.g. 'I enjoy being around old people' and 'I enjoy talking with old people'), 2) psychological concerns and changes generally associated with ageing ('I fear it will be very hard for me to find contentment in old age' and 'I will have plenty to occupy my time when I am old'), 3) physical appearance measuring anxiety around expected age-related challenges in physical appearance ('I have never dreaded looking old' and 'It doesn't bother me to imagine myself as being old') and 4) fear of losses, which assess anxiety about expected sources of loss in old age. Participants completing this scale are asked to rate items on a five-point scale according to how much they agree or disagree with each item.

The Anxiety About Ageing Scale (Lasher & Faulkender, 1992) is a measure which has adequate internal reliability and external validity. Although this scale is supposed to have four factors measuring different components of anxiety about ageing, Lasher & Faulkender (1992) report good internal reliability for this scale with all twenty items combined (Cronbach's alpha of .82). Other researchers report similar results. For instance, Watkins, Coates & Ferroni (1998) found good internal reliability scores with adults aged between 60- and 87 years (Cronbach's alpha = .84). Harris & Dollinger (in press) also measured internal reliability for this scale using Cronbach's alpha; these researchers found internal reliability scores of .82 for the full scale. Furthermore, in a study with young (age-range 18-22 years) and older adults (age range 62 year) Chasteen (2000) reports internal reliability scores of .84 for this measure.

Concerns posed earlier (see section 2.4.2.3) about the content and face validity of anxiety about ageing measures are also salient with regard to this Anxiety about Ageing Scale. In the specific case of the anxiety about ageing scale (Lasher & Faulkender, 1992) these authors did not

develop this scale from empirical sources; instead they drew upon work by Lawton (1975) at the Philadelphia Geriatric Center Morale Scale which includes a measure of attitudes towards one's own ageing defined in the context of perceived changes to the self. The difficulty with the latter scale is that it includes items like 'do you feel as happy now as you were when you were younger' which can tap dispositional traits rather than an evaluation about the experience of ageing and later life. In addition, as already noted, there has been little research exploring the ways in which anxiety about ageing manifests itself, and so evaluating the adequacy of a measure for addressing this construct is very difficult to do. Nevertheless, with twenty items this measure is also on the long side; this is especially problematic, as researchers have usually be constrained for space in questionnaire packs. In addition, other researchers with only an indirect interest in ageing and age-associated attitudes may be less inclined to use longer measures. Both these issues mean that research on attitudes to ageing is not advancing at the pace it could do, if short measures were available which also had good psychometric properties.

With only four studies found using the Anxiety about Ageing Scale (Chasteen, 2000; Harris & Dollinger, in press; Lasher & Faulkender, 1992; Watkins, Coates & Ferroni, 1998) more research with longitudinal designs are needed to examine the predictive value of this scale. Similarly, assessing concurrent, convergent and discriminant validity is difficult. The Anxiety about Ageing Scale has been used in this thesis to address the latter limitation, and to gather more data on this measure with British samples. Nevertheless, Lasher & Faulkender (1993) do report that anxiety about ageing as measured using this scale was related to a range of psychosocial variables including frequency and quality of contact with older adults, knowledge about the experience of ageing, and well-being.

2.4.2.4 Ontario Opinions about People Scale

The Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971) seeks to measure anxiety about ageing. This scale is short with just five items which include 'Old age is a worry for me', 'I cannot help feeling depressed at the thought of getting old', and 'It is rather sad to be still alive after all your friends are gone'.

Although one does not know what components are inherent in anxiety measures (see sections 2.4.2.2 and 2.4.2.3), the Ontario Opinions about People Scale takes a wide approach to include items relating to worry, depression and sadness. This wide sweep can be useful in

incorporating a range of issues, nevertheless it is problematic in that mood or morale type affect inherent in this scale, and so the relationship between anxiety about ageing and other emotions or constructs cannot be examined easily. That researchers are unable to separate for instance anxiety about ageing from fear about ageing is problematic, especially if later research as has been carried out in this thesis finds that different types of negative affect are related to different outcomes in the context of ageing and later life. For instance it is possible that anxiety about ageing may lead to hyper-vigilance which can impair health and well-being, while age-associated sadness and depression may be more associated with withdrawal from people and situations. Unless these different types of affect are examined in their own right, it is not possible to understand the relationship between them and later health or well-being.

Researchers have found this scale to have low-to-moderate internal reliability scores. For instance, in a study investigating ageing anxiety in a national survey of caregivers, Wullschleger *et al.* (1996) report Cronbach's alpha of .62 for Anxiety subscale from the Opinions About People Scale from the Ontario Welfare Council (1971). Other researchers also report low internal reliability scores for this measure (e.g. Downe-Wamboldt & Melanson 1990). However, in defending their use of this scale, despite it's poor psychometric properties, Wullschleger *et al.* (1996: 7) state that this scale was used because it is 'more recent than the Tuckman-Lorge Questionnaire (1953) and Kogan's Old people Scale (1961)'. Although age in itself is not a problem in using a scale, psychometric adequacy should be present and the continued use of a scale that does not adhere to modern psychometric norms of acceptability reflects both the paucity of research in this area and particularly, the tremendous lack of suitable alternative measures. Little information is available regarding the external validity of this measure.

2.4.2.5 Single Item Measures and Word Lists

Many researchers (e.g. Mosher-Ashley & Ball, 1999; Watkins et al., 1998) use single item measures with no attempt to examine their validity. Many other researchers have used lists of adjectives to ascertain the beliefs of adults towards aspects of their own ageing and future old age (e.g. see Heckhausen, Dixon, & Baltes, 1989). In these studies researchers typically ask participants to rate a list of adjectives (e.g. intelligence, wise) within a range of contexts (e.g. desirability, onset, or controllability) and time (e.g. ten years form now, or twenty years ago). The insights gained form such studies can be very useful (e.g. findings that adults associate the latter part of their lives with impaired control, or more negative losses and challenges, see Heckhausen

et al., 1989), however there is typically little attempt to evaluate these measures in terms of their psychometric properties.

2.4.2.6 Summary and Conclusions about Measures

There are few available measures for researchers interested in age-associated attitudes; short measures in use (e.g. Kafer et al., 1980) tend to have poor psychometric properties. Longer scales perform better psychometrically (Lasher & Faulkender, 1993), but have other difficulties including being more difficult and cumbersome for both researchers and participants. Additionally there is very little research on age-associated attitudes on community based adults of all ages; instead, researchers in this field have tended to concentrate on specific populations including groups of older adults (e.g. Connidis, 1989; Heikkinen, 1996; Watkins, Coates & Ferrono, 1998), students (e.g. Lasher & Faulkender, 1993; Mosher-Ashley & Ball, 1999) and/or groups of nursing professionals (e.g. Bernard, 1998). The lack of research examining age-associated anxiety or fear with community based adults is addressed in this thesis; not only are adults recruited across the age range but incentives and gift vouchers are also offered to participants to minimise recruitment biases towards adults more altruistic or even generative. In addition, one of the main aims of the research in this thesis is to develop a range of psychometrically sound scales, which are short (ideally five items or less), easy to rate and score, and which offer researchers choices, i.e. scales which measure different aspects of age-associated attitudes. Possible items for these scales were developed from the pilot study outlined in the next chapter.

2.5 General Summary and Discussion

Although no literature review on age-associated attitudes can be conclusive given the many keywords under which studies in this field can be categorised, comprehensive steps were taken to find relevant articles: many databases were searched, key authors were contacted and conference abstracts and proceedings were searched. In examining the literature on age-associated attitudes it was argued that there is little systematic research in this field; consequently, despite the potential impact of age-associated attitudes on health, there are currently few insights into the nature of age-associated attitudes, what it means to hold a certain attitude, the basis of such attitudes or their consequences on later behaviour, development and well-being. In examining measures currently in use, it was argued that these are typically of poor quality and should not be used. Exceptions to this criticism include the Anxiety about Ageing Scale (Lasher & Faulkender, 1993) and the Reactions to Ageing Scale (Gething, 1994) however the length of these scales makes them

cumbersome and impractical given space constraints often typical in questionnaire packs. The chapter to follow will begin to address these limitations in the literature by using open ended questions to gather exploratory data on adults' attitudes to ageing; the chapter to follow will also draw on this data to develop possible items for a range of new attitudes to ageing measures.

Chapter 3
Developing Measures

"I will take increasing physical risks as I age and hopefully end my life in an extreme manner so I don't have to face old age" (Mike, age 36, O'Hanlon, in prep)

3.1 Introduction and Chapter Overview

The first aim of this chapter was to carry out a pilot study using the World Wide Web to explore adults' attitudes to their own ageing and future old age. This research was carried out given the paucity of research (see previous chapter) exploring the ways adults think and feel about the latter part of their own lives. The World Wide Web was the method of data collection used in this exploratory pilot study because this tool offered the possibility of gathering much data, in a short space of time and from a wide group of people. For this pilot study nearly 1000 participants were recruited via the World Wide Web; a comparison group of participants completed a similar questionnaire in Southampton via the more traditional method of pen and paper. Few significant differences were found on the quantitative measures between the two groups suggesting that the World Wide Web is a useful method of data collection. Responses to the open-ended questions resulted in a rich data set covering over 1500 A4 pages (11 font). Findings indicated that most participants recognised the many positive attributes and experiences that can occur in later years; these included warm relationships with others and extra time for hobbies and leisure pursuits. Nevertheless, a significant proportion of the sample also expressed very high levels of worry and danger for the latter part of their lives. Discussion then followed about whether negative attitudes to ageing could be best understood in terms of the level of threat being associated with the latter part of the life course.

The second aim of the research to follow was to draw on the above exploratory data to develop possible items for a new scale measuring adults' general attitudes to their own ageing and prospective old age. Despite a review of the literature (see Chapter 2), there are few scales to measure adults' general attitudes to the latter part of their lives: scales that are available often have poor psychometric properties or uncertainty regarding aspects of their validity. As was discussed in Chapter 1, the development of a new measure of general attitudes may contribute to the current field by facilitating further research that can ultimately improve health and quality of life for adults in their later years. Attempts were also made to keep this measure as short as possible so that it

might be more useful to a wider range of researchers, including those with only indirect interests in the field of adult development and ageing.

The final main aim of this research was to examine the relationship between general attitudes to one's own future old age and the level of threat being associated with later life. To address this issue new scales were developed from the pilot study data and their relationship to general age-associated attitudes examined. Adults can evaluate the latter part of their lives in unfavourable ways for many reasons including current mood state or a simple dislike for a given experience. However, finding evidence to support a link between age-associated attitudes and the level of threat being associated with later life could facilitate new areas of research exploring for instance the nature of age-associated threats, why some people experience these more intensely than others, and the strategies adults can use to maintain control, predictability and safety. Drawing on the clinical literature particularly around fears associated with heights, snakes and spiders (e.g. see Menzies & Clarke, 1995), threat can be assumed to be present when a given entity or experience is perceived as being unpleasant, uncontrollable, inescapable, and as having a high probability of serious outcomes for the self. In a similar way, adults who associate the latter part of their lives with high levels of threat would also be expected to associate their later years with a greater lack of control and with many unpleasant consequences which have a high probability of occurrence. These statistical relationships should remain significant even when controlling for rival variables such as current mood state, neuroticism and/or knowledge about ageing.

New scales developed in this chapter included the General Attitudes to Ageing Scale (GAAS), the Ageing Controllability Scale, the Dependency Fearfulness Scale and the Attitudes to Time Future Scale. These items were tested with a group of community-based adults attending social events including line dancing. Results indicated that the newly developed measures did have good psychometric properties. Results also indicated that there was a significant relationship between general attitudes towards one's own future old age and the level of threat being associated with this time of life. Specifically, adults with more negative attitudes to the latter part of their lives also viewed this time of life as being significantly less controllable, with more serious outcomes for the self and as having a lower probability of positive experiences and attributes occurring. To consider the possibility that these results could be explained by a general negativity or overlap in items, factor analysis was carried out with the main measures. However, results indicated that there was little overlap in questionnaire items so the above conclusions remain. In addition, the study to follow will report similar results with external raters (e.g. spouses of participants) providing independent data on responses.

It is concluded that: 1) the World Wide Web is a useful method of data collection and should be used by many more researchers, 2) that a scale can be developed measuring general attitudes to ageing which is easy to score and rate, short, and with good psychometric properties, 3) that scales can be developed, with good psychometric properties, which also measure threats being associated with own ageing and future old age, and 4) that there is a significant relationship between general attitudes to ageing and the level of threat being associated with later years.

3.2 Pilot Study: Exploring Attitudes via the World Wide Web

Given the paucity of research in this field, the aim of the pilot study to follow was to use the World Wide Web to explore the hopes, fears and concerns adults had for their own ageing and prospective old age. This new technology can offer revolutionary new opportunities for teaching and research. However, given the potential for biases in the recruitment and responses of participants (e.g. not everyone has online access), a second local sample group of participants were completed the same questionnaire but using the more traditional pen and paper format.

3.2.1 Pilot Study Participants and Procedure

The first online group were recruited via mainstream electronic bulletin boards; notices inviting people to take part in the research were placed in high exposure mainstream electronic message boards, including psychology-based survey sites, websites for seniors, literary or writing circles, and mainstream search engines. Netequitte was not breached and spamming (sending out mass emails via distribution lists) was not used. Participants (n = 942) completed the questionnaire online; to ensure confidentially and anonymity the system was set up so that all returned emailed responses would note the sender simply as 'null@soton.ac.uk'. Questionnaires were returned from many different countries, however the majority of web responses were returned from the United States and Britain. Demographic information for this web-sample can be seen in Table 3.1. A copy of this web-based questionnaire can be seen in Appendix 1.

A second local group of participants (n = 55) also completed a pen and paper version of the same questionnaire. This second group of undergraduate participants were recruited via a higher educational centre in Southampton. With agreement of course tutors, undergraduate students were asked at the end of a lecture if they would be willing to help with a study on attitudes to ageing being carried out as part of a postgraduate course. Students who agreed, completed the questionnaire at home in their own time, and returned these by post in enclosed prepaid enveloped. Recruiting undergraduates may bias the sample towards adults more able to articulate their ideas, however given the exploratory nature of the questions being posed, such a bias was deemed acceptable and necessary. Demographic information for this sample can also be seen in Table 3.1. A copy of this paper questionnaire can be seen in Appendix 2.

Table 3.1

Basic Socio-demographic Variables of Pilot Study Participants Recruited by the World Wide Web and By More Traditional Pen and Paper Format

Variables	Websample (all age groups)	Websample* (under 35s only)	Paper Sample
Age			
≤35	484 (51%)	484 (51%)	52 (98%)
36-49	203 (22%)	-	2 (02%)
50-64	187 (20%)	-	-
65+	68 (7%)	-	-
Gender			
Female	631 (67%)	343 (71%)	38 (71%)
Marital Status			
Single	486 (52%)	393 (81%)	45 (85%)
Married	342 (36%)	80 (16%)	08 (15%)
Education			
Non-graduates	412 (43%)	231 (48%)	53 (100%)
Graduates	530 (57%)	253 (52%)	-
Religion			
Christian	440 (46%)	225 (46%)	29 (54%)
None	137 (15%)	91 (18%)	6 (10%)
Finances			
Worse**	193 (20%)	126 (26%)	14 (26%)
Average	462 (48%)	248 (52%)	20 (38%)
Better**	294 (32%)	109 (22%)	19 (37%)
Country***			
U.S.	612 (65%)	N/A	-
Europe (U.K.)	236 (25%)	N/A	53 (100%)
Europe (Other)	47 (05%)	N/A	-
Canada	19 (02%)	N/A	-

Note: *Demographic details are given separately for young web participants so that direct comparisons could be made more easily with the participant group completing the paper version only as the latter group are mainly adults under age 35. **Worse/better than average, ***Country = the country or continent where the questionnaire was completed, N/A = information not yet available; this data were coded by hand collectively and not in the context of specific age groups.

In both the paper and the web questionnaires, participants were given quantitative and open-ended questions to complete. Quantitative measures included the Life Satisfaction Scale developed by Deiner and colleagues (Deiner, Emmons, Larsen & Griffin, 1985); this scale is reported to have good psychometric properties including high internal reliability scores (Cronbach's alpha of .85), good test-retest reliability (coefficients of .84), and significant

correlations in the expected direction with a range of other measures. Participants were also given open-ended questions asking about their thoughts, fears, hopes and concerns for the latter part of their lives and their beliefs about death and dying. Responses to these open-ended questions resulted in a very rich data set, covering just over 1500 A4 pages of data.

3.2.2 Pilot Study Data Analysis Strategy

3.2.2.1 Examining the Use of The World Wide Web as a Method of Data Collection

As summarised next, several statistical tests were carried out to examine the efficacy of the World Wide Web as a reliable method of data collection. All quantitative data were analysed using *SPSS Version 9 for Windows.*

Reliability of the quantitative measures; If the web is a useful method of data collection one would expect the quantitative data gathered using this method to have acceptable internal reliability; this is especially so if acceptable reliability is found for the control group of participants using the more traditional pen and paper version of the same scales. Cronbach's alpha was used to calculate the internal reliability value of the life satisfaction scale by Denier and colleagues (Deiner, Emmons, Larsen & Griffin, 1985); to be acceptable, scores on this test should be .07 or above. Cronbach's alpha is a standard way of measuring levels of consistency in the responses to given scale items. Assumptions underpinning this test include equivalence between items (i.e. that all items measure the same underlying construct), and unrelated errors in measurement parts, i.e. that performance on one test item or part does not influence performance on another test item or part. As noted by Green et al. (2000) a violation of the latter assumption could occur when items are linked together, or when scores depend on performance within an allotted time scale. The necessary assumptions for using this statistic were met in this pilot study.

Comparable mean scores; if the web is a useful method of data collection, one would expect mean scores on all quantitative measures to be comparable to those of participants completing the same questionnaires but using the more traditional method of pen and paper. This is especially the case if/when any known sample differences (e.g. in finances or education) are controlled. To examine the mean differences between both the web and the paper-format participant groups an independent t-test was carried out. As noted by Green et al. (2000) the advantage of an independent samples t-test over other analyses such as the one-way analysis of variance (ANOVA) is that the former calculates a score which does not assume that the population variances be equal. However according to Green et al. (2000) this assumption may be violated

when sample sizes are moderate to large which they suggest should be 15 cases or more per group; this assumption was therefore met in the current pilot study given that the smaller of the two sample groups had over 50 participants. In the current pilot study the dependent variable for this analysis was the life satisfaction scale (Deiner, Emmons, Larsen & Griffin, 1985); the grouping variable was the method of data collection group (web, paper).

Correlations between measures; if the World Wide Web is a good method of data collection one would expect patterns of associations between the quantitative measures to be similar for both the web and paper recruited participants. For example if associations between two given variables were significant for participants completing their questionnaires via pen and paper, but not for participants completing their questionnaires via the World Wide Web, this could indicate a problem with the web as a method of data collection which would warrant further investigation. To examine this issue, Pearson's correlations were carried out to examine the relationship between scores on life satisfaction and financial status between the two participant groups. It is expected that adults who are more satisfied with their lives will also express more positive feelings about their own ageing.

3.2.2.2 Analysing the Open-Ended Data

Data from the open-ended questions were analysed thematically; categories were continuously generated and amended as the researcher's thinking and understanding of the data became more refined. Initially, responses from the whole sample to individual questions were collated and read through repeatedly. This made it possible to get a sense of the data as a whole, which in turn provided a context for examining individual responses. A series of continual comparisons were then made to better understand what respondents were saying. This was carried out by comparing an individual's response to one question, with his/her response to another question. Similarly, a series of comparisons were made between an individual's response to one question and the response of others in the group to that same question. Each response was given a code and these codes formed categories that were continuously redefined in the light of new quotes and new data.

3.2.3 Pilot Study Results

3.2.3.1 Exploring the World Wide Web as a Method of Data Collection

By comparing the responses of participants via the web with those recruited from local venues who completed the same questionnaire via pen and paper, results suggest that the World Wide Web is a reliable and valid method of data collection.

Internal reliability; To examine internal reliability of the Life Satisfaction Scale, Cronbach's alpha scores were computed and found to fall within an acceptable range for all participant groups. For instance, as can be seen in Table 3.2, Cronbach's alpha score for this scale was .84 for participants using the traditional pen and paper format; for participants under 35 years taking part on the World Wide Web Cronbach's alpha score was found to be .85; for respondents of all ages taking part via the web Cronbach's alpha score was .86.

Comparing mean scores; An independent samples t-test was used to examine whether there were significant mean differences between both groups on the Life Satisfaction Scale. Results from the independent samples t-test indicated that there was no significant mean difference between both groups on life satisfaction, t (993) = 0.15, p = 0.87. As can be seen in Table 3.2 participants recruited via the World Wide Web had similar scores to those recruited by pen and paper; these results suggest that the World Wide Web is a useful method of data collection.

Correlating measures; Pearson product-moment correlation coefficients were used to examine the relationship between life satisfaction and the feelings participants had about ageing. As can be seen again in Table 3.2, similar patterns were found for participants recruited by pen and paper and the younger web participants only; for the young participants in both groups, life satisfaction was not significantly related to feelings about ageing. However, when all the age groups were combined for the web sample, a small but significant relationship was found. Although it had been expected that patterns of relationship would be the same for both formats

Table 3.2
Data Comparing Responses via Electronic and Paper Modes of Data Collection

Variable	Web (n = 942, all age groups)	Young Web Sample (n = 484, age < 35 years)	Paper Sample (n = 52, < 35 years))
Deiner Life Sat. Scale			
- Cronbach's alpha	.84	.85	.87
- Mean Score	21.2 (SD = 8.4)	20.9 (SD = 7.5)	20.8 (SD = 7.3)
Relationship between life satisfaction and age-associated feelings	r = .21, p < .01	r = .05, p = .23	r = .15, p = .33
Relationship between life satisfaction and difficulty associated with old age	r = .11, p = .11	r = -.23, p < .05	r = -.30, p < .01

Note; The web sample is further subdivided with younger participants' scores highlighted to make direct comparisons with the younger aged paper sample.

of data collection, these results indicate that these differences found may be a consequence of age differences rather than differences in the method of data collection; this is particularly likely given that similar patterns of relationships were found for young adults recruited both by the web and by the more traditional pen and paper format.

Pearson's product-moment correlation coefficients were also used to examine the relationship between current life satisfaction and the level of difficulty respondents associated with their own ageing and future old age. As can be seen again in Table 3.2, a significant relationship between these variables was found for the websample but not for the paper sample, i.e. for the websample as a whole, current life satisfaction was not associated with the level of difficulty being associated with their own future old age, however for the paper sample respondents who are more satisfied with their lives associated the latter part of their lives with lower levels of difficulty. When this analysis was repeated with the younger web participants only, similarly associations were found to those of the paper sample, i.e. results were comparable for the younger age groups irrespective of the mode of data collection. These results indicate that the web is a useful and valid way to gather data.

3.2.3.2 Exploring Age-Associated Attitudes

Data to the open-ended questions was analysed thematically, and found to provide rich insights about the nature of age-associated attitudes; the quotes to follow are from participants recruited in this pilot study.

3.2.3.2.1 Positive Attributes and Experiences; Relationships, Hobbies and Continued Growth

Many of the respondents expected to find enjoyment and pleasure in warm and loving relationships with others, including spouses/partners, children and grandchildren: 'I feel that having close family and friends as one ages is very important' (Sue, age 32); 'I look forward to seeing my children grow up and develop ..., watching their achievements and spending good quality time alone with my husband ... sharing and doing the things we have had to put on hold to support our children' (Eileen, age 49) and 'Living is a process, and the skills you develop are, or should be transferable. ... I have been happily married for years ... There is something very comforting in the familiar in a world that is constantly changing. It's not that we have separate beds and flannel nightclothes - it's more like a well banked fire where the warmth is constant, but you know all you have to do is poke it and the flames will be as strong as ever. As the years go by that is what matters' (Teresa, age 48).

A source of expected pleasure and joy for many participants was the prospect of increased growth and development, and the pursuit of hobbies and leisure facilities; 'at this time, I like the idea of growing old. I believe that with each year I live, I will become a better person. I will grow stronger, wiser, more confident, considerate, etc. as time goes on' (Helen, age 30), and 'Wisdom. I know so much more now than I did at any age before. I know I did not have a clue then. I am learning and experiencing new things every day, I guess in search of .. "self actualisation". I still have a long way to go though' (Kathleen, age 42). Participants also expected to enjoy leisure pursuits in their later years, including pleasure in reflecting and/or accepting past choices made: 'I'm looking forward to getting old. I think really old age (70+) will be fun because you can be crazy and people just attribute it to you being old' (Alison, age 21).

3.2.3.2.2 Concerns, Worries and Fears; Poor Health, Dependence and Challenged Identities

However, definitions of attitudes based on levels of favourability or unfavourability (see Eagly & Chaiken, 1993) did not capture the tone of many negative responses which often reflected an endangering reality for many people. For instance, when asked what ageing meant to them and how they felt about the latter part of the lifecourse, threatening responses included: "suffering, dying, slow and painful, restricted, waiting for the end" (John, age 20); 'death, wrinkles, age-spots, grey wiry hair, hospitals, IV tubes, not being able to care for myself, sickness, torture, anguish' (Ellen, age 45); "I will take increasing physical risks as I age to ... end my life in an extreme manner so I don't have to face old age" (Mike, age 36); "I hate it. I have lived a diverse, challenging and independent life, and it appears to be all down-hill from here" (Sandra, age 67); "I find the prospect of dependence on others unbearable. The .. only reason I do not commit suicide is because my partner loves me a lot" (John, age 58) and "the thing I fear most is ... losing my independence" (Thomas, age 45).

For many people, the prospect of old age was a threat because it contradicted or challenged prized images and identities constructed of the self; "I am concerned about being dependant. If I find I am going to become that I will take my own life. I have always carried my own weight and could not exist unless I can do so" (Jennifer, age 66) and "I do not like limiting factors such as physical aches and pains, lowered energy and the nuisance of losing hair and developing orthopaedic problems that require a doctor's attention. I despise having to see a doctor for insignificant problems that need to be attended to now to save me further distress in the future" (Mary, age 58).

3.2.4 Pilot Study Discussion

This pilot study sought to explore the use of the World Wide Web as a method of data collection, and to explore adults' thoughts, hopes and fears for their own ageing and future old age. Although more research needs to take place on this issue and with more quantitative measures, evidence was found in this pilot study to indicate that the World Wide Web is a useful method of data collection; the quantitative measure used had good internal reliability, and responses were similar between participants recruited electronically and those recruited using the more traditional method of pen and paper. Mehta and Sivadas (1995) also found no significant differences in responses to the same questions administered in both paper and electronic format.

Although the use of the World Wide Web is still a novel way to gather data, it is likely that this tool will become a more usual mode of data collection in the future given its many advantages. For instance, this technology allows greater numbers of participants to be recruited from wider geographical areas. In addition, as responses are returned already in electronic format more time can be spent away from data entry and on the more sophisticated aspects of the research including running more than one study simultaneously. Furthermore, the World Wide Web offers additional opportunities to recruit a wider range of participants from different groups, cultures, and countries. This benefit is especially important given the wide heterogeneity known to occur in later life between people. Although unfortunately many people still do not have the technical, financial or linguistic resources to make use of this new technology (e.g. the bulk of websites are still written in English only), this state should change over time, particularly given greater access to technology via libraries, or public wi-fi (wireless) local area networks/ hotspots.

In examining responses to the open-ended exploratory questions, many rich insights were made available about the thoughts, hopes and fears adults had with regard to their own ageing and future old age. Additional quotes from this rich data set will be reported through this thesis. While many participants held positive views about the latter part of their lives, many others held very negative views and images of their later years, more consistent with high levels of danger and threat rather than simple negative evaluations. Surprisingly however, few researchers have examined age-associated attitudes, and even less have explored or examined age-associated attitudes in the context of threat and danger. One exception is the work by Brandtstädter and colleagues (e.g. Brandtstädter & Rothermund, 1994; Brandtstädter, Rothermund & Schmitz, 1998; Brandtstädter, Wentura, & Greve, 1993); however, even then, potential age-associated threats are not explored or examined directly, but in terms of their consequences and implications for identity.

To summarise, the World Wide Web offers a useful way for researchers to collect data in a short space of time, and from large populations recruited across many different cites and countries. Although only a brief summary of this data gathered is given here, additional quotes will be made available form this study through this thesis. In addition to being informative in themselves, responses to the open-ended questions were used to develop possible items for new scales measuring in different ways adults' attitudes to their own ageing and future old age. The development of possible items for new attitudinal measures is now described.

3.3 Developing Possible Items for the General Attitudinal Measure

The second main aim of this chapter was to develop possible items for a new scale measuring adults' general attitudes to their own future old age. Possible items for this and other new scales were developed from the above pilot study data with consideration for the issues outlined next.

3.3.1 Content Validity

Possible items for the new General Attitudes to Ageing Scale (GAAS) were derived mainly from the pilot study (see section 3.2 above) in which adults were asked to describe their hopes, fears and concerns for their own ageing and future old age. From this work, almost 30 items were developed for possible inclusion in the final scale. Statement items for the proposed General Attitudes to Ageing Scale reflected positive and negative statements about later life; negatively worded statements included: 'I see my own old age mainly as a time of loss' and 'I worry I will have nothing to offer anyone when I am old'. Positively worded items included statements like: 'old age can be a happy time of life' and 'I feel content about my own ageing'. Other items were included from research by Coleman et al. (1993). Following discussions with other researchers in this field several of the possible questionnaire items were dropped, changed and/or re-worded for clarification before it was felt that these items were ready to be tested.

3.3.2 Controlling for Social Desirability Biases in Responses

Adults may not wish to acknowledge any fears or concerns they have about the latter part of their lives. In addition, some adults may be motivated to answer more positively than they actually feel in part to maintain the esteem and respect of others, especially younger generations. In the current study, a number of steps were taken to address potential problems of social desirability in responses. Firstly, the construct of attitudes is likely to be much less threatening for respondents than asking them about their level of anxiety. Secondly, to

encourage people to express any concerns they might have about their own ageing, respondents were asked to complete the questionnaire anonymously. It was also stated on the covering letter that some people do have concerns and fears about their own ageing, thus normalising these concerns. Similarly, participants were told that the scale items were composed of statements other people had made. These strategies may reassure respondents and give them more confidence to express any negative attitudes that they have. Other steps taken to reduce the level of threat included balancing questionnaires and questionnaire items so that the overall tone would not be either very positive or very negative.

3.3.3 Avoiding Undue Negative Biases in Responses

Although one must encourage participants to communicate freely their concerns and fears about ageing, researchers must be equally careful not to induce negative biases in responses which could skew or even invalidate findings (see Kremer, 1988). In the current study, undue negative biases in responses were avoided in a number of ways. Firstly, the tone of questionnaire items was neutral, e.g. instead of using the phrase 'old people' which might have negative connotations, the terms 'older people' or 'older adults' were used. In addition, the items aimed not to be too serious or threatening for respondents; not only would this be unacceptable ethically, but in many cases, it is likely that the negative stereotype will be rejected. For example, the respondent may not complete the questionnaire if it does not hold some resonance or validity for them personally; alternatively, they may respond in ways that are excessively positive. Balancing items so that participants were asked about the positive experiences they also associated with the latter part of their lives helped to avoid negative biases in responses. Drawing on the pilot study data, examples of positive experiences in later life included having a more balanced view on life, more free time, greater self-acceptance and improved self-confidence.

3.3.4 The use of Five-Point Likert Type Scale

A five point Likert-type scale was the response format used in most of the scales developed in this study. This format was chosen for a number of reasons. The use of a five-point Likert-type scale was likely to increase the reliability and range of responses. Specifically, rather than forcing participants' responses into a 'true/false' scale format, or even a 'true/false/don't know' format, a five-point Likert-type scale allows participants greater freedom in their responses and consequently, increases the range and validity of responses. This format is also easy for respondents to complete.

3.4 Exploring the Relationship Between Attitudes and Threat

The research to follow also aimed to consider the relationship between the general level of favourability/unfavourability being associated with the latter part of the lifecourse, and the level of threat being associated with this time of life. As already stated, definitions of attitudes in terms of favourability or unfavourability may not adequately capture the nature of age-associated evaluations, why they are there or the mechanisms through which these can influence later development and health. Reconsidering age-associated attitudes in terms of threat could address this potential problem. Possible threats with one's own future old age were identified in two ways; by drawing on the gerontological literature and by drawing on the exploratory data from the initial pilot study described earlier.

3.4.1 Controllability

Adults who view their own ageing in threatening ways would be expected to associate the latter part of their lives with less control. Maintaining a sense of control is critical to many definitions of mental health (Jahoda 1951; Ryff 1992) and a key issue in successful ageing (Heckhausen & Schulz, 1997). Lack of felt control can be anxiety provoking, and alongside other factors (as below), indicative of high levels of threat in the clinical literature (e.g. see Menzies & Clarke, 1994; Rapee, 1997; Williams & Watson, 1985; Zane & Williams, 1993). A perception of control with regard to the experience of later life can mean individuals have better quality of life, e.g. adults can be more motivated to engage in exercise or more healthy dietary behaviours. In the current research it was expected that more negative attitudes towards one's own prospective old age would be associated with perceptions of having less control across a range of experiences in later life.

3.4.2 Severity of Outcome

Adults who viewed the latter part of their lives in threatening ways, would also be expected to view this time of life as having serious outcomes for the self. Evidence to support the relationship between threat and severity of outcomes comes from the work of clinical psychologists. For instance, by comparison with their non-acrophobic counterparts, adults with a fear of heights tended to give higher estimates about the seriousness of injuries that would result from a potential fall (e.g. see Menzies & Clarke, 1995). Drawing on data from the first exploratory Web study (see pilot study above) potentially serious outcomes for the self in later life can include needing help from others, ill health, disability or chronic pain, and/or few positive or enjoyable experiences.

3.4.3 Susceptibility or Likelihood of Occurrence

However it is possible that the potential problems summarised above will only become a threat if the individual believes that there is a reasonable likelihood that he/she is personally at risk. In clinical studies for instance it has been found that adults with a fear of heights or spiders report an excessively high probability of injury from these sources of threat. In an experimental study for instance, Menzies & Clarke (1995) recruited patients with a phobia around heights and a matched group of control participants. Participants were told that the experimenter was interested in their views about height-related scenes; from the ground, participants were asked to rate a ladder scene on a range of dimensions, including the probability of falling when at different heights. A significant difference between the two groups was found with the high phobic group expressing a significantly higher probability of falls than the control group. In a similar way, if adults evaluate the latter part of their lives in threatening ways, one could expect their later years to be associated with a high likelihood of aversive experiences occurring and a lower likelihood of positive experiences occurring. Examples of positive experiences can include gaining more confidence in later life, being accepted more by others, and enjoying life more.

3.4.4 Age-associated Threats of Time

Adults who evaluate the latter part of their lives in threatening ways, would also be expected to report greater anxiety about the finite nature of time. Although later life can offer opportunities for a range of positive experiences and attributes (e.g. leisure activities, time to enjoy relationships with children and grandchildren), viewing time negatively can include a greater recognition for receding opportunities to fulfil goals (e.g. Baltes, 1996), an increased awareness of time until death, and/or a greater worry about losing parental or work roles. With age can come despair (Erikson, 1982) and 'anguish' (Kirkwood, 1999; 10) at the growing realisation that time is moving forward and that life cannot be re-lived. Evidence to support the notion of time as an important factor in later years can be seen in a quote from Schroots (1996); "In Chester cathedral there is a clock which reads "For when I was a babe and wept and slept, Time crept / When I was a boy and laughed and talked, Time walked / Then when the years saw me a man, Time ran / But as I older grew, Time flew".

3.4.5 Age-associated Threats of Possible Dependency

Another possible threat identified from earlier empirical research (see pilot study) was

dependency and lost autonomy. Bowlby (1979) rejected the negative connotations of dependence on others to argue instead that attachment relationships (where strong emotional bonds occur between people) are highly desirable throughout the lifecourse. Nevertheless, reliance on others in later life is a source of concern as can be seen in the quotes from participants in the initial pilot study; "I am concerned about becoming dependent. If I were to become that, I will take my own life" (Margaret, 66 years); "I find the prospect of dependence on others unbearable. The .. only reason I do not commit suicide is because my partner loves me a lot" (John, age 58); "I'm scared of ... not being able to fulfil my own needs" (Michael, age 22) and "the thing I fear most is ... losing my independence" (Tom, age 45). Adults evaluating the later part of their lives in threatening ways were expected to evaluate reliance on others very negatively.

3.5 Summary and Research Goals

To reiterate, the goals of Study 1 were as follows:

1) to draw on the above open-ended data to develop and test the psychometric properties of a new scale measuring the general level of disfavour adults associated with the latter part of their lives; it was expected that a general attitudes to ageing scale could be developed which would have good reliability and validity,
2) to develop psychometrically sound measures of possible threats being associated with later life; it was expected that age-associated threat based measures could be developed which would have good psychometric properties, and
3) to examine the relationship between threat based measures and general attitudes to ageing. Age-associated threats were identified from current literature (e.g. Croake et al., 1988) and from the initial pilot study (see above). These new measures included the Dependency Fearfulness Scale, the Ageing Controllability Sale, and the Ageing Seriousness Scale.

3.6 Study 1: Method

3.6.1 Participants

Participants from social and dance events, typically linedancing, were recruited to this study from a city in the south of England: social and dance centres were chosen mainly because they enabled a comparable group of participants to be recruited from all adult age groups and both genders. In addition, given the possibility that some participants might experience distress

in thinking about the latter part of their lives, this sample was chosen because they were generally in good health and with a wide social network within which they could discuss any worries or concerns that may arise. (See the section to follow on procedure for more information on the ways respondents were recruited.)

Table 3.3

Basic Socio-demographic Variables of Study 1 Participants by Age Group (n=158)

Variables	**<35**	**35-49**	**50-64**	**65+**
Gender				
Male	6 (25%)	11 (31%)	15 (34%)	19 (35%)
Marital Status				
Single	6 (25%)	6 (17%)	3 (6%)	-
Married	11 (45%)	20 (57%)	30 (68%)	37 (68%)
Education				
School	9 (37%)	15 (42%)	9 (20%)	39 (72%)
Cert/Diploma	11 (45%)	15 (42%)	21 (47%)	10 (18%)
Degree	4 (16%)	3 (8%)	10 (22%)	3 (6%)
Adv. Degree	-	1 (3%)	1 (3%)	1 (2%)
Children				
None	6 (25%)	6 (17%)	7 (15%)	1 (2%)
One	6 (25%)	6 (17%)	10 (22%)	7 (13%)
Two +	12 (49%)	22 (63%)	27 (63%)	40 (83%)
Religion				
Christian	8 (33%)	16 (45%)	28 (63%)	39 (72%)
None	13 (54%)	18 (51%)	14 (32%)	13 (22%)
Finances				
Worse*	3 (12%)	8 (20%)	6 (12%)	5 (8%)
Average	15 (62%)	21 (60%)	23 (52%)	31 (57%)
Better*	6 (24%)	7 (20%)	14 (32%)	18 (32%)

*Note: * = than average,*

Participants from both genders and from across the complete adult age range were recruited to one of four age bands: young adults (aged 20 - 34), young mid-life adults (aged 35 - 49), older mid-life adults (aged 50 - 64) and older adults (adults aged over 65). Participants were divided into these four categories, rather than the more typical three age categories (young, mid-life and older adults) in order to make increasingly refined observations about attitudes in the different age groups. However, given the relatively small sample size in the age group of adults over age 65 years (n = 54), it was not feasible to make further distinctions between 'the younger old' and the 'older old' as some researchers have done. Basic descriptive data on participants can be seen in Table 3.3.

3.6.2 Procedure

Participants were recruited from social and health events in the following way. With the permission of the manager or co-coordinator of the social event, potential participants were recruited typically in the reception area of the venue before the class or session they were attending had begun. Participants were asked if they would be interested or willing to take part in a psychology study that would involve them completing a questionnaire at home and returning it in the enclosed prepaid envelope. When an interest was expressed, participants were informed that the study sought to explore adults' attitudes towards the latter part of their lives. It was made clear to participants that they were under no obligation to take part in the study; this was done both verbally and in the covering letter. Furthermore, given that many participants were approached at times when they were in small groups of two or three, steps were taken to make it easy for participants to decline participation if they so wished. Specifically, reasons were given why some participants may not wish to take part in the research, e.g. it was openly stated that the questionnaire was long and would take some time to complete. However very few people declined to take a questionnaire. In addition, of the 200 questionnaires originally distributed, 158 completed questionnaires were returned giving a response rate of 79%. Names or other identifying information were not requested from participants at any time; it was hoped that anonymity would lessen the probability of participants responding to the questionnaire in socially desirable ways. A copy of the questionnaire can be seen in Appendix 3.

3.6.3 Measures

Participants were asked to answer some demographic questions, some newly developed measures which were in line with the aims of the current study and a range of other measures which were included to consider the external validity of the newly constructed scales. As outlined next, the latter set of measures included the Anxiety about Ageing Questionnaire (Lashner &

Faulkender, 1992), the Ageing Opinion Survey (Kafer *et al..,* 1980), The Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971) and the Facts on Aging Quiz (Palmore 1977). The Marlow Crowne Social Desirability Scale (Crowne & Marlow, 1960) was also included.

3.6.3.1 General Attitudinal/Ageing Measures

The General Attitudes to Ageing Scale (GAAS): Possible items for this measure were developed from the exploratory pilot study. Possible were discussed with a small group of gerontologists for content, relevance and clarity; some items were dropped and others rephrased. A total of 27 evaluative items about later life (see section 6 of this questionnaire) were included in this study for testing. Participants were asked to rate all these items on a five point Likert-type scale from strongly agree to strongly disagree in the direction of negative attitudes to own future old age. In later analysis however, only ten of these 27 items were independently rated by five doctoral level researchers as being general rather than specific; the latter included any item relating to physical (e.g. health), social, psychological (e.g. personality) or economic aspects of later life. Although an attitudes to ageing scale could have included subscales of specific as well as general items, the priority in the current study was the development of a short, general attitudinal scale. Consequently, only these ten items agreed as being general rather than specific were included in this analysis. Examples of items included 'There is nothing positive about old age' and 'Old age can be a happy time of life'.

Anxiety about Ageing Questionnaire (Lashner & Faulkender, 1992)*:* To provide external validity for the General Attitudes to Ageing Scale, the Anxiety about Ageing Questionnaire of Lashner & Faulkender (1992) was included. Examples of items included 'it doesn't bother me at all to imagine myself as being very old' and 'I fear that when I am very old all my friends will be gone'. Although Lashner & Faulkender (1992) report good internal reliability for this scale, there is as yet no data on this scale from a UK-based population.

The Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971): A second measure of anxiety about ageing came from a sub-scale of the Opinions about People Scale. This scale consists of five scale items, all graded from 4 (low) to 5 (high). The statements are as follows; 'Old age is a worry for me', 'I cannot help feeling depressed at the thought of getting old', 'It is rather sad to be still alive after all your friends are gone', 'The future is so uncertain that there is little point in thinking or planning ahead' and 'It must be quite a shock to look in the mirror and find that you are showing signs of ageing'. Test-retest

reliability as reported by Down-Wamboldt & Melanson (1990) is .60, and Wullschleger et al. (1996) report Cronbach's alpha of .62 for this scale in their study.

Ageing Opinion Survey (Kafer *et al.*, 1980)*:* A third external measure to validate the GAAS came from the attitudes toward own ageing scale of the Aging Opinion Survey (Kafer *et al.* 1980). The items on this scale are graded on a five point Likert-type scale from strongly disagree (1) to strongly agree (5). The items for this measure include: 'I always dreaded the day I would look in the mirror and find a gray hair', 'I fear that when I'm older all my friends will be gone', 'The thought of outliving my spouse frightens me' and 'the older I become the more anxious I am about the future'. Internal reliability for this scale however is only minimally adequate with non-UK samples, i.e. reported Cronbach's scores for males and females respectively were .60 and .52 (Montepare & Lachman 1989).

Perceptions of general favourability of own ageing: This measure asked respondents to summarise on a five point Likert-scale their feelings about their own ageing (from very positive to very negative). The second generalised measure of ageing was a single item measure asking people whether they expected their own ageing to be difficult or problematic. Responses were rated on a five point Likert-type scale from yes very difficult (5) to not at all difficult (1).

3.6.3.2 Threat-based Measures

Ageing Controllability Scale: Following the example by Brandtstädter & Rothermund (1994) this scale asked participants to rate the level of control they felt they with over thirty positive and negative experiences that could occur in later life. Areas of experiences included physical health, autonomy, independence, the development of wisdom and maturity, the ability to take a wider perspective on life, a comfortable standard of living and respect from other people. Participants were asked to rate on a seven point scale, the level of control they felt they had with each of these experiences. Items were scored in the direction of higher levels of control.

Susceptibility Scale: Taking each of the above items in turn, participants were also asked to rate the likelihood that these experiences would occur in the latter part of their lives. Participants were asked to rate each item on a five point scale from **1** (not very likely), to **5** (very likely).

Ageing Seriousness Scale: Participants were also asked about their feelings towards using certain aids to functioning if these should be needed. It was hypothesised that greater reluctance to use these aids would be indicative of a higher level of threat being associated with these. Examples of aids included the use of hearing aids, walking sticks, glasses, special cutlery,

home-helps, warden-controlled accommodation, and rest homes. Responses again were on a five point scale.

Favourability of Time Future Scale: Favourability of Time Future Scale aimed to assess the general favourability or otherwise with which time future was being evaluated; this scale included items asking about the use of time around possible positive and negative experiences in later years. Examples of positive items from this scale included 'I am looking forward to having more time to spend with others in my old age' and 'One of the nicest things in old age will be in having more time to do the activities that I want to do'. Examples of the negative experiences with time future included 'As I get older, it really bothers me that time is running out', 'in my old age, I expect I will feel incredibly sad that I cannot live life over again' and 'I really worry about fitting everything in before I reach old age'. As with most of the newly developed scales, participants were asked to rate each item on a five-point scale in the direction of more negative attitudes to time future.

Dependency Fearfulness Scale: Dependency Fearfulness Scale consisted of 35 evaluative statements about possible dependency on others; these items were developed from the first pilot study in which participants described their thoughts, hopes and fears for the latter part of their lives. This number of items was included mainly to have a large pool from which the final set of items for this new measure could be chosen. Examples of items included 'it is reasonable to ask for help on occasion', 'I would really hate to get an illness or disease that made me dependent on others in my old age' and 'I would rather die, than have someone help me bath or dress'. Participants were asked to rate their level of agreement with each item on a five point Likert-type scale.

3.6.3.3 Miscellaneous/Rival Measures

Knowledge of Ageing (Palmore, 1977): The measure for knowledge about ageing was the Facts on Aging Quiz (Palmore, 1977). Although a number of researchers have identified problems of theoretical and psychometric problems with this scale (see Chapter 2), this scale was used to assess its psychometric properties with a UK population. This measure was also included to consider the relationship between general attitudes to the latter part of the lifecourse and the level of knowledge adults had about the latter part of their own lives.

Social Desirability Scale: The Marlowe-Crowne Social Desirability Scale (Crowne & Marlow, 1960) measures an individual's need to present him/herself in a favourable light to

others. This measure was included to examine the relationship between social desirability and age-associated attitudes.

Current Life Satisfaction: The Satisfaction With Life Questionnaire (SWLQ) used in this study came from Deiner *et al.*. (1985) and assesses cognitive-judgmental aspects of global life satisfaction. Examples of questions include "I am satisfied with my life" and "In most ways, my life is close to my ideal". For each of five items, participants were asked to respond on a 7-point Likert type scale, ranging from strongly disagree to strongly agree. Results from a number of studies *indicate* that the scale does have favourable psychometric properties. For reliability Neto (1993) reports satisfactory internal consistency (alpha = .78 and .87 for American undergraduates) for this scale. Two month test-retest correlation coefficient was .82 (coefficient alpha = .87) indicating favourable stability scores. In further studies looking at the relationship between the SWLQ and other measures of subjective well-being Deiner *et al.*. report finding moderate to strong correlations indicated good validity.

3.7 Data Analysis

All data were analysed using *SPSS Version 9 for Windows.*

3.7.1 Exploring the Reliability and Validity of the Newly Developed Scales

3.7.1.1 Internal Reliability: Consistency and Stability

Reliability refers to the consistency and stability of a given measure, i.e. the extent to which items are similar in content, and particularly, under similar conditions at different time points (Robson, 1995). Scores on this measures range between 0 and 1: although scores between .6 and .7 can indicate only moderate reliability, scores on this scale should be above .7 to indicate good internal reliability scores. (Stability was tested in the final study of this thesis when participants were asked to complete the same measure over a two-month period.) Assumptions underpinning this analysis have already been discussed (see Chapter 2) and these include normality of distribution and equivalence between items; these assumptions were met in Study 1.

3.7.1.2 External Validity

Validity in contrast, refers to the extent to which a given scale measures what it purports to measure. As discussed in the previous chapter however, validity can be further defined in a range of ways including: a) face validity (a subjective but expert assessment examining the appropriateness of items to a given theme), b) construct validity (the extent to which test items capture the theoretical quality or construct it was designed to measure), c) concurrent validity (the extent to which a measure relates to other scales claiming to measure the same construct), and d) predictive validity (the extent to which scores on a given test, predicts performance on other measures). In the

current research, the validity of the General Attitudes to Ageing Scale was assessed by having a small group of gerontologists review the items (face validity), and by correlating the final measure with other scales claiming to measure a similar issue (concurrent validity). Assumptions underpinning correlation coefficients are discussed in the section to follow.

3.7.2 Examining the Relationship between General Attitudes and the Threat-Based Measures

3.7.2.1 Exploratory Factor Analysis

Factor analysis is a statistical technique used to reduce a large number of items to a smaller number of factors, and to provide information about the internal structure of a given scale including the level of cross loadings or overlap between different subscales. As noted by Tabachnick & Fidell (2001), factors are thought to reflect underlying components or processes that have created the correlations between variables. In examining the relationship between multiple factors or subscales, one can also establish that cross loadings between variables is minimal, i.e. that any significant relationships later found are not attributable to overlap in questionnaire items or concepts.

Following item selection and measurement, principle components factor analysis was carried out in three further main stages; factor extraction to pull out salient factors, factor rotation to make factors more meaningful and then analyses to interpret the results in meaningful ways. To determine the number of factors to be extracted, two criteria were employed: the value of the eigenvalues and the scree plot. Eigen values refer to the amount of variance which is accounted for by a factor; these values should be greater or equal to zero but should not exceed the total variance. Although Green et al. (2000) note that several criteria have been proposed for deciding the number of factors to be extracted, one criterion is to retain all factors that have eigen values greater than one. A more accurate way is to examine the scree plot which is a plot of the eigenvalues also known as the scree test; in this instance the researcher examines and extracts the number of factors with eigen values in the sharp decent part of the plot before the eigenvalues start to level off. Once the number of factors to be extracted is determined, factors then typically need to be rotated to make them more interpretable. Rotated factors can be uncorrelated (orthogonal) or correlated (oblique) and the most popular rotational method Varimax leads to orthogonal factors. A final stage of the factor analysis is interpreting the results; this aspect can be largely a pragmatic issue, but interpretability can be made easier when the observed variables/items correlate highly with this factor not others.

As noted by Tabachnick & Fidell (2001) several practical realities and assumptions underpin factor analyses. The researcher must make his/her enquiry sufficiently broad as failure to measure an important factor can distort the relationships between the measured factors. Each factor needs also to have items that clearly relate theoretically to the factor of interest; ideally, then, these should correlate with only one factor. It is also important to check for outliers or poorly distributed variables as these can skew findings and the factors that may emerge. Assumptions of normality also underpin factor analysis which can be tested through the use of the Kolmogorov-Smirnov Test as summarised below. Furthermore, sample sizes need to be sufficiently large so that correlation coefficients are reliable; although exploratory factor analysis can be done with about 100 respondents, this figure should ideally be nearer to 200+ respondents.

Factor analyses have a number of strengths and limitations. As noted by Tabachnick & Fidell (2001) a problem with factor analysis is that there are an infinite number of rotations available which necessitate a judgement call by the researcher about the interpretability and utility of the analyses and the factors decided. This range of options means that researchers can often have different opinions about the number of factors which should be rotated, how these should be interpreted and their scientific usefulness. This complexity is more difficult given that there are no criteria through which to test the solution. Specifically, in many analyses (e.g. multivariate analysis of variance) results can be judged on how well group membership is predicted, however in factor analysis there is no external criterion such as group membership against which the solution can be tested. Significant strengths however of factor analysis include its ability to reduce a large number of items/variables to a smaller and more manageable number of factors; this in turn can lead to concise descriptions and summaries of the relationships between the observed variables. In addition, through factor analysis results, items for questionnaires can be added and removed, before being re-tested with other populations; therefore, through an ongoing process of analyses this tool can play a vital role in ultimately enabling the researcher to emerge with a measure that adequately represents a given area.

3.7.2.2 Pearson's Correlations

To consider the relationship between two sets of variables, Pearson's correlations were used; assumptions of normality and specificity underpin this test. To test whether measures were normally distributed the one sample Kolmogorov-Smirnov Test was used. The value of this test is based on the largest absolute difference between the observed data and the theoretical distribution, i.e. this goodness-of-fit test tests whether the observations could reasonably have

come from a pre-specified theoretical distribution. In this study, measures did conform to normality as assessed by the one sample Kolmogorov-Smirnov Test. A second assumption underpinning the use of Pearson's correlations is that there is equality of the group covariance matrices; this assumption was tested using Box's M test. The *F* test from the Box's M statistics should be interpreted cautiously however because this test is sensitive to departures from normality, e.g. a non-significant effect can also be a consequence of a lack of power or a small sample size. A strength of this analysis is that the correlation coefficient is a useful measure of the degree to which quantitative measures are linearly related. To examine the relationship between multiple variables a multiple regression analysis was used as discussed briefly next.

3.7.2.3 Multiple Regression Analysis

Regression analysis allows researchers to assess the relationship between one dependent variable and several independent variables. As noted by Tabachnick & Fidell (2001) there are three main types of multiple regression: 1) standard multiple regression where all independent variables enter the regression equation at one time and each is assessed as if it had entered after the other independent variables, 2) statistical or stepwise regression in which the order of the variables entered is based solely on statistical criteria, and 3) sequential or hierarchical regression in which independent variables are entered in the order specified by the researcher. The latter analysis was the one used in the current study. The decision about the order in which the independent variables are entered can be based on theoretical or logical considerations; although the independent variables that have more importance theoretically can be entered first, the opposite strategy was used in the current research. Specifically, in the current study, sequential regression analysis was conducted to examine the amount of variance in general attitudes to ageing scores that could be explained by the threat based variables, once demographic and rival variables had been entered or controlled.

In the current study, the criterion or dependent variable for the hierarchical regression analysis was the General Attitudes to Ageing Scale (GAAS). The independent variables in contrast were demographic variables, rival variables and threat based variables. Specifically, the first set of independent variables to be entered were demographic variables (i.e. education, finances and age group) as these could provide as base from which further analyses could take place; it was also possible that demographic variables can contribute some of the variance in age-associated attitudes. The second set of independent variables to be entered were rival explanations for attitudes; these included knowledge about ageing (Palmore, 1977) and current

life satisfaction (Deiner *et al.,* 1985). Once these variables were entered and controlled, the final set of independent variables to be entered was the threat-based variables; these included perceived controllability with age (control over both positive and negative experiences), social support and dependency fears, time future positive and negative, and the general level of difficulty being associated with own future old age. These predictor variables were entered in analysis with entry to the model set at $P < .05$ and removal set at $P < .05$.

There are a number of indices to determine how well the independent variables predict the dependent or criterion variable. The multiple correlation (R) is the correlation between the predicted criterion scores and the actual criterion scores. R ranges in value from 0 to 1; while 0 means that there is no linear relationship between the predicted scores and the criterion scores, a value of 1 implies that the independent variables provide a perfect fir or prediction for the criterion variable. To help interpret the values of R, R can be squared and multiplied by 100 to get a percentage of the variables accounted for by the independent variables. For example, an R^2 value of .30 indicates that 30% of the criterion variance is accounted for by its linear relationship with a given independent variable. A change in R^2 is the difference between an R^2 for one set of predictors and another. The value in R^2 ranges from 0 to 1 and is interpreted for instance as an increase in the percent of criterion variance accounted for by including two sets of predictor variables in the regression analysis rather than just one set of predictor variables. Parameter estimates in multiple regressions refer to the unstandardised regression (B weights). A B weight for a particular independent variable represents the change in the criterion associated with one-unit change in that predictor variable, with all other predictor variables held constant. Tabachnick & Fidell (2001) however note that caution is needed in interpreting these results, given that the accuracy of parameter results is dependent on the assumptions of multiple regression analyses being met. These assumptions are summarised next.

As noted by Green, Salkind & Akey (2000) several sets of assumptions underpin the use of regression analyses. The first assumption in the use of this test is that the independent variables are normally distributed; however if this assumption is violated these authors note that this test statistic can still yield accurate results with moderate to large sample sizes. Another assumption underpinning this test is that scores on the variables are independent of other scores on the sample variables; if this independence assumption is violated the F test for regression analyses yields inaccurate p-values.

A strength of multiple regression analysis is that it can be used with continuous or dichotomous IVs (by converting the latter into dummy variables); this analyses also allows the researcher to ask many questions, including the relative importance of some independent variables over others. Some limitations however include difficulties in establishing causality which is an experimental rather than a statistical issue. Similarly, regressions are sensitive to the combination of variables which are entered, e.g. if a given variable is the only one to be entered it can appear more important than if this same variable was entered as the last of several. For this reason, the threat based variables were entered last in the current study, i.e. it was of interest to understand how much of the variance could in attitudes to ageing be explained once rival variables had been entered and controlled.

3.7.2.4 Effect Sizes

In many of the analyses reported through this thesis, the test statistic eta square (η^2) was used to calculate effect sizes; values on this test range from 0 to 1, with higher scores indicating stronger effect sizes.

3.8 Results

Results are presented in three sections in line with the three main research questions being addressed in this study. The first section, 3.8.1 reports on the psychometric properties of the General Attitudes to Ageing Scale (GAAS) including it's internal reliability, factor structure and external validity. In the second section, section 3.8.2, data is reported on the psychometric properties of the other scales used in this research and particularly those scales specifically developed for the current study. Once it has been established that these measures are reliable and valid, the final results section, section 3.8.3, then examines the relationship between these variables and particularly, the relationship between general attitudes and the threat-based measures.

3.8.1 The General Attitudes to Ageing Scale (GAAS)

3.8.1.1 *Item Analysis*

To decide on the total number of items that should be retained within the General Attitudes to Ageing Scale (GAAS) item-to-total correlations were carried out with the ten possible items for this scale (section 6, items 3, 8, 9, 12, 17, 20, 21, 22, 26, 27); the meaning and theoretical contribution of each item was also examined. The decision to remove an item was based both on its low item-total correlation (i.e. when $r < .55$), and also with consideration for the impact the removal of the item would have, e.g. not to remove a well-written item if this

action then compromises the content coverage of the scale. These analyses led to the removal of three items for psychometric reasons: these were items 3 ('I think things will work out just fine for me into old age', item-total correlation = .46); 8 ('Old age is a time when choice is taken away', item-total correlation = .52} and 12 ('there is nothing positive about old age', item-total correlation = .55). Item 22 was also removed ('I have no anxiety about getting older', item-total correlation = .67) because the focus was on developing a general attitudinal measure rather than a measure of anxiety about ageing. Furthermore, despite a high item-total correlation (r = .62), one further item was removed, item 26 ('I hate the thought of getting older') because its all encompassing negative tone could bias responses to other items, i.e. agreement with this item would then make it difficult for an individual to respond less negatively and even positively to the remaining items on this scale.

Factor analyses was carried out to examine the internal factor structure of the remaining 5 items. Principle components analysis was used to extract factors from the correlation matrix. To determine the number of factors to be extracted, two criteria were employed: the value of the eigenvalues and the scree plot. Drawing on advice by Green et al. (2000) one criterion for deciding the number of factors to be extracted, is to retain all factors that have eigen values greater than 1. Using this criterion, there was just one factor in the current test with values greater than one. The scree plot showed the same results, i.e. only one factor was apparent in the sharp decent before the values started to level off. The normal second stage to this analysis is to make items more meaningful through factor rotation; however rotation was not necessary as only one factor had been identified. This one factor was called general attitudes to ageing, and it explained 54% of the variance in scores. (The five items for this scale can be seen in Table 3.4.)

Table 3.4
Items from Unrotated Factor Matrix for the General Attitudes to Ageing Scale (GAAS)

Scale Items	1
***Factor 1* 'GAAS'** (α = .78)	
21) I feel content about my own ageing	.78
27) Old age can be a very happy time of life	.75
17) I see my old age mainly as a time of loss	.72
20) I worry I will have nothing to offer anyone when I am old	.71
9) Life loses its meaning when you become old	.68
Eigen Value	2.7
% of Variance Explained	54%

Note: n = 158

3.8.1.2 Internal Reliability of The General Attitudes to Ageing Scale (GAAS-5)

The internal reliability of the newly developed General Attitudes to Ageing Scale was examined by using Cronbach's alpha. For the sample as a whole, Cronbach's alpha was calculated to be .78 indicating that this short measure does have good internal reliability. To consider the internal reliability of the GAAS within different contexts and conditions, separate Cronbach's alpha scores were each calculated for the sample by age group (< 34, 35-49, 50-64 and age 65+), by gender (male and female) and by general attitudes ('positive' and 'negative' groups). Cronbach's alpha scores for all these sampling groups ranged from .71-.82 again indicating good internal reliability for this newly developed General Attitudes to Ageing Scale.

3.8.1.3 Concurrent Validity of The General Attitudes to Ageing Scale (GAAS)

Pearson's correlations were used to examine the relationship between the GAAS and other scales purporting to measure a similar construct. As can be seen in Table 3.5, results indicated that the GAAS was significantly correlated ($r = .68 - .52$, $p < .001$) with the Anxiety about Ageing Questionnaire (Lashner & Faulkender, 1992), the Ageing Opinion Survey (Kafer *et al.,* 1980), the Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971) and both the feelings and level of difficulty participants reported with regard to their own future old age (very positive-very negative/very difficult- not at all difficult). The General Attitudes to Ageing Scale however, was uncorrelated with social desirability ($r = .14$, $p > .05$). These results indicate that the GAAS does have good concurrent validity.

Table 3.5
Concurrent validity of the General Attitudes to Ageing Scale (GAAS)

Variable	α	1	2	3	4	5	6
1. GAAS	.78	-					
2. Lasher & Faulkender[1]	.86	.68**	-				
3. Kafer et al.[1]	.50	.43**	.42**	-			
4. Ontario[2]	.66	.59**	.53**	.44**	-		
5. Feelings about ageing		.54**	.55**	.26**	.37**	-	
6. Difficulty expected[3]		.52**	.45*	.27**	.44**	-.30**	-
7. Social desirability[4]	.70	.14	.27*	.15	.32**	-.20*	.13

Note: ** = p < .001, * = p < .01, α = Cronbach's alpha, [1]Anxiety about ageing scales, [2]The Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971), [3]in old age, [4]Marlow Crown Social Desirability scale

3.8.1.4 Construct Validity of The General Attitudes to Ageing Scale (GAAS)

Given evidence that the GAAS does measure general attitudes to the latter part of the lifecourse, a further test was carried out to examine the number of items on the GAAS which carried this effect. For a more rigorous assessment, a separate measure which asked participants to summarise the level of difficulty they associated with their later years (very difficult – not at all difficult) was used to group participants into two groups; the first group were those who associated their own future old age with moderate to high levels of difficulty while the second group were those associating the latter part of their lives with moderate to low levels of difficulty. A multifactoral analysis of variance was then carried out; the independent variable was level of difficulty associated with own ageing ('high' and 'low'), while the dependent variables were each of the five items on the GAAS. A significant effect of difficulty group was found, $F(1, 147) = 10.0$, $p < .001$, $\eta^2 = .26$. Further analysis indicated that there was a significant mean difference between the two groups on all five items of the GAAS ($p < .000$). These results indicate that all five items on the GAAS distinguished between the two groups of participants.

3.8.1.5 Summary of Section on Newly Developed General Attitudes to Ageing Scale

Results from this section indicate that the newly developed 5-item GAAS is a useful scale with good reliability and validity. However the potential advantage of the GAAS over related measures such as 20-item Anxiety about Ageing Questionnaire (Lashner & Faulkender, 1992) is that it is a lot shorter, making it easier for participants to complete and less time consuming for researchers to rate and score. Furthermore, the advantage of the GAAS over the Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971) or the Ageing Opinion Survey (Kafer et al., 1980) is that the GAAS conforms to commonly accepted psychometric standards, i.e. while the internal reliability of both these latter scales was found to be low (Cronbach's alphas of .5 and .6 respectively), this was not the case with the GAAS. In addition, the GAAS was developed from earlier exploratory work giving it greater content validity. However, although there is evidence that this newly developed measure is promising, further and more rigorous testing needs to be carried out the relationship between the GAAS and other forms of validity, e.g. the ability of the GAAS to predict scores on other events and experiences in people's lives.

3.8.2 Descriptive Data on Remaining Measures

This second section reports data on the psychometric properties of the other newly developed scales measuring age-associated threats. Once the adequacy of their psychometric

properties has been demonstrated, the final results section will then examine the relationship between these threat based measures and general attitudes to the latter part of the lifecourse as measured by the GAAS.

3.8.2.1 The Ageing Controllability Scale

A pool of 32 items had been generated from which it was hoped to develop a smaller scale measuring the level of control participants felt they had with regard to a range of possible experiences in later life (see Section 8, items 1-34, however a typing error in the numbering of these items means that items 21 and 22 are missing and so this section should end at number 32 rather than 34.). These experiences reflected the hopes, pleasures, fears and worries participants had expressed in the earlier exploratory pilot study; hopes and pleasures associated with the latter part of the lifecourse increased confidence and self-acceptance, having less fear about making mistakes and/or increased wisdom. In contrast, fears and worries included changes in physical appearance, illnesses such as stroke or Alzheimer's disease and/or economic difficulties.

To decide which items should remain, analyses of each of the items including item-to-total correlations were carried out. As with all analyses the decision to remove an item was based both on its low correlation with the total score (i.e. when $r < .60$), and with consideration for the impact the removal of the item would have on content coverage. This analysis led to the removal of five items for psychometric reasons; items 5 ($r = .42$), 8 ($r = .43$), 9 ($r = .47$) 17 ($r = .3$), and 20 ($r = .18$). These analyses also lead to the removal of a further 15 items on theoretical grounds. These grounds included items with very negative connotations which may bias responses to remaining items, i.e. item 2 (needing help from others to get bathed and dressed), item 12 (becoming frail so cannot walk on the street), item 16 (time running out), 25 (maintaining own independence in old age), 27 (having the respect of other people) and item 29 (avoiding a serious illness such as cancer) and item 34 (living in own home through whole of old age); all these items had item-total correlations between .53 and .66. Items removed on theoretical grounds also included items not directly related to the health and psychosocial experience of ageing, i.e. items to do with: 1) feelings about ageing i.e. 3 (feeling anxious about general ageing), and 4 (depression), and 2) items to do with economic aspects of later life, i.e. items 6 (worry of paying bills) and 30 (having a comfortable standard of living. A further item, 33 (Having time to follow own interests) was also removed as the concept of time was specifically addressed in another scale. In addition, the item 12 (deterioration in physical appearance) was removed as this item could have been phrased better. The item to total correlations for all these items ranged from .58 - .83. These analyses led to the removal of 18

items in total, leaving 14 items remaining; remaining items were items 1, 7, 10, 11, 13, 14, 15, 18, 19, 24, 26, 28, 30, 31 and 32.

Principle components factor analysis was then carried out to examine the internal factor structure of these 15 items and to decide if any further items could be removed in the interests of having a scale that was as short as possible. All scale items were analysed using principle components factor analysis to extract factors from the correlation matrix, and Varimax rotation, as the factors were believed to be uncorrelated. To determine the number of factors to be rotated, three criteria were employed: firstly, factors extracted with eigenvalues above 1.0, secondly the scree test, and thirdly, the interpretability of the results.

Based on this analysis, two factors were identified which explained 56% of the variance in scores. The first of these with eight items (items 15, 31, 32, 1, 19, 28, 14 and 26) was labelled control over positive experiences. The second factor with five items (items 10, 11, 18, 24, 13 and 7) was called control over negative experiences. In the interests of having a shorter scale, additional item-total analysis was carried out to consider whether these subscales or factors could be further shortened to just five items each without sacrificing coverage. For the positive control subscale, item 26 was removed as it had the lowest item-total correlations. Items 31 and 32 were also removed because these addressed constructs about psychological development in later life rather than more physical or health related experiences ('gaining wisdom in later life', and 'the ability to take a wider perspective on life'). For the negative control subscale, item 18 was removed (living alone, with one weekly visitor) because it had among the lowest item-total correlations ($r = .56$) and because again this item could have been phrased better and in ways to highlight attitudes toward the need for support and help from others.

The final scale then had two subscales measuring perceived control over a range of both potential positive and negative experiences in later life (see Table 3.6). None of the remaining ten items cross loaded onto each other. In addition, Cronbach's alpha for the ten-item measure was acceptable at .83; Cronbach's alpha for the positive and negative subscales were also acceptable at .84 and .76 respectively. As can be seen later in Table 3.11, both subscales were found to be significantly correlated with each other ($r = -.29$, $p < .001$) and with most other threat based measures. Although this scale needs to be validated against other control-based measures, the results above suggest that these two subscales are reliable and valid measures of the level of control associated with positive and negative aspects of one's own future old age.

Table 3.6
Items from a Rotated Factor Matrix for the Ageing Controllability Scale

Scale Items	1	2
***Factor 1* 'Control about Positives'** *(α = .84)*		
15) Enjoyment of life	**.86**	..11
1) Maintaining self-esteem in later life	**.81**	.16
28) Having warm relationships with others	**.73**	.00
19) Greater self-acceptance	**.70**	.28
14) Gaining confidence in later life	**.68**	.18
***Factor 2* 'Control about Negatives'** *(α = .76)*		
11) Having a stroke	.00	**.83**
10) Having cardiovascular disease	.00	**.77**
24) Mental deterioration so can't read a paper.	.00	**.72**
13) Needing help from others in getting weekly groceries	.24	**.69**
7) Being in moderate pain	.23	**.68**
Eigen Value	4.1	1.8
% of Variance Explained	42%	17%

3.8.2.2 Susceptibility and Importance Scale

Participants had been asked to indicate the likelihood that a range of positive and negative experiences would occur in the latter part of their lives. They were also asked to indicate how important the occurrence of these experiences would be. Unfortunately, when the first batch of questionnaires were returned it was discovered that over a quarter of participants did not answer these questions; although the wording of this scale did not seem problematic when the questionnaire was initially piloted, participants were being asked to rate the same statement three times albeit in different ways (see Section 8 on the questionnaire). Given the possibility that this caused some confusion, it was decided not to use this data; also when a second batch of questionnaires was being distributed this section of the questionnaire was crossed out in order to take up less time of participants.

3.8.2.3 Ageing Seriousness Scale

Participants were given a pool of 16 items (e.g. hearing aides, walking stick/cane) and asked how serious they believed things would have to be before these were used. Although retrospectively this may not have been the correct phrasing to use, at the time it was hypothesised that high levels of seriousness associated with these experiences would be indicative of aversiveness and threat.

Several sets of analyses were carried out to consider which items should remain in this scale. In the first analyses each item was read critically with regard to its tone (level of negativity), content coverage and relevance. In this analyses 8 items were removed. Specifically three items, items 1-3 (wearing thermal bed socks, hearing aides and glasses) were removed because these are mild and uninformative strategies used by many people. Items 11 and 15 (Home Helps' and 'Meals on Wheels') were also removed as these experiences may be more salient for adults in lower socio-economic groups, while item 4 ('using motorised buggies') may be more salient for adults in mid- to higher socio-economic groups. Items 12 and 16 ('wheelchair use' and 'disability benefits') were also removed because the use of these aids can be a consequence of a range of experiences which can be removed form the experience of ageing and future old age. Item-total correlations were also carried out for the remaining 8 items to consider whether this scale could be shrunk further while still having coverage and content validity. The decision to remove an item was based both on its low correlation with the total score (i.e. when $r < .60$), and with consideration for the impact the removal of the item would have on content coverage. This analysis led to the removal of just three items: item 7 (using two handled cups, for better grip with friends, $r = .36$), item 13 (living in an old people's home, $r = .45$) and item 14 (day-care centre for over 65s, $r = .54$).

Principle components factor analysis of the remaining ten items was then carried out. To determine the number of factors to be extracted, two criteria were employed: the value of the eigenvalues and the scree plot. Following an examination of the scree plot and the number of eiganvalues over 1, just one factor was extracted. With just one factor, rotation to make the factors more meaningful was not necessary. This one factor was labelled 'Ageing Seriousness' and it explained 75% of the variance in scores. (The five items for this scale can be seen overleaf in Table 3.7.) Cronbach's alpha scores for this five-item scale was high at .91. However, as can be seen later in Table 3.11, this scale did not correlate with any of the other threat based measures except one, the negative controllability subscale ($r = .20$, $p < .05$). These results suggest that this scale is not necessarily a valid scale, and future research should examine this issue further.

3.8.2.4. Favourability of Time Future Scale

Participants were given a pool of 10 items asking them to rate their attitudes about time future. These items can be seen in Section 2, items 21-30. In the first set of analysis each item was reviewed with particular regard to tone, content coverage and relevance. Two items, items 26 and 23 were similarly worded (i.e. 'I get really worried when I think how little time I have left' and 'as I get older, it really bothers me that time is running out'): the latter item was removed,

Table 3.7
Items from Unrotated Factor Matrix for the Ageing Seriousness Scale

Scale Items	1
Factor 1 'Ageing Seriousness Scale *(α = .91)*	
9) A walking stick/cane	.87
6) Special cutlery at home in company of visitors, e.g.	.86
knives with thicker handles for better grip	.85
8) Telephone with big buttons and large visual display	
10) Walking frame	.78
5) Installation of handrails in bathroom/hall	.77
Eigen Value	3.7
% of Variance Explained	75%

Note: n = 158

leaving just nine possible items for this scale. Item 27 was also removed (in my old age I expect to have very few regrets about the way in which my life will have gone) as the phrasing of this item may be confusing for some people. Remaining items addressed the positive and negative aspects of time future.

The internal factor structure of the possible Favourability of Time Future Scale was examined using factor analysis. Principle components analysis was used to extract factors from the correlation matrix. To determine the number of factors to be extracted, two criteria were employed: the value of the eigenvalues and the scree plot. There were two factors with eigenvalues greater than one; similarly, there were two factors apparent in the sharp decent before the values started to level off. Varimax rotation was then used to rotate these factors to make them more meaningful. The first of these factors, with four items accounted for 32% of the variance in scores and was labelled 'Time Future Negative'. The second factor was called 'Time Future Positive': this factor had four items which accounted for 31% of the variance in scores. (The eight items for this scale can be seen in Table 3.8.)

Results also indicated that both subscales combined had good internal reliability (Cronbach's alpha of .70). Cronbach's alphas for the two subscales individually were .80 and .78 respectively. Also, as can be seen later in Table 3.11 both subscales were found to be significantly related to controllability with positive experiences ($r = .16$-$.17$, $p < .05$) and perceived social support ($r = -.22$ - $.29$, $p <.005$). However, the two time future subscales did not correlate with each other and each had a slightly different impact on the threat based measures. Specifically, negative time future but not positive time future was significantly

Table 3.8
Rotated Factor Matrix of the Time Future Scale

Scale Items	1	2
***Factor 1* 'Time Future Negatives'** *(α = .80)*		
28) In my old age, I expect I will feel very sad that I cannot live life over again.	**.82**	.02
30) I really worry about fitting everything in before I reach old age.	**.81**	.12
26) I get really worried when I think how little time I have left	**.79**	.07
25) I feel really anxious about the receding opportunities to fulfil my remaining ambitions.	**.76**	.03
***Factor 2* 'Time Future Positives'** *(α = .78)*		
29) There are lots of things I am looking forward to doing into my old age when I will have more time.	.00	**.82**
21) One of the nicest things into old age will be in having more time to do activities that I want to do	.12	**.81**
22) I am looking forward to having more time to spend with others into my old age	.07	**.78**
24) I believe later life will offer me many positive experiences for learning and growing	.02	**.69**
Eigen Value	2.5	2.4
% of Variance Explained	32%	31%

correlated with dependency attitudes (r=.15, $p < .05$), and levels of age-associated difficulty (r = .33, $p < .000$). These results again suggest that the positive and negative qualities of one's own future old age are separate issues for research.

3.8.2.5 Dependency Fearfulness Scale

Drawing on data from the exploratory pilot study, dependence on others can involve a wide range of factors and issues, including: 1) views on the concept of dependence (e.g. 'dependency is often a natural consequence of growing older'), 2) dependence identity (e.g. 'I value my independence enormously'), 3) dependence fears and worries (e.g. 'Becoming dependent on others is always a really bit worry'), 4) attitudes to receiving help from others ('Into old age it would be a great relief to have other people get my groceries in, if needed'), faith people have in others to provide support and help when needed ('other people let you down) and 5) knowledge about the rates of dependence (e.g. 'the vast majority of older people maintain their independence in old age'). To address this complexity, 35 items had been developed in the current study for possible inclusion in a dependency scale with one or more subfactors.

To decide which of the 35 items could be removed several sets of analyses were carried out. In the first analysis, each item was reviewed critically to determine its relevance, content validity and coverage. Two items were removed as they addressed issues relating to older adults generally, rather than dependence as applied to the self; these items were item 1 ('the vast majority of older people maintain their independence in old age'), and item 7 ('The number of older people living gin nursing or rest homes is very small'). Seven further items were removed because the occurrence or absence of these issues may cause people distress and worry, that may in turn bias responses to remaining items. These items included: item 2 ('becoming dependent on others is an experience which should be avoided at all costs'), item 15 ('I worry about my choices becoming limited if I became ill'), item 17 (In old age it would bother me hugely if I could not live in my own home'), item 24 ('Becoming dependent on others in old age is always a really big worry'), item 27 ('I am positive others (my children) would take care of me in old age if I became ill'), item 31 ('I have faith that others will look after me when I am old') and item 35 ('I worry about not having anyone to look after me when I am old'). Five more items were removed because they were phrased very strongly: item 10 ('I have always carried my own weight and could not exist unless I could continue doing so'), item 14 ('I would rather die than have someone help me bathe or dress'), item 21 (I would really hate to get an illness or disease that made me dependent on others'), 22 ('It would bother me enormously to have someone else organise my day') and item 34 (I have no intention of relying on anyone but myself in old age'). Finally, one other item was removed, item 33 (I would fine it very hard to allow others to help me, even if I needed help') because it contracted directly a number of other items including items 16 and 12 ('I would willingly accept help and care from others should I need it').

Further analysis was carried out to examine further the remaining 20 items for this dependency fearfulness scale, and to consider whether further items could be removed in the interests of having a scale which was as short as possible. Item-to-total correlations were carried out with the 21 possible items for this scale (section 3, items 3, 4, 5, 6, 8, 9, 11, 12, 13, 16, 18, 19, 20, 23, 25, 26, 28, 29, 30 and 32). The decision to remove an item was based both on its low item-total correlation (i.e. when $r < .55$), and also with consideration for the impact the removal of the item would have, e.g. not to remove a well-written item if this action then compromises the content coverage of the scale. Five of these items had low item-total correlations and were removed: item 4 ($r = .14$, 'dependency if often a natural consequence of growing older'), item 5 ($r = .25$, 'dependency is an experience which occurs throughout life, not just in old age'), item 9 ('It is really important to me that I be in control of my own life'), item 11 ($r = .22$, 'I value my independence enormously') and item 19 ($r = .24$, 'I get really concerned that I will not be able to do what I want to do into my old age').

A factor analysis was carried out to examine the internal factor structure of the remaining 15 items (items 3, 6, 8, 12, 13, 16, 18, 20, 23, 25, 26, 28, 29, 30 and 32). Principle components analysis was used to extract factors from the correlation matrix. To determine the number of factors to be extracted, two criteria were employed: the value of the eigen values and the scree plot. Using these criteria, three factors were identified for rotation. These three factors explained 55% of the variance in scores. The first factor with seven items (items 23, 29, 25, 32, 26, 30, and 28) was called support expectations. The second factor, with six items (12, 18, 13, 16, 3 and 8) was called dependency attitudes. The third factor had two items (items 20 and 6) was uninterruptible and removed. However, several of these items cross loaded to multiple factors, e.g. item 30 loaded on factors 1 and 2; item 28 loaded on factors 1 and 3; and item 8 also loaded to factors 2 and 3. These items were removed given this overlap, the need for a short measure and the content coverage remaining. Factor analysis using principal components was carried out again, on the remaining 10 items using: two factors emerged, with five items each, explaining 59% of the variance in scores. Items for each subscale can be seen in Table 3.9. Cronbach's alpha for the complete scale was .80; Cronbach's alphas for both subscales were .85 and .73 indicating good internal reliability. Furthermore, as can be seen later in Table 3.11 both subscales were significantly related to other threat based measures indicating good validity.

Table 3.9
Rotated Factor Matrix of the Dependency Fearfulness Scale

Scale Items	1	2
***Factor 1* 'Support Expectations'** *(α = .85)*		
21) If you are in need of help other people just don't want to know you.	**.85**	.03
23) People are never there when you need them.	**.85**	.04
25) I am not confident other people would help if I needed them	**.80**	.13
32) People will only offer help if there is something in it for them	**.77**	.07
26) Other people let you down.	**.69**	.29
***Factor 2* 'Dependency Attitudes'** *(α = .73)*		
12) In old age, I would willingly accept help and care from others should I need it.	.00	**.81**
13) Into my old age it would be a great relief to have other people get my groceries in, if needed.	.06	**.71**
18) I would absolutely hate to rely on other people for help, even for regular grocery shopping	.25	**.70**
16) I would be glad to have other people to drive me where I wanted to go, if I were not able to get around myself	.00	**.58**
3) Dependency on others does not mean always mean being helpless	.25	**.52**
Eigen Value	3.7	2.1
% of Variance Explained	37%	22%

3.8.2.6 Miscellaneous/Rival Measures

Three other miscellaneous or rival variables were used; these included Palmore's (1977) Facts on Aging Quiz, Denier's (1985) Life Satisfaction Scale and the Marlow Crowne social desirability measure. Results indicated that internal reliability scores for each of these measures were .44, .87 and .70 respectively. The low internal reliability for Palmore's quiz has been found by other researchers. However, in defending these findings, Palmore has argued that internal consistency scores are less relevant as the scale measures knowledge about ageing across different domains.

3.8.2.7 Summary of Section

The above section examined the psychometric properties of a range of newly developed scales measuring a range of possible threats associated with one's own future old age. Results indicated that these measures tended to have good psychometric properties. The section to follow will now examine the relationship between these measures, and particularly, the relationship between general attitudes to one's own future old age and the level of threat being associated with this time of life.

3.8.3 Exploring the Relationship Between Attitudes and Age-Associated Threats.

3.8.3.1 Relationship between The General Attitudes to Ageing Scale and Other Measures

Before examining the relationship between general attitudes and other measures, exploratory factor analysis was carried out to explore possible overlap in items between the main measures. Such overlaps could result in a Type 1 error, i.e. when a significant relationship between two or more variables is erroneously accepted.

Factor analyses with principle components analysis was used to extract factors from the correlation matrix. Eight subscales had been developed as described above and so the number of factors was constrained to eight. These factors were then rotated using varimax rotation and found to explain 66% of the variance in scores. These factors with their corresponding items can be seen in Table 3.10. As can be seen in this table there were few cross loadings between the subscales; one exception is the last item on the General Attitudes to Ageing Scale that also loads on the control positives subscale. The above results showing a lack of overlap statistically indicates that any relationship between these variables can not be attributed to item overlap.

Table 3.10
Factor Analysis of Main Measures (with Cronbach's Alpha Scores, α)

Scale Items	1	2	3	4	5	6	7	8
***Factor 1* 'Severity Scale'** *(α = .91)*								
a) Special cutlery at home in company of visitors, e.g. knives with thicker handles for better grip	**.89**	.02	.05	.09	.04	.09	.02	.02
b) A walking stick/cane	**.88**	.06	.01	.17	.09	.06	.00	.03
c) Telephone with big buttons and large visual display	**.86**	.12	.03	.13	.09	.01	.10	.03
d) Installation of handrails in bathroom/hall	**.84**	.00	.18	.00	.11	.04	.02	.02
e) Walking frame	**.81**	.18	.05	.13	.01	.04	.11	.02
***Factor 2* 'Control Positives'** *(α = .84)*								
a) Enjoyment of life	.02	**.84**	.11	.09	.13	.02	.03	.10
b) Maintaining self-esteem into later life	.00	**.70**	.25	.05	.20	.08	.05	.08
c) Gaining confidence into later life.	.12	**.70**	.14	.02	.13	.16	.22	.07
d) Having warm relationships with others	.04	**.69**	.02	.28	.09	.05	.23	.09
e) Greater self-acceptance	.01	**.69**	.00	.25	.01	.00	.02	.04
***Factor 3* 'Support Expectations'** *(α = .85)*								
a) People are never there when you need them.	.08	.13	**.86**	.10	.01	.02	.05	.02
b) If you are in need of help other people just don't want to know you.	.06	.04	**.85**	.12	.13	.01	.14	.04
c) People will only offer help if there is something in it for them	.07	.22	**.76**	.00	.02	.10	.17	.12
d) I am not confident other people would help if I needed them	.21	.05	**.71**	.14	.00	.11	.11	.02
e) Other people let you down.	.15	.00	**.61**	.01	.39	.06	.16	.13
***Factor 4* 'Control Negatives'** *(α = .76)*								
a) Having a stroke	.08	.08	.11	**.85**	.21	.08	.03	.00
b) Having cardiovascular disease	.08	.08	.12	**.81**	.14	.07	.11	.10
c) Mental deterioration so can't read a paper.	.17	.00	.11	**.71**	.00	.07	.13	.22
d) Being in moderate pain	.20	.17	.02	**.68**	.02	.03	.04	.08
e) Needing help from others in getting weekly groceries	.12	.35	.04	**.62**	.03	.13	.06	.09
***Factor 5* 'Time Future Negatives'** *(α = .80)*								
a) Into my old age, I expect I will feel very sad that I cannot live life over again.	.02	.04	.08	.00	**.85**	.01	.11	.00
b) I get really worried when I think how little time I have left	.09	.05	.18	.07	**.71**	.07	.25	.01
c) I really worry about fitting everything in before I reach old age.	.01	.00	.04	.14	**.71**	.16	.26	.20
d) I feel really anxious about the receding opps. to fulfil my remaining ambitions.	.02	.04	.09	.20	**.64**	.01	.14	.09

Table 3.10 contd.:

Scale Items	1	2	3	4	5	6	7	8
***Factor 6* 'Dependency Attitudes'** *(α = .73)*								
a) In old age, I would willingly accept help and care from others should I need it.	.07	.12	.06	.03	.05	**.80**	.20	.07
b) Into my old age it would be a great relief to have other people get my groceries in, if needed.	.01	.11	.11	.10	.02	**.73**	.10	.11
c) I would be glad to have other people to drive me where I wanted to go, if I were not able to get around myself	.10	.07	.08	.05	.13	**.71**	.10	.01
d) I would absolutely hate to rely on other people for help, even for regular grocery shopping	.02	.10	.13	.17	.25	**.70**	.04	.05
e) Dependency on others does not mean always mean being helpless	.07	.22	.15	.21	.15	**52**	.01	.11
***Factor 7* 'GAAS'** *(α = .78)*								
a) I feel content about my own ageing	.06	.00	.00	.02	.28	.08	**.72**	.02
b) Old age can be a very happy time of life	.07	.10	.08	.02	.06	.14	**.71**	.33
c) I see my old age mainly as a time of loss	.01	.26	.19	.18	.21	.16	**.64**	.07
d) I worry I will have nothing to offer anyone when I am old	.03	.17	.16	.29	.23	.05	**.62**	.06
e) Life loses its meaning when you become old	.01	.47	.32	02	.17	.09	**.47**	.12
***Factor 8* 'Time Future Positives'** *(α = .78)*								
a) There are lots of things I am looking forward to doing into my old age when I will have more time.	.18	.02	.03	.01	.12	.13	.18	**.82**
b) One of the nicest things into old age will be in having more time to do activities that I want to do	.02	.10	.11	.06	.00	.10	.03	**.78**
c) I believe later life will offer me many positive experiences for learning and growing	.08	.02	.00	.04	.02	.01	.03	**.71**
d) I am looking forward to having more time to spend with others into my old age	.08	.10	.14	.14	.06	.12	.08	**.61**
Eigen Value	7.9	4.4	3.4	2.9	2.5	2.0	1.7	1.4
% of Variance Explained	18%	10%	8%	7%	6%	5%	4%	3%

Note: n = 158

3.8.3.2 Relationship Between Main Variables

To examine the relationship between general attitudes to one's own future old age and other threat and rival variables, Pearson's correlations were used as the scales administered were normally distributed. Results from this analysis can be seen in Table 3.11 overleaf and indicated that general attitudes to own old age were significantly associated with the threat based measures. Threat based measures included less perceived control over both positive ($r = -.30$, $p < .001$) and negative age associated experiences ($r = -.19$, $p < .05$), and greater concerns ($r = .51$, $p > .001$) and fewer positives associated with time future ($r = .32$, $p < .001$). Adults with more negative attitudes also had greater concerns about receiving support in relationships ($r = .36$, $p < .001$), expected more difficulties into their own future old age ($r = .52$, $p < .001$), and expressed greater fears around possible dependency in their later years ($r = .28$, $p > .01$). Knowledge about ageing and current life satisfaction also correlated with general attitudes to one's own future old age ($r = -.28$ and $-.52$, $p < .001$).

3.8.3.3 Predicting General Attitudes to Ageing

Hierarchical multiple regression analysis was used in the current study to examine the amount of variance in general attitudes to ageing scores that could be explained by the threat based variables, once demographic and rival variables had been entered or controlled. The predictor variables were entered in blocks in the regression analysis with entry into the model set at $p < .05$ and removal set at $p < .05$.

In this analysis the dependent variable for the sample was the General Attitudes to Ageing Scale (GAAS). The first set of independent variables to be entered was demographic variables, i.e. education, finances and age group. This set of variables was entered first in order to establish a base line from which to examine the variables of interest and to examine how much of the variance in attitudinal scores could be explained by demographic variables. The second block of variables to be entered to the regression analysis was rival variables or explanation for attitudes, i.e. current mood state as assessed by a measure of current life satisfaction (Denier et al., 1985) and knowledge about ageing (Palmore, 1977). Once these variables were entered and controlled, the final set of independent variables to be entered was the threat-based variables; this set included measures of: perceived controllability with age (control over both positive and negative experiences), social support and dependency fears, time future positive and negative, and the general level of difficulty being associated with own future old age. The threat based measures were entered last in order to establish how much of the variance in general attitudes to ageing could be explained beyond rival explanations.

Table 3.11

Correlations Examining the Relationship between General Attitudes to Ageing and the Level of Threat Being Associated with Later Life'

Variable	1	2	3	4	5	6	7	8	9	10	11
1. GAAS											
Threat Measures											
2. Control Positive	-.35***	-									
3. Control Negative	.18*	.29***	-								
4. Seriousness	.05	.02	.21*	-							
5. Time Future Negative	.52***	.16*	.14	.07	-						
6. Time Future Positive	-.32***	.17*	.05	.02	.05	-					
7. Dependency Attitudes	.28***	-.09	.06	.07	.19*	.13	-				
8. Support Expectations	.36***	-.23***	.13	.04	.29***	.22***	.21***	-			
Other Measures											
9. Facts on Aging Quiz	-.28***	-.21**	.04	.10	-.20**	.12	-.05	.19*	-		
10. Current Life Satisf	-.52***	-.28***	.11	.04	-.40***	-.32***	-.00	.24**	.18*	-	
11. Social Desirability	-.14	-.10	.24**	.20*	-.23 **	-.12	.09	.15	.03	.20*	-

Note: *** = < .001, ** = <.005, * = .01,

Table 3.12

Multiple Regression Analysis Predicting Scores on the General Attitudes to Ageing Scale

Model	Beta	Sig. T.	R^2	R^2 Change	F Change	df1	df2	Sig. F Change
1) Demog.			.11	.11	7.9	2	124	.001
- Finances	-.34	.000						
2) Rival			.33	.21	19.9	2	122	.000
- Life Sat.	-.21	.000						
- Knowle.	-.13	.008						
3) Threat			.59	.26	9.4	8	114	.000
- Diffic	-.28	.000						
- Neg T.F.	.24	.000						
- Life Sat.	.20	.005						
- Pos T.F.	.17	.008						
- Dep Frs	-.12	.044						

Note: demog = demographic variables, life sat= life satisfaction as measured by Denier et la (1985), diffic. = level of difficulty associated with own future old age, Neg (Pos) T. F = scores on the time future negative (or positive, as appropriate) scale, Dep Frs = fears about dependency

As can be seen in Table 3.12, demographic variables were significant predictors of general attitudes and explained 11% of the variance in scores; finances but not education accounted for this variance. When the rival set of variables were entered, the amount of variance explained increased to 33%. The most significant factors within the second block explaining general attitudes to one's own ageing and future old age were current life satisfaction ($p < .000$) and knowledge about ageing ($p < .01$). When the final threat based measures were added to the regression analysis, the amount of the variance explained was 59%. The specific variables to carry this effect were the level of difficulty associated with the latter part of the lifecourse, time future negative, time future positive, current life satisfaction and dependency fears. Social support expectations were also approaching significance level ($p = .07$). The fact that these threat based measures remained significant predictors even when entered last to the regression analysis is evidence to support the importance of a threat based perspective when trying to understand the nature of adults' negative attitudes towards their own ageing and future old age.

3.8.3.4 To Summarise

Within the current section, the aim was to examine the relationship between general attitudes to one's own future old age and a range of rival (e.g. current life satisfaction and

knowledge about ageing) and threat based measures; the latter included dependency fears, feelings of control in later years, time future and the level of difficulty being associated with the latter part of the lifecourse. Results indicated that nearly 30% of the variance in scores on the General Attitudes to Ageing Scale was predicted by threat based measures; those results remained even when rival variables were controlled These results contribute to the current field by offering a specific way of understanding adults' attitudes to the latter part of their lives, i.e. in terms of the level of threat being associated with this time of life.

3.9 General Summary and Discussion

Results from this research indicate: a) that the newly developed General Attitudes to Ageing Scale is a promising measure of adults' general attitudes to the latter part of their lives, b) that the threat-based attitudinal measures developed do have good psychometric properties, and c) that there is a significant relationship between general attitudes to own future old age as measured by the GAAS and the level of threat being associated with this experience. Each of these issues is now discussed briefly.

3.9.1 General Attitudes to Ageing Scale (GAAS)

The first aim and contribution of Study 1 to the current field lies in the development of a reliable and valid measure of adults' general attitudes to the latter part of their lives. This is a valid contribution because there are few such scales around, and those that are being used tend to have poor psychometric proprieties. In addition, the lack of sound measures may be a significant factor in contributing to the paucity of research exploring and examining the subjective experience of own ageing and future old age, despite the potential impact of this important issue on later health and well-being (see Chapter 1). Evidence from the current study suggests that the General Attitudes to Ageing Scale (GAAS) is a promising measure of the general favourability with which adults view their own old age. Results from this study indicate that the GAAS has high internal consistency and good external validity with a range of related measures. From the researcher's perspective, the GAAS is also simple to administer and easy to score. The scale also has high content validity given it is largely empirically derived.

3.9.2 Newly Developed Threat Based Measures

The second main aim and contribution of this study to the current field was in the development of scales measuring attitudes to possible threat-experiences in later life; these new measures included the Ageing Controllability Scale, the Ageing Seriousness Scale, and

Favourability of Time Future Scale and the Dependency Fearfulness Scale. With the possible exception of the Ageing Seriousness Scale results indicated that these new measures do have good internal reliability (Cronbach's alphas of between .71 and .85) and good external validity. Although these measures will need to be tested further and with more specifically related scales, the above findings indicate that these measures can be used to examine the relationship between general attitudes to one's own future old age and the level of threat being associated with this time of life. A summary of these results is given in the short section to follow.

3.9.3 Relationship between General Attitudes And Threat

The final aim and contribution of this study was to explore the relationship between general attitudes to one's own future old age and the level of threat being associated with this time of life; the motivation behind this research question was the need to understand what it means to hold a negative attitude about one's own future old age. Results suggest that general attitudes to one's own old age can be understood in relation to the general level of danger or threat being associated with this experience. Specifically, participants with more negative attitude towards their own old age were also reporting more concerns with possible dependency into later life, more concerns about constraints associated with the finite nature of time into old age, more anxiety about own ageing, and a reduced perception of controllability with a range of possible experiences into later life. Surprisingly however, general attitudes to own old age were not found to be related to the level of seriousness associated with later life, although this latter scale was found to have good internal reliability (Cronbach's alpha = .92). These results were unexpected, and although one should always keep an open mind about contradictory or unexpected research findings, the most likely explanation for these results based on current evidence is that this scale is not a valid measure. This interpretation is especially likely as the remaining findings are in line with expectations to indicate that attitudes can be understood in terms of the level of threat associated with own future old age.

3.9.4 Future Research

The next study sought improve upon the design of Study 1 by addressing three potential methodological limitations. Firstly, while participants for the current study may be biased towards adults who are more socially active and physically healthy, participants in the study to follow were recruited directly from the highstreet and from attendance at church events. With potentially less physically healthy and more diverse samples, the psychometric properties of scales including the GAAS can be tested more rigorously and critically. Secondly, in the study

to follow the use of incentives was included to encourage greater participation in the research, particularly amongst adults who might not otherwise be inclined to take part in research. In may be that Eriksonion generativity is related to attitudes to ageing, and if so, the use of incentives to encourage participation by a more diverse sample group may be important in considering the generalisability and interpretability of research findings. Finally, the potential confound of sole reporting was addressed in the study to follow by gathering independent data on participants' attitudes, with their permission, from family members of participants, or their friends. This independent data can provide additional evidence to test the psychometric properties of the newly developed 5-item General Attitudes to Ageing Scale.

Chapter 4
Testing the General Attitudes to Ageing Scale

"I am very trusting, or maybe the word faith comes in here. I see no reason to be concerned. ... I may not be able to get out of bed, but I can still pray for everyone" (Kate, age 57, O'Hanlon, in prep)

4.1 Introduction and Chapter Overview

The first aim of Study 2 was to examine the psychometric properties of the GAAS and the other newly developed measures with a wider range of sample groups: adults recruited via the highstreet and those recruited at mainstream churches. A wider range of sample groups offers different contexts from which a more rigorous assessment of the scales being developed can occur. For instance, the church sample are likely to score more highly than the highstreet group on measures of religiously and spirituality, and there is evidence that religious and spiritual beliefs can have significant effects on health and well-being (e.g. see Bearon & Koenig, 1990; Bergin, 1991). Although the mechanisms through which religious or spiritual beliefs may influence age-associated attitudes are still unclear, religion and spirituality can influence health generally by helping adults to feel a sense of connection and usefulness with others, and also by facilitating a better understanding of their experiences, particularly when these are stressful or difficult (e.g. see Koenig, 1994; Stuckey, 2001). By recruiting a different group of adults by comparison with Study 1, it will be possible to examine the psychometric properties of the newly developed measures with a wider range of contexts.

The second aim of Study 2 was to examine the relationship between attitudes to ageing and the level of threat being associated with later years, and specifically, to attempt to replicate Study 1 results (see Chapter 3) in which a significant relationship was found between general attitudes to own future old age and the level of threat being associated with this time of life. There are a number of benefits in attempting to replicate Study 1 findings which suggested that negative attitudes to ageing can be understood in relation to the level of threat being associated with the latter part of the lifecourse. For instance, by attempting to replicate Study 1 findings, one can be more sure that Study 1 results were not a consequence of either the items chosen for the new measures, or sole-reporting. The latter issue was addressed in the current study by asking partners and friends of participants to comment independently on participants' attitudes to the latter part of their lives.

The third and final aim of Study 2 was to examine whether the expected relationship between attitudes to ageing and the level of threat being associated with later life remained, even when controlling for other rival explanations such as knowledge about ageing or current mood state. As noted in earlier chapters, people can hold negative attitudes about their own ageing for many reasons, including threat; these reasons can include currant mood state, current life satisfaction or the level of knowledge people have about the latter part of the life course. By exploring the relationship between attitudes, health and social support one can begin to consider explanations for age-associated attitudes.

Participants for Study 2 were recruited from their attendance at mainstream Christian churches (n = 192) and directly from the highstreet (n = 187). These groups were chosen because participants could be recruited across the adult age-range and from both genders. These groups would also provide a different context from the Study 1 setting through which to test the psychometric proprieties of the scales developed. For instance, the church based participants are likely to be more religiously orientated than the highstreet sample; furthermore, the church based sample may not necessarily be so physically active as the linedance sample in Study 1, while participants recruited directly from the highstreet may not necessarily have such wide supportive social networks as either the linedance sample or the church sample.

Replicated across the two sample groups, findings from this study indicated: 1) that the General Attitudes to Ageing Scale (GAAS) and the other newly developed measures had good psychometric properties, and 2) that there was a significant relationship between general attitudes and threat, i.e. participants with more negative attitudes towards the latter part of their lives also associated their later years as being less controllable, and as having more serious outcomes for the self including greater dependence on others and lower confidence in the willingness or availability of others to provide help if needed. Findings also indicated that the relationship between general attitudes and threat remained, even when controlling for rival explanations including knowledge about ageing, current mood state and levels of social support. This study provides a base from which more research can take place examining systematically the factors that influence or explain adults' general attitudes to own future old age; this was the goal of the final study in this thesis (see Chapters 6-9).

To summarise, the main goals for Study 2 were as follows:

1) to attempt to replicate findings from Study 1 indicating that the General Attitudes to Ageing Scale and the other newly developed measures have good reliability and validity;

it was expected that findings from Study 1 would be replicated indicating that these new measures do make a valid contribution to the current literature,

2) to examine the relationship between general attitudes as measured by the GAAS and the level of threat being associated with one's own future old age; it was expected that adults with more negative attitudes would associate their later years with a greater degree of threat as reported by themselves and by independent raters (i.e. the family and friends of participants), and
3) to examine whether the relationship between general attitudes and age-associated threats remained, even when controlling for rival explanations such as social support, emotional health and knowledge about ageing; it was expected that this relationship between attitudes and threat would remain, even when rival variables were examined.

4.2 Study 2: Method

4.2.1. Participants

Two separate groups of participants were recruited to this study in order to examine the reliability and validity of the newly developed measures in different contexts: the first 'highstreet' sample were recruited from a city centre highstreet while the second group of participants were recruited from their involvement and attendance at mainstream city-centre Christian churches. (Further information about the ways in which participants were recruited can be seen in the section on procedure to follow.) These two samples were chosen because within each group, participants would be comparable, from both genders, and representing adults from across the complete adult age range. Demographic factors for both sample groups can be seen in Table 4.1 overleaf.

To examine whether there were significant differences between the two samples on basic demographic factors, a multivariate analysis of variance was carried out. The independent variable was sample group (highstreet sample, church sample) and the dependent variables were finances, education and the importance of religion. As can be seen in Table 4.2 a significant effect of sample group was found, $F(3, 364) = 92.8$, $p < .000$, $\eta^2 = .43$. As would be expected the importance of religion was rated significantly higher by the church sample by comparison with the highstreet sample; in addition by comparison with the highstreet sample, the church sample reported having better finances and attaining higher levels of education. These known sample differences were controlled in later analyses.

Table 4.1
Demographic Variables for both the Church and Highstreet Samples (n=360)

	Church Sample (n = 192)			Highstreet Sample (n = 168)		
Measure	*n*	%	Cumulative %	*n*	%	Cumulative %
Age						
≤35	32	16	16	39	23	23
36-49	50	26	43	69	41	64
50-64	55	28	72	47	28	92
65+	55	29	100	13	8	100
Gender						
Female	116	60	60	146	78	78
Marital Status						
Single	45	23	23	31	16	16
Married	107	55	78	108	56	73
Education						
Cert/Diploma	88	44	44	128	63	63
Degree or higher	100	51	95	49	25	88
Imp. of Religion						
Not at all/little	15	7	7			
Reasonably Imp.	32	16	22	122	65	65
V. Imp/Crucial	148	76	98	28	14	80
				37	19	99
Finances*						
Poor - very poor	14	7	7	30	15	15
Average	85	44	50	99	52	68
Good - very good	90	45	95	58	30	98

Note: * Participants were asked to describe their financial status compared to theirs in their local community

4.2.2. Procedure

This study took part in two stages. In the first and main stage, all participants were personally invited to take the questionnaire home to be completed at their own convenience. To recruit participants from the highstreet the researcher was positioned on a busy pedestrian precinct in a large city centre in the south of England. Data collection only took place on days when the weather was good, and during daylight hours. Potential participants were randomly approached as they walked past and asked if they were interested in taking part in a psychology study which would simply mean them taking a questionnaire home and completing it at their own time and convenience. If they expressed an interest, more detail

Table 4.2
Sample Group Differences on Basic Demographic Factors

MANOVA results and effect sizes								
Multivariate	$F(3, 364) = 92.8,\ p < .000,\ \eta^2 = .43$							
	Church (n = 187)		Highstreet (n = 168)		Univariate			Effect Size (η^2)
Variables	Mean	SD	Mean	SD	*F*	*df*	*p*	
Finances	3.45	0.73	3.21	0.79	8.6	1, 367	.003	.02
Education	2.55	0.95	2.01	0.92	29.9	1, 367	.000	.08
Imp of Rel.	2.71	0.58	1.55	0.80	252.3	1, 367	.000	.41

Note; n = 368

was given about the research, i.e. it was then stated that the study was exploring adults' attitudes towards their own ageing and future old age and that adults aged over 18 were being approached to take part. (The latter age group was stated for the benefit of some respondents who might be concerned that they were being approached for being perceived to be in older age groups.)

The church sample were recruited through mainstream Christian church groups in the Southampton city area; denominations included Church of England, Methodist, Roman Catholic and the Society of Friends. Practical constraints meant that potential participants from these church groups could not be approached individually. Typically, it was more convenient for the priest/vicar to make an announcement from the pulpit that psychology questionnaires were being distributed at the back of the church and that people should take one as they were leaving. For both sample groups participation was purely voluntary and no identification was requested. All participants were given freepost envelopes to return their completed questionnaires by mail. A copy of the questionnaire distributed to both sample groups can be seen in Appendix 4.

Incentives were offered for participation to encourage greater participation within both sample groups, particularly from those who might not otherwise be inclined to take part: specifically, participants were invited to return a voucher with their contact details to enter a draw for prizes worth over £50. Participants were also asked to tick a box if they wished to

receive a summary of the study and its findings. However, to maintain anonymity, participants were encouraged to return the voucher in a separate envelope, and only to include minimal contact details e.g. first name only.

The second stage of the research took place alongside the first phase and aimed to gather independent data on the validity of the GAAS for a sub-group of participants. A convenience subgroup of participants were asked to identify someone who knew them well and who could provide an additional rating of their (the participants) attitudes towards old age. In many cases, these raters were spouses of participants. These external persons (raters) were then asked if they would be willing to compete a very short questionnaire on the spot about the participants' and their own attitudes towards ageing. None of the raters asked this question declined involvement in the research. Raters then completed a very short questionnaire on the spot (see Appendix 5) in which they were asked to summarise: a) their relationships with participants, b) their opinion on the way in which the participant evaluated his/her future old age, and c) the level of confidence the rater felt that he/she had in accurately summarising the participants attitude to old age. This questionnaire typically took 2-3 minutes to complete, and often raters chose to sit themselves on nearby benches so that they were comfortable in completing this short-form questionnaire. Care was taken to separate raters from participants, so that the latter group could not see what raters were writing about them.

While raters were completing the above questionnaire, participants taking part in this second stage also completed a similar short questionnaire (see Appendix 6). Participants' short form questionnaires were almost identical to the raters questionnaire above, i.e. participants were asked to summarise their relationship to their rater, and the level of confidence participants had that raters could accurately summarise the participants' attitude to his/her own future old age. This last question functioned to provide additional data to test the validity of responses on the raters questionnaires. Participants completing this short-form questionnaire were also asked about their attitudes to their own ageing and future old age so that participants' responses on this short-form questionnaire could be compared to responses on the same measure in the longer questionnaire pack. This measure would enable this researcher to consider the extent to which questionnaire length might influence responses. Participants were told the reason for getting independent ratings of their attitudes to future old age was to test the validity of a new questionnaire. In all cases, it was made clear to participants that they would not be told how the external rater had rated their attitudes.

To enable the researcher to later identify which three sets of questionnaires should go together, while still allowing participants to retain anonymity, the same randomly selected number was placed on both short form questionnaires, and on the long questionnaire which participants in the second group took home to be completed and returned later. Specifically, before distributing the questionnaires the researcher grouped all questionnaires in sets of three (the raters short-form questionnaire, the participants short-form questionnaire, and the longer main questionnaire participants completed at home). Each set of three questionnaires had the same number, and each set was then randomly distributed to participants and their raters. These numbers were the only identification marks on the questionnaires.

4.2.3. Measures

Given that many of the measures to follow have already been described (see Chapter 3), an outline only of these measures will be given here. As already noted, a copy of the main questionnaire distributed can be seen in Appendix 4.

4.2.3.1 Measuring Attitudes to own Old Age

The General Attitudes to Ageing Scale (GAAS) was used to measure adults' general attitudes to their own prospective old age. Participants were asked to rate all items on a five point Likert-type scale from strongly agree to strongly disagree in the direction of negative attitudes to own old age. In an earlier study (see Chapter 3), this five-item scale was found to have good psychometric properties.

Measures to assess the validity of the GAAS: Six measures were used to test the external validity of the General Attitudes to Ageing Scale. The first of these was the *Anxiety about Ageing Questionnaire* (Lashner & Faulkender, 1992) which as described earlier, is a 20 item scale measuring the anxiety people feel about their own ageing. The second measure was *The Personal Aging Experience Scale* developed by Steverink et al. (under review). This scale involves 12 statements each beginning with the phrase 'Ageing means to me .. '. The end of each statement refers to possible experiences of ageing relating to physical (e.g. being less fit), social (e.g. that other don't need me so much anymore) and the psychological (e.g. becoming more and more competent). Participants are asked to rate all items for accuracy on a scale from 1 (completely true) to 5 (completely not true). The third validating measure was the *Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971).* Participants were also given two separate one-item measures; the first of these asked participants to summarise their attitudes to their future old age (very positive-very negative)

while the second, asked participants to asked to rate the level of difficulty being associated with own future old age (very difficult-not very difficult).

4.2.3.2 Threat and Knowledge based Ageing Measures

Age-Associated Threats: To examine the relationship between general attitudes to own old age and the levels of threat being associated with this experience, a number of measures were included and have been described in some detail earlier (see Chapter 3). *The Attitudes to Time Future Scale* has two subscles each assessing level of favourability associated with future time. Items were rated by participants on a five point scale. *The Dependency Fearfulness Scale*, again developed in Study 1, has two subscales assessing dependency attitudes (attitudes about receiving help from others) and social support (expectations that help would be available if needed). Ratings took place on a five-point Likert type scale in the direction of more negative evaluations. Results from earlier empirical work indicate that this newly developed scale has good internal reliability and external validity. Finally, *The Ageing Controllability Scale* asked participants to rate on a five-point scale the level of control they believed they have over possible positive and negative experiences that may occur in later life. In earlier research (see Chapter 3), this scale was found to have good internal reliability (α = .84 and .57) and to be correlated with other threat based measures.

Knowledge About Ageing: The measure used to assess knowledge about ageing was Palmore's Facts on Aging Quiz (Palmore 1977). Although this scale was found to have low internal reliability in an earlier study (see Chapter 3), this scale was related to scores on the General Attitudes to Ageing Scale and a range of other measures. Given that this scale is a widely used measure in gerontology, and given that it may provide some indication of the level of knowledge adults have towards own old age, it was decided that this scale should be included again in the current research despite concerns about its psychometric properties (see Chapter 2).

Participants were also asked about the relative strength and stability of their attitudes. Specifically, participants were asked how strong their attitudes to old age were (very strong – not very strong) and how long those attitudes were held (always had these attitudes, attitudes have become more positive with age, attitudes have become more negative with age). *Rate of contact with Older Adults:* Participants were also asked to indicate the amount of time they spent with older people. Following the example of Peterson et al. (1988), participants were asked for the rate of personal contact they had with elderly neighbors and friends, i.e. face to

face interaction with an elderly person whose name is known (at least daily, at least once a week, at least once a month, at least once a year, never or almost never).

4.2.3.3 Measures of Psychosocial Well-being

Mental Health Measures: A number of health measures were included this study. *The Satisfaction With Life Questionnaire (SWLQ)* used in this study came from Deiner et al. (1985) and assesses cognitive-judgmental aspects of global life satisfaction. Deiner et al. report good psychometric properties for this scale. *Ageing Self-efficacy:* Participants were asked to rate on a five point scale their sense of competence in managing any problems that might arise in later life. Specifically, participants were asked how able they felt generally about managing problems that might arise in later life. *Current Stress Levels:* To measure current stress levels, two items were used. The first item was an open-ended question asking participants if they were currently experiencing any large or ongoing stressors in their lives. The second was a single item measure asking participants to summarise their current levels of daily stress from not very much stress (1) to highly stressed (5). Measures of physical health were also included. Participants were asked to rate both their current physical health and their levels of energy on a five point Likert-type scale from *poor* (1) to *excellent* (5), and *low* (1) to *high* (5) for health and energy levels respectively. To seek further distinctions between groups, participants were also asked to summarise their fitness levels from being excellent (5) to poor (1). In order to have a more objective measure of health participants were also asked if they were experiencing any health problems.

Supportive Networks: To provide a context for understanding attitudes, questions were asked about supportive networks. Following the example of Berkman & Syme (1979) cited in Newsom & Schulz (1996) the number and rate of contact with family and friends were calculated. Participants were asked for the number of both relatives and friends with whom they felt close, and also the number of friends and relatives seen the previous month. The quality of the spousal relationship was also assessed using a single item question. Participates were asked to rate the closeness of their relationship with their spouses or equivalent from (1) excellent to (5) very poor.

4.2.3.4 Miscellaneous Measures

Rater's Short Form Questionnaire: To provide an independent assessment of participants' attitudes on the GAAS, this study also involved a second stage for a sub-group of participants who identified a person (rater) known to them well who could provide an accurate rating of

their (the participants') aptitude to ageing. Raters filled in a short questionnaire containing two very short sections. The first section inquired about the nature and duration of the relationship between the raters and the participant. Raters were then asked in the second section of the questionnaire to rate participants attitudes to old age from very positive to very negative. In this second part of the questionnaire raters were also asked to complete The Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971) from the perspective of the participant. The final section on the rater's questionnaire asked raters for their own attitudes to their own prospective old age. This latter question was included to provide further validation of the rater's assessment of the participant's attitude, i.e. to reject the possibility that raters were projecting their own attitudes onto participants. The raters were not known to the researcher and raters were not asked to identify themselves. The rater's questionnaire was very short covering only one side of an A4 sheet (see Appendix 5).

Participant's Short Form Questionnaire: Participants taking part in the second phase were also asked to complete a short form questionnaire on the spot. Participants short form questionnaires were very similar to the raters questionnaire just described above. In the first section, participants were asked to rate the nature and duration of their relationship with their raters. The second section asked participants about their own attitudes to old age. This was carried out using two questions. The first single item measure asked participants to summarise their own attitude to old age (very positive – very negative). Participants were also asked to complete The Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971). This measure has only moderate psychometric validity (see Chapater 2), but it is a scale used in the literature and it is a measure which is easy to use and short, i.e. ideal for use in short-form questionnaire. There might also be a correlation between these two scales at the two time points which needed to be examined, i.e. in the short form questionnaire and in the longer questionnaire which participants took home. A copy of this questionnaire can be seen in Appendix 6.

4.3 Data Analysis

All quantitative data were analysed using *SPSS Version 9 for Windows* . Data were analysed for each of the main research questions as outlined next.

4.3.1 Examining the Reliability And Validity Of The Newly Developed Scales

The first aim of Study 2 was to examine the psychometric proprieties of new measures including the 5-item General Attitudes to Ageing Scale developed from Study 1. Cronbach's

alpha was the test statistic used to examine the internal consistency of these newly developed measures. As noted in Chapter 3, alpha values of 0.7 and above are accepted as indicating good internal reliability. Validity of measures was assessed by correlations with other scales purporting to measure similar things. Validity was also assessed by examining scores on the GAAS at different time points and by two people (participants and raters commenting on participants' attitudes to ageing and their own future old age.

4.3.2 Relationship between General Attitudes and Threat

The second main aim of Study 2 was to examine the relationship between general attitudes and threats being associated with own future old age; this was carried out in part using Pearson's product moment correlations. As noted by Tabachnick & Fidell (2001) correlation analysis is the most frequently used measure of association between two variables and this test statistic refers to a measure of the 'size and direction of the linear relationship between ... two variables' (p 53). Green, Salkind & Akey (2000) define correlations similarly, i.e. the degrees to which quantitative variables are linearly related. The Pearson correlation coefficient ranges in value from –1 to +1 reflecting the degree to which a high or low score on one variable relates to a high or low score on another variable. If the *r* value is positive, high scores on one variable are associated with high scores on a second variable; if the *r* value is negative, high scores on one variable can be associated with low scores on a second variable. As noted in Chapter 2, judgments about acceptable or strong levels of association are difficult and can be influenced by a wide range of factors (including the standards already set in a given field). Nevertheless, Green, Salkind & Akey (2000) note that correlation coefficient values of about .10, .30 and .50 can be taken to represent small, medium and large effect sizes respectively.

As outlined in Chapter 3, there are a number of assumptions underpinning Pearson's correlations and multiple regression analysis; these include assumptions of normality and equality of group covariance matrices. These assumptions were tested using Kolmogorov-Smirnov Test and Box's M. Although not all measures were normally distributed further analyses indicated that the reason for mild non-normality was one of kurtosis rather than skewness or outliers; this is less problematic as most of the tests used (e.g. univariate *F)* are robust in the face of modest violations of normality (see Tabachnick & Fidell, 1996).

A multivariate analysis of variance (MANOVA) was also carried out in the current study to examine whether attitudes were influenced by a range of independent variables (e.g.

age and/or gender). The use of MANOVA is an extension of an Analysis of Variance (ANOVA) to situations where there are several dependent variables. A basic goal behind the use of MANOVA is to query whether the manifestation of one or more dependent variables is changed by the manipulation of the independent variables. MANOVA can be used to examine the main effects of independent variables, i.e. whether mean differences in the dependent variables between groups are larger that those expected by chance. This test statistic can also be used to examine interactions between independent variables. When using MANOVA it is necessary to have at least five-ten cases per dependent variable; this requirement is in place in order not to lower the power of the analysis. As noted by Tabachnick & Fidell (2001) a likely outcome of reduced power is a non-significant multivariate *F,* but one or more significant univariate Fs. In the current study this requirement was met given that there were at least ten cases per variable.

As noted by Tabachnick & Fidell (2001) the use of MANOVA has several advantages. Using multiple dependent variables (DVs) at one time is a more rigorous way to examine true changes as a result of a given independent variable (IV), e.g. it protects against inflated Type 1 error due to multiple tests of correlated DVs. However, this test also has some potential theoretical and practical limitations; theoretically, attributions of causality are an experimental rather than a statistical issue, and practically, this test does prefer samples to be of relatively equal size and to be normally distributed. Nevertheless, regarding unequal sample sizes, Tabachnick & Fidell indicate that a sample size of about 20 in the smaller cell should ensure robustness. Green et al. (2000) also note that assumptions of normality are difficult to meet and that the MANOVA still yields valid results with moderate to large samples sizes.

4.3.3 Relationship Between General Attitudes and Psychosocial Variables

To examine the relationship between general attitudes to own future old age and other psychosocial variables including current health, social support and knowledge about ageing Pearson's correlations and hierarchical regression analyses were used. Information about the use of Pearson's correlation coefficient has already been given in this chapter (see section 4.3.2); information on the nature and basis of hierarchical regression analyses with associated assumptions have also been summarised in the last chapter.

4.4 Results

Results are reported in three sections in line with the main research questions being addressed. The first section, section 4.4.1 reports data on the psychometric properties of the

GAAS within both sample groups. The second section examines the relationship between general attitudes and age-associated threat measures. The final section examines the relationship between general attitudes and psychosocial health measures, and particularly whether the relationship between general attitudes and threat based measures remains significant when psychosocial health variables are controlled.

4.4.1 The General Attitudes to Ageing Scale (GAAS)

The first aim of this study was to examine further the psychometric properties of the newly developed GAAS.

4.4.1.1 Internal Reliability of the GAAS

Internal reliability for the General Attitudes to Ageing Scale was assessed for both sample groups using Cronbach's alpha. As can be seen in Table 4.3, the five-item General Attitudes to Ageing Scale (GAAS) was found to have good internal reliability across a range of sample groups including recruitment groups, gender groups, and age groups. Internal reliability for adults aged 65 years and over was slightly less good than the other samples but still within an acceptable range and also an improvement on reliability scores from other measures. These results replicate findings from Study 1 and show that the newly developed 5-time General Attitudes to Ageing Scale does have good internal reliability.

4.4.1.2 External Validity of the GAAS

External validity for the General Attitudes to Ageing Scale was calculated for both samples in terms of their correlations with other variables. As can be seen in Table 4.4 overleaf, results indicated that the GAAS was significantly correlated to a range of measures, including the Personal Aging Experience Scale, the Anxiety about Ageing Questionnaire and the Ontario Scale. These results, similar for both Study 1 and Study 2 sample groups, again indicates that the 5-item GAAS has good external validity.

Table 4.3
Cronbach's Alpha for the GAAS for Different Sample Groups

Recruitment Group		Gender		Age Group		
Church	Highstreet	Male	Female	<39	40-66 years	65+ years
.77	.85	.76	.84	.86	.82	.68

Table 4.4

Basic descriptive data for the Main Attitudinal measures and their Correlations with the General Attitudes to Ageing Scale (GAAS)

	Church Sample (n =190)				Highstreet Sample (n = 186)			
Measures	*M*	*SD*	α	r with GAAS	*M*	*SD*	α	r with GAAS
- GAAS	11.8	3.2	.77		12.8	3.3	.85	
- Ontario Scale	10.1	2.9	.67	.71***	10.8	2.9	.68	.79***
- Lashner & Faulkner	49.0	10.5	.87	.70***	54.3	12.9	.74	.69***
- Steverink Exp. Scale	26.8	5.2	.86	.68***	27.9	4.3	.82	.61***
- Summarise attitudes	2.2	0.8		.62***	2.5	0.9		.66***
- Difficulty expected	2.3	0.5		.44***	2.3	0.6		.42***

Note: Lashner & Faulkner (1992), Steverink et al (under review), Ontario subscale (1971), *** = p< .001

External validity of the GAAS was also assessed on data from the subgroup of participants who took part in the second stage of the research. This was carried out by correlating rater's assessments with assessments made by participants on both the short form questionnaire and the longer questionnaire which was completed by participants in their homes. As can be seen in Table 4.5, results from this analysis indicated that there was a high agreement between raters and participants in evaluating participants' attitudes to their own old age ($r = .75$, $p < .001$). Participants' scores to this same question on the short form questionnaire and on the longer questionnaire were also found to correlate highly ($r = .74$, $p < .001$). Results also indicated a high correlation between participants' scores on the General Attitudes to Ageing Scale and raters' summary on the short form questionnaire on

Table 4.5

Assessment by the Raters and Participants of Participants' Attitudes to their Old Age

	External Raters			Participants			Correlations		
Measures	mean	sd	n	mean	sd	n	P^1X P^2	R X P^1	R X P^2
1) Summarise	2.7	1.1	26	2.3	1.0	26	.75***	.74***	.53**
2) Anxiety	15.3	4.3	26	16.3	4.8	26	.93***	.27*	.41*

Note: summarise = raters and participants rating on five point scale of way in which participants summarise their attitude to own old age (very positive - very negative), Anxiety = scores on the Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971). P^1 X P^2 = correlation of the same measures for participants completed on the highstreet and later at home. R X P^1 = correlation of the rater's response on the high street with the participants response on the highstreet. R X P^2 = correlation of the raters response given on the highstreet with participants' responses in long version questionnaire which participants completed later in their homes. *** = $p < .001$, ** = $p < .01$, * $p < .05$,

participants' attitudes to old age as measured both by the one item question asking raters to summarise participants attitude to old age ($r = .57$, $p < .01$) and the Ontario scale which raters completed from the participants perspective ($r = .41$. $p < .05$). There was also a significant correlation between participants rating of their attitude on the short form questionnaire and on the GAAS completed later at home ($r = .76$, $p < .001$). These results provide additional evidence that the GAAS has good external validity.

A multivariate analyses of variance was used to compare the mean responses on the GAAS between participants who took part in this second phase of the research and the rest of the sample group. This analysis was carried out to consider the possibility that participants taking part in this second phase were different in significant ways from the remainder of the sample groups, thus reducing the value of the findings above. The dependent variable was scores on the General Attitudes to Ageing Scale. The independent variables were sample group (church only, highstreet only, or short-form group from both church and highstreet), demographic factors (finances, education), social support (number of both friends and family see and feel close), and health factors (energy levels, stress). A significant main effect for sample group was found, $F(2, 147) = 3.0$, $p < .001$, $\eta^2 = .19$. A post hoc Sheffé test indicated that participants taking part in the second stage of this research were comparable to the church sample, but significantly different to the highstreet sample in terms of finances ($p < .05$), the number of friends seen in the previous month ($p < .005$), and having a degree level of education ($p < .05$). Participants taking part in the second short-from stage of this research were also comparable with the church sample ($p > .05$), but significantly different from the highstreet sample in their scores on the General Attitudes to Ageing Scale ($p < .001$). These results indicate that participants who took part in the second phase of the current research were similar to the church sample, but significantly different from the highstreet sample. These results suggest that further studies should gather data on this measure from independent raters within non-religiously orientated sample groups.

4.4.1.3 Sample Differences in Attitudinal Measures

A multivariate analysis of variance was carried out to consider whether the two sample groups should be joined or kept separate in later analyses. The independent variable was sample group (church, highstreet) while the dependent variables were the GAAS, the Ageing Questionnaire (Lashner & Faulkner, 1992) and the Personal Aging Experience Scale (Steverink et al., under review). Results indicated there was a significant main difference

between the two samples, $F(4, 364) = 4.8$, $p < .001$, $\eta^2 = .05$. However given known differences between the samples in terms of finances, education and the importance of religion, this analysis was repeated with these variables entered as covariates. In this second analyses, results indicated there was no significant difference between the samples groups on the main attitudinal scores, $F(4, 351) = .41$, $p > .10$. Given no significant difference between the samples when these known sample differences were controlled, the two sample groups were joined in later analyses.

4.4.1.4 To Summarise

The General Attitudes to Ageing Scale was developed in Study 1 to measure adults' general attitudes to own future old age. The main aim of the current study was to examine further the psychometric properties of this newly developed scale with more diverse sample groups (recruited in different ways and with incentives for participation) and with independent raters. Findings indicate that this new measures does have good psychometric properties; nevertheless further and more rigorous assessments of this scale was carried out cross-culturally in the study to follow. However, despite these promising results, much more research is needed examining the psychometric properties of this scale, including tests with an increasingly diverse group of adults, and research examining the discriminative and predictive validity of this scale.

4.4.2 Descriptive Data on Other Measures

The final two aims of Study 2 were to examine the relationship between general attitudes and age-associated threats, and general attitudes and psychosocial health variables. This section summarises the psychometric properties of these scales. Once it has been demonstrated that these measures have good internal reliability and validity, section 4.4.3 then examines the relationship between both sets of variables.

4.4.2.1 Reliability and Validity of Threat-Associated Ageing Measures

As can be seen in Table 4.6, results indicate that the measures used in the current study had good internal reliability (alphas .67-.81). The only exception was Palmore Facts on Aging Quiz with group alpha score of just .31. A similar low internal reliability score for Palmore's quiz has been found by other researchers (see Chapter 3). These results highlight the need for a new knowledge based measure; the development of a new knowledge measure was one of the aims in Study 4 (see Chapters 6-9). External validity is best assessed via correlations with other measures. Although these scales measure different aspects of threats,

Table 4.6
Basic Descriptive Data for the Threat-Based Measures

Attitudes to Ageing Scales	α	1	2	3	4	5	6	7
1. Attitudes to general ageing (GAAS)	.81	-						
2. Time Future Negative	.76	.58**	-					
3. Time Future Positive	.76	-.38**	-.25**	-				
4. Dependency Attitudes	.70	.36**	.32**	-.25**	-			
5. Support from Others	.77	.51**	.43**	-.41**	.51**	-		
6. Control over Negative Experiences	.67	.16**	.09	-.14*	.12*	.09	-	
7. Control over Positive Experiences	.75	-.24**	-.20**	.27**	-.01	-.19**	-.18**	-
8. Palmore's Facts on Ageing Quiz	.34	-.23**	.18**	.16**	.08	-.16**	.09	.02

Note: ** = $p < .001$, * = $p < .01$, α = Cronbach's alpha

the scales nevertheless were significantly related to each other and to scores on the General Attitude to Ageing Scale (see Table 4.6). These results suggest that the threat based measures have good psychometric properties. In addition, a significant correlation was found between general attitudes to future old age and all age-associated threats ($r = .16$-$.58$, $p < .001$).

Participants had also been asked about the strength of their attitudes and any changes in their attitudes over time, i.e. whether attitudes had become more positive, more negative or remained the same. As can be seen in Table 4.7, only a minority of participants (n = 66, 18% of total sample) described their attitudes as being very or fairly strong; of these participants only a relatively small percentage (34%, n = 14) described their attitudes as becoming much

Table 4.7
Data showing Strength of Attitudes and Change over Time

	Changes in Attitudes over Time				
Strength of attitudes	Stay Same (n = 110)	More Posit. (n = 106)	More Neg.. (n = 106)	Sample Total	Pearson Chi Square (sig.)
Very/fairly Strong	27 (17%)	25 (16%)	14 (34%)	18%	18.3 (.001)
Somewhat Strong	94 (58%)	113 (71%)	24 (58%)	64%	
Not Strong	42 (26%)	22 (14%)	3 (8%)	18%	

more negative over time. Equally however, although 44% of the total sample (n = 160) summarised their attitudes as becoming more positive over time, this view was held strongly by only 15% of respondents (n = 25). These findings again suggest that many people have worries and concerns about the latter part of their lives. Although beyond the scope of this thesis, research exploring stability and change of attitudes could be very important in understanding the influence of attitudes on later health and well-being. To address this question, longitudinal research is needed; it is expected that participants from the last study of this thesis will be followed over time in part to address this question.

Participants had also been asked about the quantity of contact they had had with older adults; no significant relationship however was found between quantity of contact and attitudes to own future old age ($r = .10$, $p > .05$). However, although the quantity of contact may not be significant in influencing age- associated attitudes, future research should examine the quality of relationships people have had with older people; underpinning the research through this thesis is the belief that close relationships do impact on age-associated attitudes particularly by influencing the ways we view ourselves and others (see Chapters 6-9).

4.4.2.2 Reliability and Validity of Psychosocial Measures

As can be seen in Table 4.8 overleaf, results also indicated that the psychosocial measures had good psychometric properties. Each set of health and social measures, were most strongly correlated with others from the same set. These results indicate that the psychosocial measures used in this study also have good external validity. In addition, significant correlations were also found between general attitudes to own future old age and psychosocial health variables ($r = .22$-$.35$, $p < .005$); however, while rate of contact however with friends and family was not significantly related to GAAS, the quality of contact with these same groups was significant.

4.4.2.3 To Summarise

In this section it was shown that the psychometric properties were good for both the threat-based scales and the measures of psychosocial well-being. Results also indicated that there were significant correlations between the GAAS and both threat based measures and psychosocial variables. The section to follow will now examine in more detail the relationship between general age-associated attitudes, threat evaluations and psychosocial well-being.

Table 4.8

Basic descriptive data on health and social variables for Church and Highstreet Samples Combined

Variable	1	2	3	4	5	6	7	8	9
1. GAAS	-								
2. Life Satisfaction	-.35**	-							
3. Current Stress	.24**	-.35**	-						
4. Self-Efficacy	.39**	.36**	-.31**	-					
5. Physical Health	-.25**	.18**	-.18**	.25**	-				
6. Energy Levels	-.25**	.18**	-.24**	.29**	.50**	-			
7. Relatives Close[1]	-.22**	.17**	-.22**	.20**	.03	.16**	-		
8. Relatives See[2]	-.10	.07	-.10*	.13*	.04	.07	.55**	-	
9. Friends Close[1]	-.24**	.08	-.11*	.12*	.06	.18**	.50**	.20**	-
10. Friends See[2]	-.07	.14**	-.10*	.07	.04	.08	.10*	.21**	.32**

Note: ** = $p < .001$, * = $p < .05$, α = Cronbach's alpha, [1]Number of relatives and friends feel close to, [2]Number of relatives and friends see regularly

4.4.3 Relationship between Variables

This section aimed to examine in more detail the relationship between attitudes to future old age, age-associated threats, and psychosocial variables.

4.4.3.1 Relationship Between General Attitudes and both Threat and Psychosocial Variables

As established already (see Tables 4.6 and 4.8) a significant relationship was found between the GAAS and both threat based measures, and psychosocial measures. To examine whether the relationship between the GAAS and threat based measures remained even when controlling for demographic and psychosocial variables, additional correlations were carried out. As can be seen in Table 4.9 significant relationships between general attitudes to future old age and the threat-based measures remained even when partialling out the effects of rival variables; the latter included demographic factors, positive and negative affective states, and both demographic and psychosocial variables combined. With a more diverse sample, the above results again indicate that attitudes to future old age can be understood in relation to the level of danger or threat being associated with this time of life. In addition, results also indicated that demographic and psychosocial variables had little impact on the relationship between general attitudes to own future old age and the threat based measures.

Table 4.9
Correlations between the GAAS and Age-associated Threats while Partialling the Effects of One or More Control Factors

Variable	a	b	c	d	e
1. GAAS	-	-	-	-	-
2. Tine Future Negative Scale	.58**	.59**	.51**	.54**	.45**
3. Tine Future Positive Scale	-.38**	-.37**	-.35**	-.37**	-.24**
4. Dependency Fearfulness Scale	.36**	.32**	.32**	.34**	.18**
5. Support Expectations	.51**	.47**	.46**	.48**	.31**
6. Control Over Negative Experiences	.16**	.13**	.14**	.15**	.07
7. Control Over Positive Experiences	-.24**	-.25**	-.19**	-.22**	-.17**

Note: n = 373, a) zero order correlations, b) partial correlations controlling for demographic factors (finances, education and religion), c) partial correlations controlling for health (life satisfaction, self-efficacy, stress and physical health), d) partial correlations controlling for negative affect (stress), e) partial correlations controlling for demographic variables, health factors and social relationships (rate of contact with friends and family).

There was one exception however to the above results in that there was no significant relationship between the GAAS and the negative control subscale once demographic and psychosocial measures were controlled. This unexpected finding may reflect a limitation of the measure used which should be addressed in future research; however, this possibility is unlikely given that this subscale had good psychometric properties. Instead, these findings may reflect an awareness by participants that problems and aversive experiences can occur throughout the lifecourse, irrespective of the actions or attitudes of the individual. In contrast, age-associated positive experiences and attributes are not only related to the actions and attitudes of the individual, but often dependent on these; consequently lack of felt control over positive experiences in later life would be expected to be a more serious threat to the self. These ideas are consistent with the findings in Table 4.9 and provides further evidence that age-associated attitudes can be understood in relation to the level of danger or threat being associated with the latter part of the life course.

4.5 General Summary and Discussion

Replicating and extending findings from Study 1, results from Study 2 indicate: 1) that the newly developed 5-item General Attitudes to Ageing Scale does have good psychometric proprieties, 2) that attitudes to own future old age can be understood in relation to the level of threat associate with this time of life, and 3) that the relationship between general attitudes and threat remains, even when controlling for rival variables or explanations. These findings are discussed briefly in this section.

4.5.1 Examining the Psychometric Properties of the GAAS

The first aim and contribution of the current study was in testing further the psychometric properties of the newly developed General Attitudes to Ageing Scale. As noted earlier (see Chapter 2) researchers in adult development and ageing have few measures from which to explore and examine the subjective experience of own ageing and future old age; measures which are available can be very long, and/or have poor psychometric properties. Evidence replicated across two sample groups indicates that the GAAS by contrast is a promising measure of adults' attitudes to own future old age. Specifically, this five item scale was found to have good internal reliability across a range of sample groups (alphas .68 - .86) and to have good external validity with a range of other measures. Additional evidence to support the validity of the scale came from external raters. Although the General Attitudes to Ageing Scale needs further testing including with more heterogeneous samples evidence from the current study suggests that this scale is a promising measure of the general attitudes adults have towards their own prospective old age.

4.5.2 Examining the Relationship Between General Attitudes and Threat

The second aim and contribution of Study 2 to the current literature was in examining the relationship between general attitudes to own future old age and threat based measures. Understanding what it means to hold a negative attitudes to own future old age has theoretical and applied value, particularly in facilitating health and well-being in later years. Results from this research again supported the relationship between general attitudes to own old age and the level of threat being associated with this experience. Specifically, replicating results from the first study (see Chapter 3), people with a negative attitudes to own old age associated own future old age with lower levels of felt control, greater concerns about possible dependency with age, and more anxiety around the finite nature of time. It is possible that concern about one's own old age can ultimately lead to many positive outcomes, further growth, development and integrity in later life. Nevertheless, as already discussed, concern about own old age can also have many serious consequences on health and the quality of relationships; as such, it is imperative that researchers understand in more detail the nature of threats in later life, and the strategies adults use to regulate and manage these.

4.5.3 Examining The Influence of Health Variables on Attitude-Threat Relationships

The final aim of Study 2 was to examine the relationship between general attitudes and threat while controlling for psychosocial well-being. In this study, health and social

relationships were found to be significantly related to scores on the GAAS. However the relationship between general attitudes and the threat based measures remained significant, even when health and psychosocial variables were controlled.

4.5.4 Future Research

In the current study further evidence was found to indicate that negative attitudes to ageing can be understood in terms of the level of threat being associated with the latter part of the life course. Specifically, significant correlations were found between general attitudes and threat-based variables; these relationships remained significant even when controlling for demographic and psychosocial factors. The cross-cultural study to follow sought to extend findings further, by examining in more detail and the nature of age-associated threats.

Chapter 5

A Cross Cultural Study of General and Specific Attitudes to own Prospective Old Age

"I hope I won't be treated like an old thing of no importance, not a real person, just an old bag of bones" (Elizabeth, age 63, O'Hanlon, in prep)

5.1 Introduction and Chapter Overview

Studies 1 and 2 demonstrated a significant relationship between general attitudes to one's own future old age and the level of threat being associated with this time of life. Study 3 sought to extend those findings further by examining in more detail the nature of age-associated threats. Specifically, the first aim of Study 3 was to examine the relationship between general and specific age-associated threat domains; the latter included evaluations about physical, social and psychological aspects of later life. The second main aim of Study 3 was to distinguish between different types of age-associated threats, i.e. possible losses (e.g. irretrievable loss of something important), constraints (e.g. restraints or limitations in activities), and positives, e.g. if enjoyed leisure pursuits are challenged by social or physical restraints; similarly, the inability to appreciate age-associated positive attributes and experiences (e.g. further development, see Erikson et al, 1986) can also pose a threat to the self, including to health and well-being. Study 3 also sought to examine attitudinal variations between participants recruited in the United States and Britain, in part because different funding arrangements in each of these countries for health care may impact significantly on the way later life is being viewed and evaluated.

The first main aim of the study to follow was to examine the relationship between general and specific attitudes to own future old age in order to shed more light on the nature of age-associated evaluations. Attitudes to one's own future old age can be understood in relation to the level of threat being associated with later years (see Chapters 3 & 4). However, to date it is not clear whether that threat is largely physical (e.g. concerns about declining health, death or the process of dying), social (e.g. concerns about changes in work or parenting roles/relationships), psychological (e.g. regrets about missed opportunities/poor choices made in the past), or a combination of all these domains. Using the General Attitudes to Ageing Scale, it is expected that the general level of threat adults associate with their own ageing and future old age will not be related solely to one specific domain, but instead be related to a combination of physical, social and psychological domains of experience.

The second main aim of Study 3 was to attempt to distinguish between specific age-associated threats, i.e. drawing on earlier pilot study data, specific possible threats included losses, constraints and threats around positive experiences (see Table 5.1 for preliminary definitions). Losses can include irretrievable loss such as through death and bereavement, while constraints can refer to either internally or externally imposed restraints on the self around physical, social, psychological and/or sexual aspects of life in later years. Finally, threats associated with possible positive experiences in later years can include the potential or actual absence of current pleasures and pursuits, and/or the inability to recognise and appreciate the positive qualities and attributes which can occur in later years. (Drawing on findings from the first exploratory pilot study, positive of experiences in later life can include relationships with children and grandchildren, e.g. 'seeing more of the family', 'growing old with someone', and 'the joy of having children or young people around'. Other positive attributes and pleasures can include increased confidence and experience, being less anxious and more relaxed about life, the enjoyment of new leisure activities, and pleasure in reflecting and/or accepting past choices made.) The need to be increasingly refined and detailed in understanding the nature of age-associated threats is underpinned by the possibility that different kinds of age-associated threats may impact on health in different ways, with age-associated losses for instance having a greater effect on the onset of depression while constraints may be more linked to anxiety. A better

Table 5.1
Preliminary Definitions for General and Specific Age-Associated Threats

Variable	Brief Definition
General threat	- threat occurs when a given aversive experience is seen as being uncontrollable and inescapable, with serious outcomes for the self, which have a reasonably high probability of occurrence (see Chapter 3)
Constraints	- Confines/restraints/limitations on the self (e.g. of time, opportunities, health or social expectations) which precludes certain desired activities or behaviours, e.g. health problems which limit travel plans
Losses	- Irretrievable demise/passing of something critical to the physical, social or representational self, e.g. independence, health, life
Positives	- Restriction, removal, absence or inaccessibility of otherwise enjoyable, constructive, and/or affirmative experiences associated with later years, e.g. enjoyment of children/grandchildren, greater confidence and appreciation of the self, continued development and growth, including in advanced old age (e.g. see Tornstam, 1992).

understanding of age-associated threats and challenges therefore may be important in facilitating greater health and well-being for more people for longer in later years.

The final aim of Study 3 was to consider cultural differences in attitudes between participants recruited in the US and the UK. Culture can be studied in small or wide geographical areas, between individuals in the same town or between individuals from different countries. In the current study, the decision was taken to examine cultural differences in attitudes between participants recruited in the US and the UK for pragmatic and theoretical reasons. Pragmatically, data collection in the US was a feasible option; this researcher was funded to attend two conferences in each of New York City and Washington, D.C., and as there was about a week between these two conferences this time could be used for data collection. More significantly however, there are strong theoretical reasons for examining cultural variations in age-associated attitudes between the US and Britain. Specifically, there are significant cultural differences between the US and Britain in terms of the way heath care is funded, and it was not clear whether these differences would be related to the level of danger or threat being associated with the latter part of the lifecourse. For instance, in Britain the National Health Service (NHS) was set up to provide free healthcare for citizens from birth to old age. The age-associated attitudes of older British-based adults therefore may be more positive because, despite constraints and cuts, later life may still be seen as a safe experience in which the health care needs of older users are largely met. In contrast however, healthcare in the US is an 'unequal' purchased commodity (Schoen, Davis, DesRoches, Donelan & Blendon, 2000: p 68) which individuals themselves typically need to try and organise. Many US-based adults will have taken active steps to prepare for their health needs in their later years, and the quality of care they can expect is very high. For many millions of others however, especially those in lower socio-economic groups, their inability to prepare adequately for their health care needs may mean that ageing is viewed more negatively and as a significant source of danger. Examining cultural differences in attitudes between participants in the US and the UK can therefore shed more light on the nature of adults' age age-associated attitudes and the role that culture can play in shaping and influencing those attitudes. Exploring attitudes in the United States and Britain would also provide more varied contexts from which to test further the psychometric properties of the newly developed scales.

In Study 3, participants from the highstreet were recruited from two cities in each of the United States (Washington, D.C. and New York) and Britain (Sheffield and Southampton). Participants were recruited by the same researcher in the same way in each city, and invited to take a questionnaire home to be completed at their own time and convenience. A wide range of measures was used.

Replicated across the samples, results indicated: 1) that all measures had good psychometric properties, 2) that physical, social and psychological concerns all contributed significantly to general age-associated attitudes, and 3) that the level of threat adults associated with their own ageing and future old age was related to participants' ability to manage constraints, minimise losses, and create positive gains. Contrary to expectations however, differences in general and specific attitudes between participants in the two countries did not reach significance level.

With more people living longer than ever before, there is a greater urgency to the need to understand the factors that can influence health and well-being for adults in their later years. Understanding that attitudes to ageing encompass physical, social and psychological domains of experience sheds more light on the nature of an issue very under investigated to date. Understanding age-associated attitudes in the context of constraints, losses and challenges to positive experiences is also important for theoretical and applied reasons, particularly in changing attitudes where these have negative effects on quality of life and well-being. Although ageing may be a similar experience for adults in relatively affluent Western countries, culture can nevertheless, be a very important factor in influencing and shaping the ways in which adults evaluate and experience the latter part of their lives.

5.2. Exploring general and specific attitudes to own future old age

5.2.1 General Attitudes to own Future Old age

This research aimed to examine the relationship between general attitudes to own future old age and the level of favourability/unfavourability being associated with physical, social and psychological aspects of later years. However, attempts to separate physical, social and psychological aspects of one's own ageing and future old age are not unproblematic, not least because some potential threats in later years (e.g. dependency on others) cross physical, social and psychological boundaries. Nevertheless, attempting to separate and examine the relative impact of each of these specific domains on general attitudes may be important for both theoretical and applied reasons. For instance, it may be that adults' attitudes solely/most strongly predicted by evaluations about the physical aspects of death. If so, it may be more logical and more valid to speak about 'attitudes to death' rather than 'attitudes to ageing or future old age'. Similarly, understanding better the domains of experience that contribute to general age-associated attitudes could have applied value, particularly in targeting resources and time as when considering interventions and attitude change.

5.2.2 Attitudes Towards the Physical Aspects of Own Old Age

As noted in Chapter 1, many of the negative images people often associate with later years can be a consequence of ageist thinking and stereotypes, e.g. that later life is intrinsically a time of decline and loss. In the initial pilot study however it was found that many participants were optimistic and content about the physical aspects of their own ageing and future old age including appearance and health: 'I expect to have white beautiful hair. Gentle eyes. Physical fragility, yet a lot of inner strength' (Sam, age 34); "I expect to spend my time walking, swimming, cycling, relaxing, doing things together as a couple, grandchildren, holidays, gardening, walking and more walking" (Margaret, age 52); 'I don't mind getting old or wrinkled. I think I will be one spunky old lady' (Sally, age 21); 'I am ageing very gracefully" (Helen, age 48) and "I .. take care of my body. I don't plan to actually look 50 or 60. When I'm that age. I plan to look younger' (Kerry, age 32).

In the initial exploratory web study (see Chapter 3) concerns around physical appearance included: "I think about being unattractive, feeble, and not able to do the things I do now" (Eileen, age 59); "I don't like it, I dislike changes in my looks and my body shape" (John, age 55) and "a little apprehensive ... I'm afraid for the superficial reasons of physical ageing and getting wrinkled and saggy" (Helen, age 35). Concerns around physical health included: "being physically weak and unable to move around much. Not having the energy to do things" (21F); "Sickness, hospitals, IV tubes, dependence on others" (Michael, age 23); "being trapped in a body that might not work" (James, age 36) and "I am concerned about the physical changes that go with ageing, like hearing loss and poor vision" (Andrew, age 68). Worries and concerns about death were mentioned by a number of participants: "fear of dying or losing my future spouse to death" (Sally, age 22); "My main worry is death" (Anne, age 32) and ".. although I am a positive person, my fear of dying casts a shadow over my enjoyment of my life. I know there is no point in worrying and I try to put it from my mind but I do wonder how I will cope with this fear as I get older" (Pippa, age 28).

Possible items for this and the other social and psychological subscales to follow were developed from the above exploratory webstudy (see Chapter 3): subscales sought to measure the positive and negative attributes within each of physical, social and psychological aspects of own future old age. Possible items were developed with consideration for issues identified in Chapter 3 (see section 3.2). In addition, care was taken when choosing items: 1) to ensure that items reflected the concerns and issues raised by participants in the first exploratory study, 2)

that items were phrased in focused ways to minimise overlap in concepts and to reflect either physical, or social or psychological domains of later life, and 3) that items within each set of domains reflected the positive and negative experiences being associated with physical, social and psychological aspects of later years. As with other measures, participants were asked to rate each item on a five point Likert type scale from 1 (strongly agree) to 5 (strongly disagree).

5.2.3 Attitudes Towards Social Aspects Of Own Old Age

As noted in Chapter 1, another body of concerns people have about later life can be related to changes and losses in social roles and relationships. Drawing on data from the initial pilot study (see Chapter 3), relationships in later years can be a source of joy, pleasure and satisfaction for many participants: "I think of being active and playing with grandchildren and being with my husband and cooking" (Sarah, age 34); "I look forward to ageing, retiring, having grandchildren, and being with my husband" (Paula, age 36); ".. my marriage has gotten better every year ... I believe being married to a dependable man .. will go a long way in nurturing my ability to enjoy old age" (Jo, age 28); "Finding a partner to grow old with, having children and grandchildren and giving them the same love I have received from my parents/grandparents" (Christine, age 31); "I hope that I can live to enjoy watching my family grow and if time permits, grandchildren also" (Yvonne, age 19) and "Growing old with my husband and having grandchildren" (Mairead, age 32).

Relationships with others however can also be a source of concern and worry, particularly the prospect of being alone in later years and/or not being appreciated or even acknowledged by the wider social community. Evidence to support this issue came from the initial pilot study (see Chapter 3): "I worry about eventually being alone if something happens to my husband" (Bridgid, age 72); "Getting old and finding myself divorced and on my own" (Majella, age 30); "being alone bothers me a lot. So many older people waste away in nursing homes .. for lack of company" (Alice, age 47); "I get upset sometimes when I think about getting older, but my biggest fear about it is to be alone" (Kelly, age 18); 'invisibility' (Martin, age 32) and "old age can mean social exclusion in all its facets" (John, age 52).

5.2.4 Attitudes Towards Psychological Aspects Of Own Old Age

Again, drawing on data from the first exploratory study, it was apparent that many participants did recognise the many positive psychological attributes and experiences that can occur in later years. As can be seen next, these included Eriksonion themes of generativity and wisdom (Erikson et al, 1987): "Spending time with children and taking care of their needs" (Stephnie, age 52); "I do not mind ageing at all. I think our wisest people are older and I look

forward to having had years of experiences and stories to tell grandkids and family members" (Mary, age 29); "I hope I will live long enough to grow old. ... I think of becoming wiser and being able to look back and make sense of what I did with my life" (Helen, age 32) and "I hope to be wiser and more self controlled. I think about becoming a role model and a teacher to the generations after me. Most of all I think of a deeper understanding of myself and the world around me" (John, age 50).

Psychological concerns reported by participants included an increasingly urgent awareness of the finite nature of time, changes in identity, and also regrets. Specifically, time-related concerns included: "There is so much that I still want to do and I worry about time running out" (Niamh, age 28); "Scared, cheated out of time, annoyed that in my head I feel 25 but do not look it!" (Michael, age 44); "a little apprehensive about fitting in the things I should be doing like having kids" (Angela, age 34) and "I feel very sad that my age creeping up on me even as we speak" (Kathy, age 42). Many participants had worries about identity and about regrets: "I have looked back on my life many times and regretted so many things. It seems that I am trying to right many wrongs that can never be made right" (Catherine, age 42) and "I have spent my life involved in so many other things that were not really that valuable, and now old age looms and I don't have the time to do the things that are actually important" (Kathleen, age 61).

5.2.5 Summary

To summarise, the physical, social and psychological aspects of own future old age can have many positive and feared qualities. The current study sought to examine the contribution of physical, social and psychological domains of experience in contributing to the variance in general attitudes to ageing. Possible items for the new scales were developed from earlier empirical data to reflect positive and negative aspects of specific age-associated attitudes. As described shortly, these items were then tested with participants in the U.S. and Britain.

5.3 The Constraints Losses, and Positives Scale (CLP-Scale)

The second main aim of the current study was to distinguish further between specific age-associated threats. Threats have been defined in the context of certain conditions including loss of control, susceptibility and severity of outcome. However, consideration was given to the need to define the nature of age-associated threats more precisely, i.e. in terms of losses, active constraints and challenges to positive gains. Constraints can refer to restraints imposed on the self, either internally (e.g. low confidence to try new things) or externally (e.g. social disapproval assumed to be present). Losses by contrast, can be taken to refer to the

irretrievable unfavourable and distressing loss/damage of something critical to the self, e.g. of health or relationships (Bowlby, 1980). Challenges to positive gains however can refer to potential removal of enjoyed activities and experiences, or the inability to recognise and appreciate positive qualities and experiences in later life. As already noted, being increasingly detailed in understanding the nature of age-associated threats may be important in understanding their impact on later health and well-being.

Understanding the nature of adults' attitudes towards the latter part of their lives is important for theoretical reasons. For instance, if, as is argued in the current research, negative attitudes to ageing and future old age are best explained by the level of danger or threat being associated with these experiences, then one would expect age-associated attitudes to be best explained by age-associated losses and constraints rather than other explanations such as current mood sate or financial status. In addition, by examining age-associated attitudes in the context of constraints, losses and possible challenges to positive experiences, one can gain further insights about age-associated attitudes and consequently pose increasingly sophisticated questions about this variable. The latter is especially urgent given the paucity of systematic research in this field. This systemic research is also urgent as discussed next, given the need to consider interventions when attitudes are so negative that quality of life and well-being are being impaired.

More sophisticated insights about the nature of adults' age-associated attitudes could also have applied value. For instance, it may be that age-associated losses are quite distinct from the constraints associated with the latter part of the life course. In addition, age-associated losses and constraints may be very different issues from the ability to see and recognise positive experiences in later life. Each of these sets of evaluations in turn may have distinct consequences on health and well-being, e.g. age-associated losses may have a greater impact on depression in later years, while age-associated constraints may be more significantly related to anxiety and worry. In addition, the interventions needed to change age-associated constraint evaluations (such as counselling) may be very different to interventions aimed at changing evaluations about possible positive experiences in later years; the latter intervention may be simply about giving people information/leaflets about the nature of later years. However, unless research is carried out examining the nature of adults' age-associated attitudes in more detail, interventions to improve health and quality of life may be less effective and ultimately older adults will not receive the high quality care and advice they have the right to expect. Possible items for the above scales were again developed from the initial pilot study (see Chapter 3).

5.4 Cultural Differences in Attitudes to Ageing

There is evidence that culture can be a significant variable in contributing to a range of health and psychosocial outcomes. These include personality development (Ochse & Plug, 1996), symptoms of PTSD (Hautamäki & Coleman, 2001), the meaning of health in later life (Westerhof, Katzko, Dittman-Kohli & Hayslip, 2001), the manifestation of health problems and experiences (Helman, 1990), estimations of intelligence levels (Furnham, Hosoe, & Li-Ping Tang, 2001), job satisfaction and well-being at work (Sousa-Poza & Sousa-Poza, 2000), perceived stress and rewards in the parental care role (White, Townsend & Stephens, 2000) and longevity (Erikson, Hessler, Sundh & Steen, 1999). In addition, Blanchflower & Oswald (in press) examined well-being and happiness over time in both Britain and the United States. These authors draw on data from the General Social Surveys in the US, and the Eurobarometer Surveys in the UK; annually for the past 25-30 years, both surveys provide cross sectional information on more than 55, 000 adults in each country. Although this relationship is confounded by other variables such as marital, gender and income groups, Blanchflower & Oswald argue that while well-being in America has steadily declined for many groups since the 1970s, there is evidence that well-being has remained stable over the same time in the UK. Given this evidence about the important role culture can play on a range of health and psychosocial outcomes, the current study sought to examine whether culture might also have a significant effect on the ways adults in the UK and the US evaluated the latter part of their lives.

Culture may be an important variable in explaining later psychosocial development and health for a number of reasons which include the provision of resources and healthcare. Within the context of culture for instance, people learn about themselves and others, including information about the availability and willingness of others to provide support and help, and the amount of resources available if sick or in need of help. This information may impact significantly on the ways adults think and evaluate the experience of their own ageing and future old age. On a related issue, the amount of resources people have within different cultural groups can also significantly impact on morbidity and mortality via a range of mechanisms including diet, education and quality of care. The latter is an especially important issue for older adults, as adults in later life can be more likely access the services of health care professionals by comparison with other age groups. Between the United States and the UK however there are highly significant differences in the way health care is provided, and it was queried whether these cultural variations in health care funding would be significantly related to the level of danger and threat adults associate with the latter part of the life-course. For instance, in Britain the government funds health care (needed medical services such as GPs and hospitals) through the National Health Service so that basic health care for citizens is free

at the point of entry. In the US by comparison, there is no similar national health care system; although government programmes are in place to help those on lower incomes to access needed health care, this programme is not likely to cover all medical costs and so the majority of the population need to try to take out private insurance.

Data indicates that the ways in which health and health care are perceived are very different for American and British adults. For instance, drawing on data from five countries (the United States, Britain, Canada, Australia and New Zealand) in the Commonwealth Fund International Health Policy Survey (Schoen, Blendon, desRoches & Osborn, 2002), findings indicated that Americans were most likely to say that their healthcare system needed to be rebuilt and most likely not to fill a prescription given concerns about costs. Many more American-based participants reported having difficulties seeing a specialist by comparison with similar groups of participants in Britain (30% and 13% respectively). Difficulties in meeting and paying medical bills were the most extensively reported by US participants, while only a small percent (3%) of Britons reported similar difficulties. However, while costs were the greatest barriers to healthcare in the US, waiting times were the leading reasons for not accessing care in Britain. Furthermore, while just 5% of US based participants reported waiting for surgery for four months or longer, the corresponding figure for British based participants was 38%. Nevertheless, Schoen et al (2002) conclude that despite having many strengths (e.g. greater responsiveness to patients as shown in shorter waiting times), the US healthcare system ranks bottom among the five countries surveyed for 'equity and most indictors of getting (and paying) for needed care' (p5). One possible consequence of this system is that Americans may tend to evaluate the latter part of their lives in more negative ways, and with greater levels of challenge and threat. The current situation sought in part to address this question.

By recruiting participants in the same way, by the same researchers in each city and country, it would be possible to examine cultural differences in attitudes to ageing. It was expected that attitudes in the US would be more negative than those in the UK, in part because health and healthcare in the US can be denied to many adults.

5.5 Summary and Goals

To reiterate, the goals of Study 3 were as follows:

1) to draw on pilot study data (see Chapter 3) to develop scales with good psychometric properties which could measure the level of favourability[1] being associated with physical,

[1] (Un)favourability is a necessary but not sufficient condition of threat; unfavourability is assumed to reflect threat until future research shows that each of these evaluations are related to losses of control, high susceptibility, serious outcomes for the self etc.

social and psychological aspects of own old age; Study 3 also sought to examine the relationship between these domains and general attitudes to own future old age,

2) to draw on earlier pilot study data to develop scales, with good psychometric properties which measure age-associated constraints, losses and positives; Study 3 also sought to examine the relationship between these measures and general attitudes to own old age,
3) to examine cultural differences in both general and specific attitudes to ageing and one's own future old age in participants recruited from both the US and the Britain.

5.6 Study 3 Method

5.6.1 Participants

Participants from the highstreet were recruited **to** this study from two cities in each of the United States (New York and Washington) and Britain (Southampton and Sheffield). This method of recruitment was chosen mainly given its effectiveness in earlier research (see Study 2). In addition, two cities were chosen in each country as a way of validating findings and considering the generalisability of results, e.g. if statements are to be made about cultural differences these should be replicated for each of the two cities within a given country. (More information on the ways participants were recruited is given in the section on procedure to follow.) Basic demographic information about participants is given in Table 5.2 overleaf.

To examine differences in participant groups by country, several sets of contingency table analyses were carried out; each set of variables with their associated levels can be seen in Table 5.2. Results indicate that there was a significant main difference between the samples in terms of both education (Cramér's V = .39) and finances (Cramér's V = .24). Follow-up pairwise comparisons were conducted to examine differences between the four samples in terms of education and finances, and particularly, to determine the direction of effect. As can be seen in Tables 5.3 and 5.4, results indicated that there were no significant differences on education or finances for participants recruited within each country, but that there were significant differences on these variables between the two countries. Specifically, when examining British-gathered data only, there was no significant difference between the two British cities in either education or finances; similarly, when comparing data from participants in both American cities only, there were no significant differences in education or finances. However, there were significant differences in education and finance levels when comparing across the two countries. These variables were then controlled in later analyses.

Table 5.2

Basic Demographic Variables for all Sample Groups Showing Significant Sample Differences only in Education

Follow-Up Variables	Levels	Number (and city %) by Sample Groups (n = 288)				Sample Total	Pearson Chi Square (sig.)
		New York (n = 90)	Washington (n = 61)	So'ton (n = 85)	Sheffield (n = 52)		
Age (years)	< 40	35 (39%)[1]	26 (44%)	36 (44%)	14 (27%)	112 (38%)	15.4 (p = .017)
	41-64	38 (42%)	28 (45%)	46 (54%)	32 (62%)	149 (51%)	
	65+	17 (19%)	7 (11%)	3 (3%)	6 (12%)	33 (11%)	
Gender	Male	9 (10%)	11 (18%)	16 (19%)	14 (27%)	50 (18%)	6.8 (p = .077)
	Female	81 (90%)	50 (82%)	69 (81%)	38 (73%)	238 (82%)	
Marital Status	Single	44 (48%)	29 (48%)	29 (34%)	19 (36%)	121 (42%)	5.3 (p = .149)
	With partner	46 (51%)	32 (52%)	56 (66%)	33 (64%)	167 (58%)	
Education	Non-Grad[2]	24 (27%)[2]	16 (26%)	53 (63%)	37 (72%)	130 (45%)	45.5 (p = .000)
	Graduate	66 (74%)	45 (74%)	32 (37%)	15 (28%)	158 (55%)	
Finances	≤ Aver.	44 (48%)	27 (44%)	61 (72%)	35 (68%)	167 (58%)	16.2 (p = .001)
	> Aver.	46 (52%)	34 (56%)	24 (28%)	17 (32%)	121 (42%)	

Note; [1] 39% of participants within the New York sample, [2] Nongraduate = pps with a maximum of school, certificate or diploma level of education,

Table 5.3

Follow-up Pairwise Comparisons for Education Showing no Significant Differences in Either Country Alone, but a Significant Effect of Education Between the Two Countries

Sample Comparisons	Pearson χ^2	n	p-value	Cramér's V
1. New York vs. Washington	0.01	151	.553	.00
2. So'ton vs. Sheffield	1.10	137	.193	.09
3. New York vs. So'ton	22.5	175	.000	.35
4. New York vs. Sheffield	26.6	142	.000	.43
5. Washington vs. So'ton	18.5	146	.000	.35
6. Washington vs. Sheffield	22.7	113	.000	.45

Note: Sot'on = Southampton

Table 5.4

Follow-up Pairwise Comparisons for Finance Showing no Significant Differences in Either Country Alone, but a Significant Effect of Finances Between the Two Countries

Sample Comparisons	Pearson χ^2	n	p-value	Cramér's V
1. New York vs. Washington	.03	151	.348	.04
2. So'ton vs. Sheffield	.03	137	.357	.04
3. New York vs. So'ton	9.5	175	.002	.23
4. New York vs. Sheffield	4.5	142	.025	.18
5. Washington vs. So'ton	11.2	146	.001	.27
6. Washington vs. Sheffield	6.0	113	.011	.23

5.6.2 Procedure

For the British cities, participants were recruited from the city centre pedestrian precinct as in both instances this area would incorporate a wide range of people from different socio-economic groups and backgrounds. In the American cities, participants were recruited from the highstreet in both affluent and mid-range socio-economic areas based on the range of shopping outlets in that particular area. For safety reasons, participants in all instances were recruited during daylight hours only, in non-deprived areas, and in areas which had visible security measures in place, such as close circuit television or patrolling police officers. Data collection

only took place on days when the weather was good. At all times during data collection, the researcher was smartly dressed, with a university identity badge clearly visible.

Participants were randomly approached and asked if they were interested in taking part in a psychology study which would simply mean them taking a questionnaire home and completing it at their own time and convenience (see Appendix 7). If they expressed interest, more detail was given about the research, i.e. it was then stated that the study was exploring adults' attitudes towards their own ageing and future old age and that adults aged over 18 were being approached to take part. When participants declined involvement in the study it was made clear verbally that their decision was fine. However it was also quickly queried whether participants would still be willing to answer a few quick questions on the spot just so that it could be explored whether people who were taking part in the study were different in some ways by comparison with those who were declining involvement. In many instances potential participants did not delay long enough for this question to be asked; however the vast majority of participants addressed in this way seemed pleased to help in this way. In these instances and to avoid being overheard, participants typically read each of four questions to themselves that were on laminated cards; they then indicated their responses via the letters beside each answer.

The number of participants approached in order to give out the available questionnaires can be seen in Table 5.5; although recruitment rates were low for the American cities, these figures included all persons approached, including non-English speakers, and people who did not delay long enough to know why they were being approached. Of the participants who declined to take part in the main questionnaire study, a convenience subgroup were asked if they would be willing to answer four key questions on the spot (Stage 2). These questions were posed to consider the generalisability of results, and the basic factors that may influence the decision to

Table 5.5

Basic Information about Participant Numbers Including Recruitment and Response Rates

		Participants (Stage 1)*		General Recruit. Rate	General Response Rate	Decliners (Stage 2)	
	City	Total Qs to Distrib.	No. Asked			Total Declined	Stage 2 Asked (and agreed)
US	NY	120	743	15%	90 (75%)	623	38 (93%)
	Wash.	80	376	22%	61 (76%)	296	18 (78%)

Note: *Stage 1 = Number of people first approached, British data to follow

Table 5.6

Mean Response Scores (with Standard Deviations) to Four Key Questions Participants Recruited in Each of the US and Britain

Country	Main Study Participants					Stage Two Participants					*p*			
	Q1	Q2	Q3	Q4	n	Q1	Q2	Q3	Q4	n	Q1	Q2	Q3	Q4
U.S	3.1 (0.8)	3.5 (0.8)	2.4 (0.9)	2.6 (0.9)	151	2.5 (1.0)	3.0 (0.8)	2.4 (1.0)	2.6 (0.9)	49	.14	.01	.86	.74
U.K	2.1 (1.0)	3.2 (0.6)	2.3 (0.8)	2.6 (1.0)	137			N/A				N/A		

Note: Q1 - What is the highest level of education you have received? Q2 - How would you describe your current financial situation? Q3 - How would you rate your current stress levels? Q4 - What is your attitude towards you own future old age? N/A Not yet available

take part in research. As can be seen in Table 5.6, there were no significant differences in terms of education, stress or general age-associated attitudes between Stage 1 and 2 US participants. However, there were significant differences in terms of finances, i.e. US participants who declined participation summarised their financial state as being higher (more affluent) than participants who completed the main questionnaires; these findings may limit Study 3 generalisability towards less affluent participant groups. In addition, future research should ask about time pressure, as lack of time was the main reason given by people who declined involvement in the study.

At no point were participants asked for identifying information. Participants were not given any financial incentives for their involvement; nevertheless, they were offered feedback on the study and the specific questions being posted. Participants were also given the opportunity of having their names placed in a draw. In addition, recruitment procedures for each county were similar, consequently, still enabling useful comparisons between the samples in each country.

5.6.3 Measures

5.6.3.1 General and Specific Attitudes to own Old Age

The General Attitudes to Ageing Scale (GAAS) was used to measure the general level of favourability or threat adults associated with their own ageing and future old age. Participants were asked to rate all items on a five point Likert-type scale from *strongly agree* to *strongly disagree* in the direction of negative attitudes to own old age. In earlier studies this scale was found to have good internal reliability ($\alpha = .72$) and good external validity. The development and earlier testing of this measure has been described extensively earlier (see Chapters 3 and 4).

Measures to validate the GAAS: The Anxiety about Ageing Questionnaire (Lasher & Faulkender, 1992) is a 20 item scale measuring the anxiety people feel about their own ageing. The Anxiety sub-scale of the Opinions About People Scale (Ontario Welfare Council, 1971) consists of Likert-type measure, with items graded from 4 (low) to 20 (high). The third measure was a single item scale asking participants to summarise on a five point Likert-scale their attitudes to future old age (from very positive to very negative).

Physical Domains[1]*:* Drawing on earlier data, a series of items were developed which sought to measures adult's concerns and worries for own future health in later life. Participants were asked to rate their level of agreement with each item. Statements included; 'Into my old age, I worry about having heart problems' and "loss of energy into later years will bother me a lot". *Expected physical appearance:* Again, drawing on data from the fist empirical study, statements by participants about changing physical appearances with were listed. As before, participants were asked to rate their level of agreement with each item . Statements included; "even into my old age, I expect to stay in shape' and "even into my own old age, I still expect to look well physically". *Fears around physical death:* To enquire about the level of fear adults had around own future death, a single item was used ('loss of life into later life bothers me enormously') to which participants were asked to rate their level of agreement on a five point scale. Later analysis will examine the external validity of these measures with related scales.

Social Domains: to examine participants' attitudes towards possible positive aspects of relationships, a series of items including expected warmth in relationships and generative identities were developed. As before, participants rated each item on a five point scale. Examples of these items included "I expect to gain a lot of enjoyment from following the activities of younger people" and I expect I will enjoy talking to older adults, even when I am very old". *Concerns about future social interactions*: Many participants had worries and concerns about the quality of social interaction with others, including whether or not care would be offered and available, and also about the ways they would be treated by others. To examine these issues, possible items were developed from the first pilot study of this research (see Chapter 3) and participants were asked to rate their level of agreement with each item. Examples of items included; 'Into my own old age, I worry that people will think of me as being unimportant: 'I really worry that people will ignore me when I am very old' and 'Into old age, I expect I will be concerned about losing the respect of other people'.

[1] * Physical domains were listed last on the main questionnaire to avoid biases responses to other items (e.g. see article by Stuart-Hamilton, 1999).

Psychological Domains; To examine evaluations around possible positive attributes and development in later life, participants were asked to rate their level of agreement with a range of items again developed from the first pilot study (see Chapter 3). These items included: 'When I reach old age I expect I will feel more at peace with myself ', 'As I get older I expect to know myself really well' and 'Into my old age, I will be glad to have gained more experience of life'. Psychological negatives included the level of concern adults' had towards possible negative states in later life, including regrets about time past, and despair at time future. Statement items for this measure included 'into my own future old age I expect I will have many regrets about wasting so much of my life' and 'Into my own old age I expect I will be really bothered that I cannot re-live my life again'.

Constraints, Losses and Positives Scale; In order to be more specific about the nature of age-associated threats, items were also developed to measure levels of favourability associated with possible constraints, losses and challenges to positive experiences in to later years. These items were to be rated on a five point scale from strongly agree to strongly disagree. Care was taken to ensure; a) that these items reflected many of the concerns people reported in earlier empirical research (content validity), and b) that items were not ambiguously phrased. More information on these items is given shortly.

5.7 Data Analyses

All quantitative data were analysed using *SPSS Version 9 for Windows.* Data were analysed for each of the main research questions as outlined next.

5.7.1 Developing New Measures

A number of analysis were carried out to examine the psychometric properties of the newly developed measures; the PSP Scale (subscales for the physical, social and psychological aspects of later life) and the new CLP-Scale (constraints, losses and positives subscales). Internal reliability at one time point was assessed by using Cronbach's alpha. The validity of these measures was tested by examining the items (content validity) and the relation between scales measuring a similar construct (concurrent validity). Exploratory factor analysis using principle components analysis was also used to examine the internal structure of the newly developed scales. Further information on these test statistics, including the different formats available and the assumptions underpinning their use, can be seen in Chapters 2-3.

5.7.2 Examining General and Specific Attitudes to Own Future Old Age

An analysis of the relationship between general and specific attitudes to own future old age was carried out in two stages. The first stage of analysis principle components actor analysis was used with all the main measures to establish that they did not cross load onto each other, i.e. that associations between variables could not be attributable to overlap in questionnaire items. In the second stage of this analysis, Pearson's correlations and hierarchical regression analysis were then used to examine the relationship between general and specific attitudes. Assumptions of normality and specificity underpin the use of correlations and regression analyses. To test the normality of distribution the one sample Kolmogorov-Smirnov Test was used; however even when violations occur, these are not always problematic (section 5.7.4).

5.7.3 Examining Age-Associated Threats; Constraints, Losses and Positives

Exploring the relationship between constraints, losses and positives was carried out using both correlations and hierarchical regression analyses; the latter analyses is useful for examining the relationship between one dependent variable and several independent variables. As already noted, a strength of regression analyses is that these can be used with continuous or dichotomous IVs (by converting the latter to dummy variables); this analyses also allows the researcher to ask many questions, including the relative importance of some IVs over others. As noted in Chapter 3, some limitations of this statistic however include difficulties in establishing causality, which is an experimental rather than a statistical issue. Similarly, regression analyses are sensitive to the combination of variables which are entered, e.g. if a given variable is the only one to be entered it can appear more important than if this same variable was entered as the last of several. For this reason, four regression analyses were carried out in which the ordering of the independent variables was rotated.

5.7.4 Examining Cultural Variations In Age-Associated Attitudes

To examine mean differences between the two countries in general and specific age-associated attitudes, a multivariate analysis of variance was carried out (MANOVA). As noted by Tabachnick & Fidell (2001), this test statistic has several advantages; using multiple dependent variables (DVs) at one time is a more rigorous way to examine true changes as a result of a given independent variable (IV), e.g. it protects against inflated Type 1 error due to multiple tests of correlated DVs. However, this test also has some potential theoretical and practical limitations; theoretically, attributions of causality are an experimental rather than a statistical issue, and practically, this test does prefer samples to be of relatively equal size and to be normally distributed. Nevertheless, regarding unequal sample sizes, Tabachnick & Fidell

indicate that a sample size of about 20 in the smaller cell should ensure robustness. Also , Green et al (2000) note that assumptions of normality are difficult to meet and that the MANOVA still yields valid results with moderate to large samples sizes.

5.8 Results

Results will be presented in three sections in line with the main aims of the study. Section 5.8.1 outlines the development of scales to measure the level of favourability and unfavourability associated with physical, social and psychological domain of later years. Section 5.8.2 examines the relationship between general and specific age-associated attitudes. Section 5.8.3 then examines in more detail age-associated threats including constraints, losses and challenges to positive experiences. The final section, section 5.8.4 examines cultural differences in age-associated attitudes.

5.8.1 Developing Specific Age-Associated Domain Scales

The first aim of the current study was to develop measures of the level of favourability and unfavourability being associated with physical, social and psychological domains of later life. Each subscale is discussed in turn in the section to follow.

5.8.1.1 Developing an Attitudinal Measure Of Age-Associated Physical Experiences

Twenty-four possible items were developed for the physical domains of life subscale (see Appendix 7, Section 6 items 1-24). To decide which items should remain in the scale several analyses were carried out. Firstly, each item was read and re-read to confirm: a) clarity of meaning and lack of ambiguity (e.g. no double-barrelled items), b) that it was not very negatively phrased which could bias responses to other scale items, c) that there was a lack of overlap between items in both phrasing or meaning (e.g. declines in health worded as both 'loss of energy' and ' slowing down physically'), d) that items were relevant to people of both sexes, and e) that each possible statement related primarily if not solely to the physical aspects of later years.

This analysis resulted in the removal of ten items; these items with their item-total correlations are given as follows. Item 4 was removed ('Into my own old age, it will be a definite bonus not to have to worry about having children', r = .06) as this item may have more salience for women. Two items examining sexual well-being were removed (items 17 and 23, rs = .46 and .50 respectively, 'Into old age I worry about losing interest in sexual relations' and 'into old age I worry about losing the capacity for sexual relations') because sexual functioning

is an important issue that warrants investigation in its own right rather than being attached to other items on physical health and well-being. Similarly item 24 was removed ('Loss of life into old age bothers me enormously', r = .47) as again death and dying are related but distinct aspects of physical functioning in later life. Two further items were removed given their emphasis on generative identities (see McAdams & de St. Aubin, 1992; McAdams et al., 1993; 1997) rather than physical health and well-being per se; these were items 13 ('Many of the things I have done will live on after me', r = 25) and 19 ('I expect I will be remembered for a long time after I die', r = .36). Four further items were removed because they related to specific health problems in later life, which can be distinct from physical aspects of again (see Rowe & Khan, 1987; however see Goodwin, Black & Satish, 1999 for views that ageing and disease are inseparable); these were items 6 ('into old age I worry about getting stomach upsets', r = .53), 9 ('into old age I worry about having heart problems'', r = .53) 10 ('into my old age I worry about being in moderate pain'', r = .58) and 12 ('Loss of health into later life is a huge worry', r = .52). One further item, item 18 ('It bothers me to imagine myself as being very old', r = .54) was removed because this item was deemed to be a general attitudinal statement rather than asking specifically about the physical components of later life. To check the justified removal of these nine items inter-rater reliability by a doctoral student in gerontology was sought and achieved with 100% agreement.

Of the thirteen remaining items (items 1, 2, 3, 5, 7, 8,11, 14, 15, 16, 20, 21 and 22), item-to-total correlations were carried to consider whether this scale could be shortened further on psychometric grounds. As before, the decision to remove an item was based both on its low correlations with the total score (i.e. when r < .50) and with consideration for the theoretical importance of that item, i.e. not to remove an item where content coverage would then be compromised. This analysis led to the removal of four items: item 5 ('I would be happy to use a hearing aid into old age if it helped me to hear better', r = .43), item 7 ('given the need for less sleep with age, I look forward to doing many more activities in to my old age', r = .43), item 8 ('Loss of energy into later life will bother me a lot', r = .46) and item 15 ('Into later life, changes in physical appearance are less important than continuing to have fun', r = .44).

Principle components factor analysis was then used on the nine remaining items (items 1, 2, 3, 11,14, 16, 20, 21 and 22) to examine further the internal structure of these items. The scree plot was examined to determine the number of factors in the sharp decent of the plot before levelling off; this analysis indicated there were two factors to be rotated. This rotation

Table 5.7

Factor Structure of Scale Measuring Attitudes to Physical Experiences in Later Life

	I	II
Physical Positives		
16) Into my own old age, I expect to be fit and to stay in shape	.83	.04
21) Even into my old age, I expect to be busy and energetic	.80	.15
22) Even into my old age, I still expect I will look well physically	.78	.14
1) I expect to remain physically resilient into my old age	.76	.21
14) Even into old age, I expect to do most things for myself	.67	.18
Physical Negatives	.10	.81
11) Slowing down physically with age will be a big worry	.16	.80
3) I am really worried about the possibility of even relatively minor health problems into old age	.00	.77
2) Into old age, it will bother met to see how my looks have changed with the years	.28	.69
20) It bothers me to imagine myself as being very old		
Eigen Value	3.8	1.7
% of Variance Explained	43%	19%

was then carried out using Varimax rotation. Results of this analysis indicated that there were two items explaining a total of 62% of the variance in scores. The first of these factors was labelled 'Physical positives' as these reflected positive physical well-being and functioning. As can be seen in Table 5.7, items within this factor were items 16, 21, 22, 14. The second factor was labelled 'physical negatives' as this factor reflected adverse physical changes in later life; items for this factor were items 11, 3, 2 and 20. Cronbach's alpha for the factors/subscales was good (see Table 5.8 overleaf). Both factors also correlated with other ($r = .37$, $p < .001$).

These results provide initial evidence that this newly developed physical domains measure does have good reliability. In addition, with just nine items, this scale is short and could be useful for researchers interested in attitudes towards the physical aspects of own future old age. It was expected that this physical attitudinal scale will combine with a social and psychological subscales as summarised next to form one larger scale measuring specific attitudes to future old age.

Table 5.8
Data Showing Good Internal Reliability (α) for Physical Positive and Negative Subscales Across a Range of Sample Groups

	United States				Britain			
Subscales	Positive		Negative		Positive		Negative	
Samples	α	n	α	n	α	n	α	n
Total	.86	144	.71	144	.82	138	.78	138
Gender								
Male	.89	20	.70	20	.86	30	.70	30
Female	.85	124	.71	124	.82	108	.72	108
Age								
≤39	.78	60	.77	60	.79	46	.74	46
40-64	.84	63	.68	63	.84	82	.81	82
65+	.85	21	.65	21	.68	10	.68	10

Note: Data on internal reliability is given for a range of groups to be more thorough and critical of findings

5.8.1.2 Developing an Attitudinal Measure of Age-Associated Social Experiences

Again, drawing on the themes developed from the first exploratory pilot study (see Chapter 3), twenty-eight items were developed for possible inclusion in the social domains of later life subscale (see Appendix 7, Section 5, items 1-28). To decide which items should remain in the scale several analyses were carried out. Firstly, items were removed which: a) were even slightly ambiguous, b) which were worded in very positive or very negative ways, c) which were of more relevance to one group of people than another (e.g. by gender or parental status), and d) which overlapped with physical and/or psychological attributes. (These criteria were considered originally when choosing which items to include in the questionnaire; however, with more refined insights as a consequence of further reading and further discussion of this topic with others items which passed these criteria initially did not always do so at the time of this later analysis.)

On the above basis, ten items were removed: these items, with their item-total correlations were as follows. Four items were removed because they primarily addressed psychological rather than social experiences (e.g. attributes of greater wisdom and knowledge, and goals in later years). These items were: item seven ('I look forward to have a greater understanding of people', r = .37), item 20 ('Into old age, I expect to have little focus or direction in my life', r = .60), item 24 ('I am afraid that it will be hard for me to find contentment with others when I am very old', r = .68) item 25 ('Into old age, I look forward to just pleasing myself', r = .04).

Item 2 ('Into old age, I expect I will be concerned about losing the respect of other people' r = .57) and 6 ('Into old age I worry that people will think of me as being unimportant', r = .62) were deemed similar in meaning so the former item was removed given the preferred phrasing of item 6 in terms of clarity, tone and coverage. Item 12 was removed {'Into my own old age I expect my children will be critical of my style of parenting', r = .31) because it excluded adults who were not parents. Item 26 ('I dread the loss of vibrancy into my own old age' r = .52) was removed because this item addressed physical rather than social domains of experience. Item 27 ('Into my own old age I expect past work colleagues will be critical of me' r = .62) because this item excluded adults who may not have had paid employment (e.g. housewives/husbands). Item 18 ('I am concerned that others will becomes impatient with me into old age, e.g. if I am driving a bit slower than other people', r = .63) was also removed, because its tone was very negative and possibly frightening for some people. Finally four other items were removed from this scale because they addressed experiences of dependence on others which is an important issue, but one which crosses physical and psychological domains as well as social domains, so therefore not appropriate in this part of this study. These four dependence-related items were: item 8 ('Into my old age, I know that others would provide help when/if this became necessary, r = .50); item 9 ('If I were to become dependent on others into old age, this would be a really big blow to me, r = .47); item 11 ('Becoming even slightly dependent on others into old age is an experience which would bother me enormously, r = .53) and item 14 ('Into old age I would willingly accept help and care form others should this be necessary', r = .45). Again to confirm the basis for items to be removed or kept, inter-rater reliability was sought and gained with 100% agreement.

To consider whether this scale could be reduced further, further analyses examining item-total correlations were carried out on the remaining 15 items (items 1, 3, 4, 5, 6, 10, 13, 15, 16, 17, 19, 21,22,23 and 28). As before, the decision to remove an item was based on its low correlations with the total score (i.e. when $r < .35$) and with consideration for the content validity of the scale. This analysis lead to the removal of five items: these were item 10 ('Into my own future old age I will be glad not to have to worry so much about the views of other people', r = .14); item 13 ('Into my own future old age I will be glad not have to worry so much about being fashionable', r = .11); item 16 ('into later life, I expect I will have a fulfilling relationship with a romantic partner', r = .31); item 21 ('Into my own age, I expect I will get very nervous when I think about other people making decisions for me', r = .11) and item 23 ('I dread losing friendships with others into later life through death and bereavement', r = 32).

Principle components factor analysis with Varimax rotation was then carried out to examine the internal factor structure of the remaining 10 items (items 1,3, 4, 5, 6, 15, 17, 19, 22 and 28). The scree plot was examined to determine the number of factors in the sharp decent of the plot before levelling off; this analysis indicated there were two factors to be extracted. Varimax rotation was then used to rotate the factors to make them more meaningful. The two factors that emerged explained 58% of the variance in scores. The first factor was labelled 'Social Negatives' reflecting negative experiences in social relationships through ageing. Items within this factor were items 6, 15, 3, 5 and 17. The second factor with five items (19, 1, 28, 22, 4) was labelled 'Social Positives' as these items reflected positive experiences in close relationships. Items can be seen in Table 5.9.

The two subscales had good internal reliability across a range of sample groupings (see Table 5.10 overleaf) and were significantly correlated with each other ($r = .41$, $p < .001$). These latter results provide initial evidence for the validity of this scale. In addition, this measure is short, easy to score, and can be used by other professionals to understand better the experience of ageing within a social context.

Table 5.9
Factor Structure of Scale Measuring Attitudes to Social Experiences in Later Life

	I	II
Social Negatives		
6) Into my own old age, I worry that people will think of me as being unimportant	.87	.16
15) I really worry that people will ignore me when I am very old	.82	.16
3) I worry that I will be criticised by others just for being old	.82	.19
5) I fear that when I am old, all my friends will be gone	.73	.02
17) Into old age I really worry about being treated as a body rather than as a whole person	.71	.26
Social Positives		
19) I am looking forward to having more time to spend with others into old age	.12	.72
1) Into old age, I expect I will really value many relationships with friends	.07	.68
28) Into later life, I expect to chat to lots of really nice people	.22	.68
22) I expect I will enjoy talking to older adults, even when I myself am very old	.26	.66
4) Into old age, I expect to gain a lot of enjoyment in following the activities of younger people	.15	.65
Eigen Value	4.0	1.7
% of Variance Explained	41%	18%

Note: n = 285

Table 5.10

Internal Reliability (α) for Social Positive and Negative Subscales Across a Range of Sample Groups

	United States				Britain			
Subscales	Positive		Negative		Positive		Negative	
Samples	α	n	α	n	α	n	α	n
Total	.81	144	.85	144	.70	138	.87	138
Gender								
Male	.70	20	.78	20	.78	30	.86	30
Female	.82	124	.86	124	.68	108	.87	108
Age								
≤39	.65	58	.81	58	.74	46	.90	46
40-64	.87	64	.89	64	.71	82	.84	82
65+	.86	22	.82	22	.65	10	.87	10

5.8.1.3 Developing an Attitudinal Measure of Age-Associated Psychological Experiences

Twenty-six items were developed for possible inclusion in the psychological domains subscale (see Section 4 in Study 3 questionnaire, item 1 - 26). Again to decide which items should be removed and which should be retained, each item was analysed according to criteria already summarised, i.e. items were removed: a) which may be of more relevance to one group of people than another (e.g. by gender, or SES), b) which were in any way lengthy, or c) which overlapped in either experience (e.g. with physical and/or social aspects of life) or content (e.g. with similarly worded items). Always, items were only removed however with consideration for the content validity of the scale, i.e. care was taken not to remove any possible item which reflected concerns raised by many participants.

This preliminary analysis on the psychological experiences items, led to the removal of ten items (items 6, 7, 8, 9, 11, 14, 15, 17, 23 and 24). Specifically, two items were removed given their long length; these were items 14 (e.g., "into my own old age I expect I will feel sad about the educational opportunities available to the young of today but which I will not know", r = .46), and 15 ('I have always carried my own weight and could not exist unless I could continue doing so, even into advanced old age', r = .42). Item 7 was removed ('into later life, I do not expect to be in such a hurry', r = .14) because it was not a well-written item and did not reflect well the issue of interest, i.e. greater patience. Item 8 ('loss of a job into later life will be a problem for me', r = .45) was removed because it reflected economic than psychological domains of experience and because this item may not apply to many people in later years. Five items were very similar in

meaning and all but one were removed given this overlap; these were items 6 ('Into my own future old age, I expect it will bother me that I did not do more with my life', r = .64); 9 ('into old age I expect to feel so angry at having wasted so much of life', r = .71); 17 ('into my own future old age I expect I will have many regrets about wasting so much of my life', r = .69); 20 ('into my own future old age I expect I will have many regrets about not achieving all that I could have done', r = .69) and 23 ('Into my own old age, I expect I will feel incredibly sad about the choices I made in my life', r = .52): all four items were removed but item 20 as this item had the preferred phrasing. Two other items were removed because they overlapped with social domains of experience; these items were item 11 ('Loss of my own independence into old age would be very difficult to accept', r = .30) and item 24 ('into my own old age, I expect to be worried about relationships not going as well as I would have liked', r = .50).

Further analyses took place on the remaining 16 items (items 1, 2, 3, 4, 5, 10, 12, 13, 16, 18, 19,20, 21, 22, 25 and 26) using item-to-total correlations to consider whether this scale could be shortened further. As before, the decision to remove an item was based on its low correlations with the total score (i.e. when $r < .45$) and with consideration for the content validity of the scale. Five items were removed following this analyses; these were item 4 ('Into my old age, I will be glad to have gained more experience of life' (r = .37), item 12 ('Into old age, I expect I will be anxious about fitting everything in', r = .38), item 13 ('With more free time into later life, I expect I will really enjoy the little things in nature, e.g. flowers', r = .32), item 18 ('It is really important to me that I be in control over everything in my life', r = .34) and item 25 ('Into old age I look forward to having more time to do the things that I want to do', r = .42).

Principle components factor analysis was then carried out to examine the internal factor structure of the remaining 11 items: items 1, 2, 3, 5, 10, 16, 19, 20, 21, 22 and 26. The scree plot (the number of factors before the plot starts to level off) and the number of eigen values over 1 were both used to determine the number of factors to be extracted. Three factors were identified; these were then rotated using Varimax rotation. This analysis led to three factors, explaining 61% of the variance in scores; the first of these factors had four items (items 19, 16, 22 and 10) and was labelled 'psychological positives' as these reflected positive attributes and continued development in later life. As can be seen in Table 5.11, items within this psychological positives factor included item 19 'Into old age I expect I will feel more at peace' and item 16 'Into later life I expect I will be much more accepting of myself'. The

second factor also had four items (items 2, 26, 5 and 3) and was labelled 'psychological negatives' as these items reflected more negative and feared psychological states and experiences in later life. Items within this psychological negatives subscale included item 2 'Possible memory losses into my own old age are hard to think about' and item 26 'I worry about my choices becoming limited if I became ill into later life'. The final factor with three items (items 20, 21 and 1) was interpretable. Items included item 20 'Into my own future old age I expect I will have many regrets about not achieving all that I could have done' and item 1 'When I reach old age, I expect I will have developed a lot of expertise in solving problems'. Given its uninterpretability, this final factor was dropped. Principle components factor analysis was rerun with only the first two factors extracted and rotated. This data is summarised in Table 5.11 with the corresponding items. As can be seen in Table 5.12 overleaf, results indicate that both subscales had good internal reliability across a range of samples (alphas .67 - .85). In addition, both subscales were significantly correlated with each other ($r = .30$, $p < .001$) which again provides preliminary evidence for the validity of this subscale.

Table 5.11
Factor Structure of Scale Measuring Attitudes to Psychological Experiences in Later Life

	I	II
Psychological Positives		
19) When I reach old age I expect I will feel more at peace	.84	.13
16) Into later life I expect I will be much more accepting of myself	.81	04
22) As I get older I expect to know myself really well	.75	.04
10) I expect to be more patient with myself in old age	.61	.30
Psychological Negatives		
26) I worry about my choices becoming limited if I became ill into later life	.14 .19	.78 .78
5) Slowing down mentally with age is always a big worry	.08	.72
3) I expect I will be really impatient with myself in old age, if I am unable to do the things I have done normally	.02	.66
2) Possible memory losses into my own old age are hard to think about		
Eigen Value	2.9	1.7
% of Variance Explained	37%	22%

Table 5.12
Internal Reliability (α) for Psychological Positive and Negative Subscales Across a Range of Sample Groups

	United States				Britain			
Subscales	Positive		Negative		Positive		Negative	
Samples	α	n	α	n	α	n	α	n
Total	.73	147	.77	144	.78	138	.77	138
Gender								
Male	.71	20	.81	20	.82	30	.85	30
Female	.73	127	.76	124	.78	108	.74	108
Age								
≤39	.67	60	.81	60	.78	46	.79	46
40-64	.80	65	.72	64	.79	82	.79	82
65+	.70	23	.79	20	.78	10	.68	10

5.8.1.4 Summary of Results on Specific Attitudinal Measures Data

The first aim of this study was to develop measures of specific attitudinal measures crossing physical, social and psychological domains of experience. Within this section, a new 28-item specific attitudinal measure of age-associated attitudes was developed and found to have good psychometric properties. The relationship between general and specific age-associated attitudes is discussed next.

5.8.2 Examining the Relationship Between General and Specific Age-Associated Attitudes

The second main aim of Study 2 was to examine the relationship between general and specific age-associated attitudes.

5.8.2.1 Correlations Between General And Specific Age-Associated Attitudes

To examine the relationship between general and specific age-associated attitudes Pearson's correlations were used. As can be seen in Table 5.13 overleaf, all measures were significantly correlated with the GAAS ($r = .38 - .59$, $p < .001$). These relationships remained even when known sample differences of education and finances were controlled. These results indicate that general attitudes to own future old age are not solely about physical, or social or psychological aspects of later years, but a combination of all of these.

However exploratory factor analysis using principle components analysis was carried out with all measures to consider the possibility that the above results could be explained

Table 5.13
Correlations Between General and Specific Attitudes to Ageing

Attitudes to Physical, Social and Psychological Experiences in Later Life	r with GAAS	r with GAAS[1]	r with GAAS[2]
1. Physical positives	-.55***	-.52***	-.50***
2. Physical Negatives	.59***	.58***	.57***
3. Fears about Death	.39***	.38***	.37***
4. Social Positives	-.38***	-.33***	-.32***
5. Social Negatives	.55***	.55***	.52***
6. Psychological Positives	-.39***	-.32***	-.32***
7. Psychological Negatives	.44***	.49***	.48***

Note: [1] Partial correlations controlling for education, [2] Partial correlations controlling for finances

instead by simple overlap in scale items or concepts. To do this analysis, seven factors were chosen for extraction: these were the GAAS, and the two subscales in each of physical, social and psychological domains of experience subscales. These factors were then rotated using Varimax rotation. As can be seen in the tabulated results from this analysis (see Table 5.14 overleaf), the seven factors loaded onto their own factors in the expected ways with very little overlap between scale items. In terms of understanding the relationship between general and specific attitudes to ageing, this lack of overlap in items suggests that the conclusions above remain, i.e. that negative attitudes to own future old age can be best understood about threats being associated with physical, social and psychological experiences and attributes in their later years.

5.8.2.2 Accepting the Relationship Between General and Specific Age-Associated Attitudes

Correlation results (see Table 5.13) indicated that physical, social and psychological aspects of own future old age are all related to general age-associated attitudes; alternative explanations for these results, like overlap in measurement items, can be discounted given results from exploratory factor analysis using principle components analysis (see Table 5.14). Nevertheless, if the specific attitudinal measures are valid one would expect certain relationships to be present in some instances but not others, e.g. one would expect current financial worries to be most strongly related to future financial worries, rather than to the physical, social or psychological domains of experience subscales. Similarly, one would expect current social relationships to correlate most strongly with future social attitudinal subscales rather than the physical/psychological attitudinal subscales.

Table 5.14 *Factor Structure of Scales Demonstrating Few Cross Loadings on Main Measures*

	I	II	III	IV	V	VI	VII
Social Negatives							
- I worry that I will be criticised by others just for being old	**.81**	.10	.09	.49	.12	.09	.08
- Into my own old age, I worry that people will think of me as being unimportant	**.81**	.06	.07	.11	.07	.14	.21
- I really worry that people will ignore me when I am very old	**.77**	.11	.06	.12	.09	.15	.23
- Into old age I really worry about being treated as a body rather than as a whole person	**.66**	.13	.07	.17	.16	.26	.03
Physical Positives							
- Into my own old age, I expect to be fit and to stay in shape	.01	**.79**	.16	.03	.08	.02	.15
- Even into my old age, I still expect I will look well physically	.17	**.72**	.07	.00	.06	.12	.13
- I expect to remain physically resilient into my old age	.03	**.70**	.12	.18	.38	.08	.02
- Even into my old age, I expect to be busy and energetic	.11	**.68**	.02	.13	.11	.08	.22
- Even into old age, I expect to do most things for myself	.16	**.57**	.13	.13	.09	.05	.02
Psychological Positives							
- When I reach old age I expect I will feel more at peace with myself	.05	.13	**.80**	.15	.06	.09	.03
- Into later life I expect I will be much more accepting of myself	.06	.12	**.78**	.14	.03	.01	.06
- As I get older I expect to know myself really well	.03	.02	**.72**	.06	.14	.03	.12
- I expect to be more patient with myself into old age	.12	.25	**.50**	.07	.12	.25	.01
Physical Negatives							
- It bothers me to imagine myself as being very old	.13	13	.02	**.75**	.01	.11	.14
- Into old age, it will bother met to see how my looks have changed with the years	.40	.04	.05	**.67**	.15	.17	.07
- I am really worried about the possibility of even relatively minor health problems into old age	.30	.11	.03	**.50**	.23	.41	.09

contd.

Table 5.14 contd.

	I	II	III	IV	V	VI	VII
Social Positives							
- Into old age, I expect I will really value many relationships with friends	.01	.00	.02	.13	**.68**	.00	.13
- I am looking forward to having more time to spend with others into old age	.00	.07	.43	.09	**.62**	.10	.05
- Into later life, I expect to chat to lots of really nice people	.18	.24	.14	.01	**.59**	.10	.10
- Into old age, I expect to gain a lot of enjoyment in following the activities of younger people	.11	.20	.04	.20	**.59**	.10	.04
- I expect I will enjoy talking to older adults, even when I myself am very old	.22	.15	.34	.12	**.55**	.04	.05
- Into my old age, I know that others would provide help when/if this became necessary	.31	.13	.08	.24	**.45**	.03	.20
Psychological Negatives							
2) Possible memory losses into my own old age are hard to think about	.06	.06	.02	.05	.13	**.75**	.19
3) I expect I will be really impatient with myself in old age, if I am unable to do the things I have done normally	.13	.23	.18	.09	.08	**.72**	.05
5) Slowing down mentally with age is always a big worry	.11	.37	.12	.08	.04	**.66**	.05
26) I worry about my choices becoming limited if I became ill into later life	.02	.42	.19	.06	.04	**.45**	.05
GAAS							
- Life loses its meaning when you become old	.08	.30	.06	.08	.05	.06	**.75**
- I worry I will have nothing to offer anyone when I am old	.24	.26	.28	.10	.00	.12	**.65**
- I see my own old age mainly as a time of loss	.09	.07	.28	.09	.14	.12	**.64**
- Old age can be a very happy time of life	.24	.25	.18	.13	.19	.10	**.38**
- I feel content about my own ageing	.24	.00	.02	.25	.00	.13	**.32**
Eigen Value	12.0	3.4	2.0	1.9	1.5	1.1	1.1
% of Variance Explained	30%	8.4%	4.9%	4.8%	3.9%	2.9%	2.6%

Note: n = 285

Table 5.15
Correlational Data Showing Significant Relationships in Expected Ways

Future Experiences	Current Attitudes/Domains of Experience				
	Current Finances	Physical Health	Energy Levels	Rels with Friends	Rels with Relatives
1. Finances	**.42*****	.12*	.03	.12*	.05
2. Physical Negative	.06	**.15***	**.18****	.05	.09
3. Physical Positive	.03	**.37*****	**.38*****	.08	.03
4. Social Negatives	.16**	.12*	.20**	.06	.06
5. Social Positives	.17**	.23***	.23***	**.18*****	**.17*****
6. Psychological Negatives	.15**	.12*	.15**	.12*	.06
7. Psychological Positives	.18**	.24***	.18**	.00	.07

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

Although many of the current attitudinal or experiential measures were limited (just single item scales, measuring just one aspect of a specific domain), results were in line with expectations. As can be seen in Table 5.15 current financial worries were most strongly related to future financial worries, and not to other subscales. In addition, current health and energy levels were most strongly related to future physical domains subscales. In addition, relationships with friends and relatives were most strongly related to future social positive domains; the future social negative domains scale reflects broader social/cultural views of older adults, which may be outside the remit of close friends and family. Finally, with no measure of current psychological self, it was not possible to make comparisons with future psychosocial subscale; however current stress levels did correlate highest with the negative psychological subscale ($r = .29$, $p < .001$). This data suggests that the new specific attitudinal subscales do differentiate between different domains of experiences in later years. As such, these scales do make a useful contribution to the field of adult development and, one can accept a relationship between general and specific age-associated attitudes with more confidence.

5.8.2.3 Predicting General Attitudes to Own Future Old Age

A series of hierarchical multiple aggression analyses were carried out to determine if one or more specific age-associated attitudes contributes more significantly to general attitudes as measured by the General Attitudes to Ageing Scale (GAAS). In each of the analyses to follow, the predictor variables are the same, but the order in which they are being entered to the regression is rotated so that it can be possible to examine how much of the variance each domain (physical v. social. V. psychological) contributes to the variance in general attitudes to ageing;

and also so that it is possible to examine how much of the variance in general attitudes to ageing can be explained by each domain once the remaining domains are entered into the model.

In the first of these hierarchical regression analysis (see Table 5.16), the dependent variable was the GAAS. The predictor variables were entered in blocks into the regression analyses, with a probability in the model of .01 and removal of .10. Demographic variables (education, gender and finances) were entered first to provide a context from which to examine the other factors. The second block were the two physical experiences subscales measuring attitudes to each of positive and negative physical experiences in later life. The third block was a single item question measuring death fears; although worries around the experience of dying and death are important and significant topics for study in their own right, death fears were included in this analysis because they may be important factors in understanding threat experiences around physical aspects of ageing and later life. The fourth set of variables to be entered was the social experiences subscales, which measure attitudes to possible positive and negative social experiences in later years. The final block of variables to be entered was the psychological experiences subscales which measured attitudes to possible positive and negative psychological experiences and attributes in later years. As can be seen in Table 5.16, results indicated that the physical aspects of own future old age, contributed a significant and sizable proportion of the variance (i.e. 47%) in general attitudes to ageing scores. Nevertheless, death fears, social experiences and psychological experiences were all significant contributors to the variance in general attitudes to ageing scores, even when entered into the model after the physical subscales. When all variables were entered into the model, the factors most predictive of general attitudes to ageing were physical positive experiences, social negative experiences, psychological positive experiences, and physical negative experiences.

Table 5.16

Hierarchical Regression Analysis Predicting General Attitudes To Ageing Scores I

Variables	Beta	R^2	R^2 Change	F Change	df	Sig. F Change
1) Demographic		.02	.02	7.4	1, 278	.007
2) Physical		.47	.44	116	2, 276	.000
3) Death fears		.48	.01	4.5	1, 275	.033
4) Social.		.51	.03	8.0	2, 273	.000
5) Psychological		.53	.02	4.8	2, 271	.009
- physical positives	-.25***					
- social negatives	-.22***					
- psychological positives	-.15***					
- physical negatives	-.17*					

Note: *** < .005, *, .05

In the second hierarchical regression analysis (see Table 5.17), the dependent variable was again the GAAS. The predictor variables were entered in blocks into the regression analysis, with a probability in the model of .01 and removal of .10. Demographic variables (education, gender and finances) were entered first to provide a context from which to examine the other factors. The second block this time was the social experiences subscales, which measure attitudes to possible positive and negative social experiences in later years. The third block was an item measuring death fears. The fourth set of variables to be entered where the two psychological experiences subscales measuring attitudes to possible positive and negative psychological experiences and attributes in later years. The final block of variables to be entered this time was the two physical experiences subscales measuring attitudes to each of positive and negative physical experiences in later life.

As can be seen in Table 5.17, results indicated that the social aspects of own future old age, contributed a significant and sizable proportion of the variance (i.e. 34%) in general attitudes to ageing scores. In addition, death fears, physical experiences and psychological experiences were all significant contributors to the variance in general attitudes to ageing scores, even when entered into the model after the social subscales. When all variables were entered into the model, the factors that contributed most to the variance in general attitudes were physical positive experiences, social negative experiences, psychological positive experiences, and physical negative experiences.

Table 5.17
Hierarchical Regression Analysis Predicting General Attitudes To Ageing Scores II

Variables	Beta	R^2	R^2 Change	F Change	df	Sig. F Change
1) Demographic		.02	.02	7.4	1, 278	.007
2) Social.		.35	.32	68.4	2, 276	.000
3) Death fears		.38	.03	15.1	1, 275	.000
4) Psychological		.44	.06	14.2	2, 273	.000
5) Physical		.53	.09	24.3	2, 271	.000
- physical positives	-.25***					
- social negatives	-.22***					
- psychological positives	-.15***					
- physical negatives	-.17*					

Note: *** < .005, *, .05

In the third hierarchical regression analysis (see Table 5.18), the dependent variable again was the GAAS. The predictor variables were entered in blocks into the regression analyses, with a probability in the model of .01 and removal of .10. Demographic variables (education, gender and finances) were entered first to provide a context from which to examine the other factors. The second block this time was the psychological experiences subscales measuring attitudes to possible positive and negative psychological experiences and attributes in later years. The third block was an item measuring death fears. The fourth set of variables to be entered were the two physical experiences subscales measuring attitudes to each of positive and negative physical experiences in later life while the final block was the social experiences subscales measuring attitudes to possible positive and negative social experiences in later years.

As can be seen in Table 5.18 results indicated that the psychological aspects of own future old age, contributed a significant proportion of the variance (i.e. 33%) in general attitudes to ageing scores. In addition, physical experiences, psychological experiences and death fears were all significant contributors to the variance in general attitudes to ageing scores, even when entered into the model after the two psychological subscales. All items entered contributed significantly to the variance in general attitudes to ageing as measured by the GAAS. The factors that contributed most to the variance in general attitudes remained the same, i.e. these were physical positive experiences, social negative experiences, psychological positive experiences, and physical negative experiences.

Table 5.18
Hierarchical Regression Analysis Predicting General Attitudes To Ageing Scores III

Variables	Beta	R^2	R^2 Change	F Change	df	Sig. F Change
1) Demographic		.02	.02	7.4	1, 278	.007
2) Psychological		.33	.31	64.7	2, 276	.000
3) Death fears		.36	.03	12.2	1, 275	.001
4) Physical		.51	.14	39.7	2, 273	.000
5) Social		.53	.02	5.2	2, 271	.006
- physical positives	-.25***					
- social negatives	-.22***					
- psychological positives	-.15***					
- physical negatives	-.17*					

Note: *** < .005, *, .05

5.8.2.4 Summary of Data on General and Specific Age-Associated Attitudes

It was queried whether adults' general attitudes could be best by explained by concerns around physical, social, psychological domains of experience, or all three combined. The current study indicates that general attitudes to ageing are not solely about physical aspects of ageing including health problems, but also about the experiences or more precisely the threats, adults associate with social and psychological domains of experience. Specifically, even when controlling for physical domains of experience, the ways in which psychological and social experiences are evaluated also contribute significantly to the variance in general attitudes to ageing scores. Although future research will need to replicate these findings, including with independent raters, is important to highlight that the above results remained even when controlling for possible overlap in ideas and measures (see exploratory factor analyses), and even when controlling for basic demographic factors such as education and finances.

5.8.3 Examining Specific Age-Associated Threats: Constraints, Losses and Positives

The second main aim of this study was to develop scales to measure and examine specific age-associated threats, i.e. possible constraints, losses and challenges to positive experiences. The need to be increasingly refined in the nature of measures and definitions is important for theoretical and applied reasons, e.g. if constraints and losses each impact most strongly on anxiety and depression respectively.

5.8.3.1 Developing the Constraints, Losses and Positives Subscales

To decide which items should be included in this possible new scale, each of Sections 4, 5 and 6 was re-read for possible items that were not being used elsewhere but which fitted onto the three subcomponents of interest, i.e. constraints, losses and positives experiences. Although there was only a limited number of possible items to chose from, preference was given to items based on the following criteria: a) items which addressed directly the definitions of constraints, losses and positives (see Table 5.1), b) items that reflected physical, social and psychological domains of future experience (e.g. physical losses such as health, and psychosocial losses such as of identity), c) items which were not previously used in other scales, and d) items which were not specific to one or more groups of people (e.g. by gender, or SES).

Based on the above criteria, only fourteen items were available for possible inclusion in this new attitudinal scale. Item-total correlations were carried out on these items, and all were found to correlate sufficiently highly, i.e. item-total correlations were between .36 and .65. Principle components factor analysis was then carried out to examine further the internal

factor structure of these items. The scree plot (the number of factors before the plot starts to level off) and the number of eigen values over one were the criteria used to determine the number of factors to be extracted. Three factors were identified and then rotated using Varimax rotation. These three factors were found to explain 51% of the variance in scores. As can be seen in Table 5.19, the first of these factors had four items and was labelled 'Constraints' as these items reflected limitations and restraints on the self, in terms of time, opportunities and financial resources. The second factor had give items and was labelled 'losses' as these items reflected the irretrievable and permanent losses of people and objects likely to be important to the self. Items within this scale included 'Loss of my independence in old age would be

Table 5.19

Items from the Constraints, Losses and Positives Sub-scales for The British and the American Samples Combined

	I	II	III
Constraints			
20)[1] Into my own future old age I expect I will have many regrets about not achieving all that I could have done	**.82**	.17	.27
17)[1] Into my own future old age I expect I will have many regrets about wasting so much of my life	**.82**	.14	.26
21)[1] Into my own old age I expect I will be really bothered that I cannot re-live my life again	**.79**	.16	.02
4)[2] I expect to have difficulty in making ends meet into my old age	**.49**	.32	.09
Losses			
32)[1] Loss of my home into later life would be a big blow	.07	**.69**	.10
11)[1] Loss of my independence into old age would be difficult to accept	.01	**.69**	.00
12)[3] Loss of health into later life is a huge worry	.30	**.64**	.07
3)[1] I expect I will be really impatient with myself into old age if I am unable to do the things I have done normally	.16	**.59**	.15
26)[4] I dread the loss of vibrancy into my old age	.31	**.56**	.13
Positives			
25)[3] Even into old age, I am sure others will seek advice	.05	.10	**.71**
13)[3] Many of the things I have done will live on after me	.14	.09	**.70**
1)[1] When I reach old age, I expect I will have developed a lot of expertise in solving problems	.33	.00	**.57**
19)[1] When I reach old age I expect I will feel more at peace	.04	.26	**.57**
10)[1] I expect I will be more patient with myself into old age	.18	.23	**.56**
Eigen Value	4.3	1.6	1.3
% of Variance Explained	31%	11%	9%

Note: [1]Section 4 in questionnaire, [2]Section 2 in questionnaire, [3]Section 6 in questionnaire, [4]Section 5 in questionnaire

Table 5.20

Reliability and Validity Data for the Constraints, Losses and Positives Subscales (CLP-Subscales)

	United States (n = 148)				Britain (n = 150)			
Measures	α	r with GAAS	r with GAAS[1]	r with GAAS[2]	α	r with GAAS	r with GAAS[1]	r with GAAS[2]
1. Constraints	.81	-.50***	-.51***	-.52***	.80	-60***	-59***	-.59***
2. Losses	.75	-.46***	-.48***	-.46***	.68	-56***	-55***	-.55***
3. Positives	.68	-.34***	-.37***	-.37***	.69	-59***	-59***	-.58***

Note: [1] With education entered as covariate, [2] With finances entered as covariate

difficult to accept' and 'I dread the loss of vibrancy into my old age'. The final factor, with five items was labelled 'positives' as this factor reflected some of the positive attributes and experiences that can occur in later years including continued development and growth, greater wisdom and experience, and the ability and need to care and teach the next generation, i.e. generativity (Erikson *et al.*, 1986). Further analyses indicated that all three subscales had good internal reliability scores as measured by Cronbach's alphas. As can be seen in Table 5.20 above, Cronbach's alpha scores for the subscales ranged between .81 and .68 across a range of groups.

5.8.3.2 The Relationship between Specific Age-Associated Threats and General Attitudes

As can also be seen in Table 5.20 above, each threat subscale was significantly related to scores on the GAAS; these significant relationships remained even when known sample differences such as education and finances were controlled. However, factor analysis using principle components analysis was carried out in order to be able to accept the above findings and discount the possibility that the relationship between general attitudes and each of the threat based measures above occurred solely as a consequence of overlap in items or content between the scales. Factor analysis using principle components was carried out with four factors identified, i.e. the general attitudes to ageing scale and the three subscales above. These four factors were rotated using Varimax rotation and found to explain 51% of the variance in scores. As can be seen in Table 5.21 overleaf, the four factors or subscales loaded onto their own factors, and there was very little overlap between items, i.e. the constraints, losses and positive subscales address different dimensions, and each contributes some unique qualities and components not addressed by the remaining scales.

Table 5.21
Items of Three CLP Sub-scales for Two Samples Combined (n = 270)

	I	II	III	IV
GAAS-5				
- I see my own old age mainly as a time of loss	**.78**	.23	.09	.06
- I worry I will have nothing to offer anyone when I am old	**.73**	.20	.17	.16
- Life loses its meaning when you become old	**.72**	.22	.14	.25
- Old age can be a very happy time of life	**.56**	.25	.33	.21
- I feel content about my own ageing	**.44**	.02	.38	.30
Constraints				
- Into my own future old age I expect I will have many regrets about not achieving all that I could have done	.19	**.82**	.15	.24
- Into my own future old age I expect I will have many regrets about wasting so much of my life	.19	**.80**	.13	.24
- Into my own old age I expect I will be really bothered that I cannot re-live my life again	.26	**.73**	.17	.00
- I expect to have difficulty in making ends meet into my old age	.27	**.45**	.29	.01
Losses				
- Loss of my independence into old age would be difficult to accept	.04	.01	**.69**	.00
- Loss of my home into later life would be a big blow	.15	.05	**.67**	.07
- Loss of health into later life is a huge worry	.22	.26	**.61**	.01
- I expect to be really impatient with myself into old age if I am unable to do the things I have done normally	.02	.22	**.59**	.19
- I dread the loss of vibrancy into my old age	.30	.25	**.53**	.06
Positives				
- Many of the things I have done will live on after me	.19	.12	.10	**.67**
- I expect I will be more patient with myself into old age	.09	.26	.27	**.64**
- Even into old age, I am sure others will look to me for advice	.27	.02	.04	**.62**
- When I reach old age I expect I will feel more at peace with myself	.11	.04	.26	**.58**
- When I reach old age, I expect I will have developed a lot of expertise in solving problems	.39	.26	.07	**.46**
Eigen Value	6.1	1.6	1.3	1.1
% of Variance Explained	32%	8.5%	6.9%	6.2%

A series of hierarchical regression analyses were carried out to examine the amount of variance explained by each of these subscales. In each of the analyses to follow, the predictor variables are the same, but the order in which they were added to the regression was rotated so that it could be possible to examine how much of the variance each domain (constraints v. losses v. positives) contributed to the variance in general attitudes to ageing.

In the first of these hierarchical regression analyses (see Table 5.22), the dependent variable was the GAAS. The predictor variables were entered in blocks in to the regression analyses, with a probability in the model of .01 and removal of .10. Demographic variables (education, gender and finances) were entered first to provide a context from which to examine the other factors. The second block was the positives subscale. The third variable to be entered was the losses subscale, while the final variable to be entered was the constraints subscale.

The first set of variables to be added to the model was demographic variables; none of these variables however was significant, except for finances ($p < .05$) although education was approaching significance level ($p = .70$). When the positives subscale was added to the model, the amount of variance explained in attitudes to ageing scores significantly increased to 25%. The specific variable to carry this effect was the positives subscale only, i.e. none of the demographic variables were significant predictors of general attitudes to ageing. When the losses subscale was added to the model, the amount of variance explained increased to 34%, with only the positives and losses subscales contributing to this effect. When the final variable was added to the model, the amount of variance explained increased to 43%. When all three blocks of interest were added to the model, constraints, losses and positives were each found to be significant in predicting scores on the General Attitudes to Ageing Scale (GAAS).

Table 5.22

Regression Analyses to Predict General Attitudes to Ageing From Threat-based Variables I

Variables	Beta	R^2	R^2 Change	F Change	df	Sig. F Change
1) Demographic		.02	.02	7.7	1, 283	.006
2) Positives Subscale		.25	.22	84.2	1, 282	.000
3) Losses Subscale		.34	.09	37.0	1, 281	.000
4) Constraints Subscale		.43	.09	43.6	1, 280	.000
- constraints subscale	-.36***					
- losses subscale	-.23***					
- positives subscale	-.19***					

Note: *** = $p < .005$

In the second hierarchical regression analysis (see Table 5.23), the dependent variable was the GAAS. The predictor variables however were entered in a different order with a probability in the model of .01 and removal of .10. Demographic variables (education, gender and finances) were entered first to provide a context from which to examine the remaining factors. The second block this time was the losses subscale. The third variable to be entered was the constraints subscale while the last block to be added to the model was the positives subscale of the CLP-scale.

As before, the demographic variables were found to be predictive of scores on the GAAS, however analysis of the univariate results indicated that an only finance was significant ($p < .05$) in predicting general attitudes. When the losses subscale was added to the model, the amount of variance explained in attitudinal scores significantly increased to 29%. When the constraints subscale was added to the model, the amount of variance explained increased to 40%, with only the losses and constraints subscales contributing to this effect. When the final variable, the positives subscale, was added to the model, the amount of variance explained increased to 43%. All three subscales contributed uniquely to the variance in general age-associated attitudes.

Table 5.23

Regression Analyses to Predict General Attitudes to Ageing From Threat-based Variables II

	Beta	R^2	R^2 Change	F Change	df	Sig. F Change
1) Demographic		.02	.02	7.7	1, 283	.006
2) Losses Subscale		.29	.26	101	1, 282	.000
3) Constraints Subscale		.40	.12	55.8	1, 281	.000
4) Positives Subscale		.43	.03	11.6	1, 280	.001
- constraints subscale	-.36***					
- losses subscale	-.23***					
- positives subscale	-.19***					

Note: *** = $p < .005$

In the third and final hierarchical regression analysis (see Table 5.24), the dependent variable again was the GAAS and the predictor variables were entered as before, but with the losses subscale added last, i.e. the first block was demographic variables (education, gender and finances); the second set of variables to be added was the constraints subscale while the third block to be added to the model was the positives subscale of the CLP-scale. The final subscale, the losses subscale, was added last to the model to explore how much of the variance in general attitudes this possible threat could contribute once other variables or explanations such as constraints and positives were entered and controlled. As before, results indicated that the constraints and positives subscales contributed significantly to the variance in general attitudes to ageing, however the losses subscale also contributed additional variance to general attitudes even when the other subscales were added to the model.

Table 5.24

Regression Analyses to Predict General Attitudes to Ageing From Threat-based Variables III

	Beta	R^2	R^2 Change	F Change	df	Sig. F Change
1) Demographic		.02	.02	7.7	1, 283	.006
2) Constraints Subscale		.30	.28	118.8	1, 282	.000
3) Positives Subscale		.38	.09	29.8	1, 281	.000
4) Losses Subscale		.43	.04	11.6	1, 280	.000
- constraints subscale	-.36***					
- losses subscale	-.23***					
- positives subscale	-.19***					

Note: *** = $p < .005$

5.8.3.1 Summary of data on CLP-Scale

The second main aim of Study 3 was to consider in more detail the nature of age-associated threats. Although the GAAS is a useful general measure of threat, a more refined measure may be important for theoretical and applied reasons, particularly for example if future research finds that specific age-associated threats are significantly more related to different forms of psychopathology. The above results indicate that the CLP-Scale does measure specific age-associated threats. Future research can use this scale to examine further the relationship between specific age-associated threats and both physical and psychosocial well-being.

5.8.4 The Influence Of Culture on Age-Associated Attitudes*

The final aim of Study 3 was to explore the role of culture on age-associated attitudes; to address this question, a multivariate analysis of variance was carried out. The independent variable in this analysis was country (U.S. and Britain), while the dependent variables were the GAAS, the PSP Ageing Scale and the CLP-Scale. As can be seen in Table 5.25 overleaf results indicated a small but significant main effect of country, $F(10, 271) = 2.0$, $p = .02$, $\eta^2 = .07$. However, once this analysis was repeated with known sample differences in education and finances controlled, no significant group effect was found, $F(10, 267) = 1.8$, $p = .055$, $\eta^2 = .06$. These results indicate there is no significant main effect of culture on the ways adults experience and evaluate the experience of their own future old age;

To consider whether the effects of culture were more subtle, this analysis was repeated but with city as the independent variable (New York, Washington, Southampton and Sheffield). Results again however indicated there was no significant main effect of city when known sample differences were statistically controlled, $F(30, 778) = 1.4$, $p = .067$, $\eta^2 = .05$. However, the number of cases in each cell are relatively small ($n = 52 - 85$) and further analysis with more data from British participants may yet indicate a significant effect. Further analyses with this additional data will also consider more subtle differences or trends in the ways culture may influence age-associated attitudes, e.g. in terms of significantly higher health expectations for US-based participants compared to their British-based counterparts.

5.8.4.1 Summary of Effects of Culture

The final aim of the research within this thesis was to consider the influence of culture on the ways adults evaluate their own future old age. Surprisingly however, no significant effect of country was found on the GAAS, the PSP-Ageing Subscales, or the CLP-Scale. Further questionnaires however from British-based participants are still being returned and this analysis will be repeated with this new data. Nevertheless, it may be that the influence of culture is more subtle, and further analyses will be carried out to examine the more refined ways in which culture can influence age-associated attitudes, e.g. through health expectations or financial preparations. A final motive for collecting data in the US and Britain was to test further the psychometric properties of the newly developed scales among a more diverse sample groups; data indicate that all new scales have good psychometric properties, and may make a useful contribution to the current field.

* It may be of interest to note that there was a small but significant effect of gender but not chronological age on age-associated attitudes; this data is not reported given space constraints in this thesis, and given that the influenee of demographic factors on age-associated attitudes is addressed in detail in Study 4.

Table 5.25

Data Examining Differences in Age-Associated Attitudes between Participants Recruited n The U.S. and those Recruited in Britain

	MANOVA results and effect sizes								MANOVA results with covariate			
Multivariate	F (10, 271) = 2.0, p = .02, η^2 =.07.								F (10, 267) = 1.8, p = .05, η^2 =.06			
	United States (n = 144)		Britain (n = 138)		Univariate			Effect Size	ANCOVA (education and finances as covariates)			Effect Size
Variable*	Mean	SD	Mean	SD	*F*	*df*	*p*	(η^2)	*F*	*df*	*p*	(η^2)
1. GAAS	11.0	3.6	12.2	3.6	6.8	1, 282	.009	.02	1.9	1, 279	.169	-
2. Physical Negatives	9.1	2.7	8.6	2.7	2.8	1, 282	.093	.01	1.4	1, 279	.224	-
3. Physical Positives	18.3	3.5	18.4	3.0	0.1	1, 282	.827	-	0.4	1, 279	.509	-
4. Social Negatives	12.3	3.8	11.6	3.6	2.7	1, 282	.098	.01	0.7	1, 279	.393	-
5. Social Positives	22.3	3.9	21.9	3.0	0.8	1, 282	.370	-	0.1	1, 279	.821	-
6. Psychological Negatives	9.1	3.1	9.0	2.9	0.1	1, 282	.840	-	0.1	1, 279	.893	-
7. Psychological Positives	13.9	2.7	13.5	2.8	2.1	1, 282	.142	-	2.9	1, 279	.088	.01
8. Constraints	13.2	3.7	12.2	3.5	4.8	1, 282	.029	.01	0.2	1, 279	.636	-
9. Losses	12.1	3.2	11.3	2.6	3.6	1, 282	.057	.01	2.8	1, 279	.093	.01
10. Positives	17.5	3.0	16.8	3.1	3.7	1, 282	.056	.01	1.2	1, 279	.264	-

Note: Questionnaires from British-based participants still being returned, *Higher scores = more positive evaluations (except for GAAS which is reverse)

5.9 General Summary and Discussion

Extending findings from Studies 1 and 2, data from the current study indicates: 1) that general attitudes to own future old age are influenced by each of physical, social and psychological domains of experience, 2) that the level of threat associated with future old age can be further understood in terms of constraints, losses and challenges to positive experiences, and 3) that there is no significant main effect of culture on age-associated attitudes. These main findings are discussed briefly next.

5.9.1 Exploring General and Specific Attitudes to Own Old Age

The main aim and contribution of Study 3 to the current literature lay in exploring the relationship between general and specific age-associated attitudes. The development of related and more refined attitudinal measures was important to facilitate new questions and new research on the subjective experience of own ageing and future old age. In addition, and at a theoretical level, it was not clear if attitudes should be more accurately defined in more specific ways, e.g. in terms of physical losses or declines in health. Furthermore, there has been very little research, particularly by psychologists, examining these issues in the context of culture. With heterogeneous samples, early findings indicate that the specific attitudinal domain measures developed: a) have good psychometric properties, b) have little overlap with other scales including the GAAS, and c) do distinguish between different aspects of possible experiences in later years. In addition, because these measures are short and easy for researchers to rate and score, they should make a useful addition to the gerontological field by facilitating further empirical work (see Table 10.1 for information on the ways the newly developed measures relate to each other). Findings from this study also suggest that physical, social and psychological domains of experience each contribute to general age-associated attitudes. These theoretical insights should be replicated, including with the involvement of independent or external raters. In addition, future research should examine the consequences different age-associated attitudes may have on health and psychosocial well-being including diet and exercise behaviours.

5.9.2 Examining Age-Associated Threats; The CLP-Scale

The second aim and contribution of Study 3 was to examine the nature of age-associated threats more specifically, i.e. in terms of constraints, losses and the absence of positive experience and attributes occurring in later years. This issue is important: a) for its theoretical value in shedding light on the nature of age-associated threats, b) for its applied value, particularly if constraints and losses respectively are more associated with depression and anxiety respectively, and c) for psychometric reasons, in considering the possibility that the GAAS only addresses certain types of threat, e.g. worry or fear. One would expect that constraints, losses and positive

experiences would all be related to the GAAS and this was found to be the case. Results indicated that the measures developed do have good psychometric properties, and that age-associated threats can be further defined in terms of constraints, losses and the absence of positive experiences. Not only were significant correlations found between these variables and general attitudes, but each of these subscales, contributed significantly to the variance in scores beyond those of demographic factors and the two remaining subfactors. Much more research on this topic however is needed, including replicating these findings with other groups and with independent raters.

5.9.3 Exploring the Role of Culture On Age-Associated Attitudes

The final aim and contribution of Study 3 to the current literature lay in its exploration of age-associated attitudes in the context of culture. Although culture is a fuzzy concept and difficult to define, it is within the context of culture that people learn about the availability and willingness of others to provide help and assistance if/when this is needed. In the current study, it was expected that the attitudes of participants in the US would be more negative by comparison with the attitudes of their counterparts in Britain; this expectation in part was based on differences between the two countries in the ways in which health and healthcare are provided. Surprisingly however, no significant main effect for culture on attitudes was found. Although questionnaires are still being returned and analyses is ongoing, further analyses will examine direct and more subtle influences of culture on age-associated attitudes. Nevertheless, to advance understanding, future research should examine this issue of culture again and include a measure of the specific variables expected to account for cultural variations, i.e. a measure of participants' expectations for healthcare in their later years.

5.9.4 Future Research

The study to follow aimed to extend current insights by examining possible explanations for age-associated attitudes; explanations considered included demographic variables (age, gender), attachment related variables (e.g. representations of self and others) and rival variables including neuroticism and current lifestyle choices. The study to follow also sought to address possible methodological limitations in recruitment in the current study. Specifically, in the study to follow, all participants were offered incentives to the value of £50 for their time and involvement in the research; such incentives may function to encourage involvement in the research among more diverse groups of adults.

Chapter 6

Introduction (Study 4): Explaining Attitudes to own Old Age

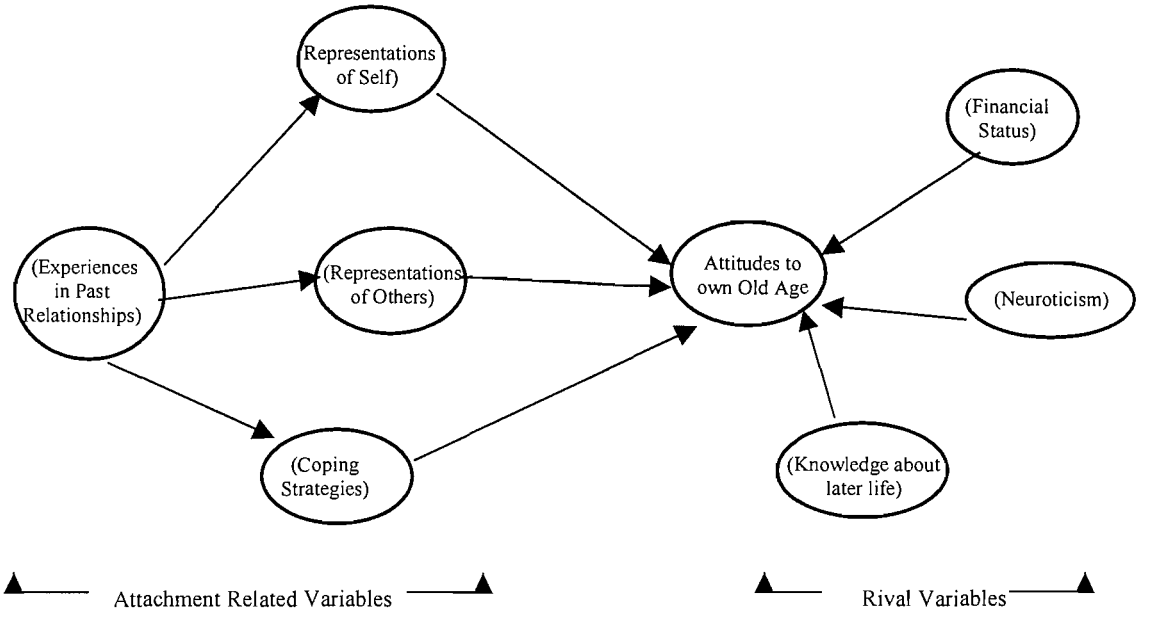
"The key to old age for me is having the ability to cope with the inevitable changes and losses that will occur" (Michael, age 62, O'Hanlon, in prep)

6.1 Introduction and Chapter Overview

The main aim of Study 4 was to examine possible explanations for age-associated attitudes. Three sets of possible explanations were examined: demographic variables, attachment related variables and rival variables (e.g. neuroticism and knowledge about ageing). Attachment related variables included representations of self and others and coping strategies. Specifically, within the developmental framework of close attachment relationships, it was expected that early experiences in relationships would be significantly related to current coping strategies (e.g. Crittenden, 1995; 1997b, Crittenden & Clausen, 2000) and current representations of self and others (e.g. Bartholomew, 1991; Bartholomew & Harowitz, 1991). These attachment-related variables in turn were expected to provide a good fit or explanation for age-associated attitudes (see the left side of Figure 6.1 overleaf). Nevertheless, possible rival explanations also considered included financial status, neuroticism and knowledge about later life (see the right side of Figure 6.1). Understanding the factors that can explain adults' attitudes to their own ageing is information which can have theoretical and applied value in enhancing health and well-being for more people for longer in later life, e.g. through interventions aimed at attitude change, particularly where attitudes are so negative that health and quality of life are being impaired.

Demographic variables examined in this study included chronological age, gender, marital status and levels of education. As discussed next, there is good evidence that these variables are significant factors in a range of health and psychosocial health outcomes (Boynton, Feder, & Hemingway, 2001; Connidis, 1989; Ginn & Arber, 1994; Macintrye, 1993). Nevertheless, in the current research demographic variables were not expected to be significant factors in explaining age-associated attitudes given the stronger associations expected between attitudes to own future old age and experiences in close relationships. The latter set of variables are summarised in the section to follow.

Figure 6.1: Proposed Model Mapping the Influence of Attachment Related Variables and Rival Variables on Age-Associated Attitudes



Attachment-related variables included representations of self and others (e.g. see Bartholomew, 1991; Bartholomew & Harowitz, 1991; Crittenden 1990; 2000c; Griffin & Bartholomew, 1994) and strategies of coping or adaptation to maintain safety, predictability and control (e.g. Crittenden, 1995; 1997b, Crittenden & Clausen, 2000). It was expected that adults with a strong positive sense of personal identity and self-worth would evaluate the experience of their own future old age more positively than would adults with lower self-esteem and worth because the former group would be less personally threatened by possible age-associated impairments and problems. Given that there can be an increased reliance on others in later years (e.g. Baltes, 1991), it was also expected that adults who had experience of others as being helpful and supportive in times of need would evaluate their own ageing and future old age more positively given a reasonable expectation of similar support again if needed in their later years. Furthermore, experiences in relationships were expected to predict attitudes via coping strategies because it is within the context of close relationships that people develop strategies for maintaining control, predictability and safety for the self and others (e.g. see Crittenden, 1995; 1997, 1999; 2000b; 2002). Within the context of life-span developmental psychology coping strategies and representations of self and others were expected to be predicted by the quality of earlier relationships with parents and grandparents.

Possible rival explanations for attitudes also examined included expected financial status, neuroticism, and knowledge or information about later life (see the right side of Figure 6.1). A good explanation for age-associated attitudes may be expected financial status, i.e. although later life offers the potential for many enjoyable activities, these are likely to be constrained unless a minimum level of financial resources is available. A second rival explanation for attitudes is neuroticism, i.e. people may hold negative attitudes about ageing simply given innate negative pre-dispositions. The final rival explanation considered for attitudes was knowledge about ageing and later life. Knowledge about ageing was further examined in three domains: a) knowledge about general aspects of later life, and particularly the true level of danger this time of life holds, b) knowledge based on one's own family history, i.e. genetic inheritance, and c) knowledge based on a pragmatic realism with regard to current lifestyle and health behaviours. The expected relationship between current health behaviours and attitudes can be summarised as follows; if adults are currently engaged in unhealthy lifestyle behaviours including poor eating habits, it is less likely that morbidity can be compressed into a small amount of time in later life. Assuming that participants are aware of the relationship between current health behaviours and later morbidity, then negative attitudes about one's own future old age may be best explained by a pragmatic realism. The rationale underpinning each of these possible explanations for attitudes to ageing is discussed more fully in the following sections.

6.2 Demographic Variables

Given their impact on a range of psychosocial variables, demographic factors may have explanatory and predictive value in helping to understand age-associated attitudes. The demographic variables examined included gender, age, marital status and education.

6.2.1 Gender

Given strong gender differences on a range of psychosocial, health and mortality variables, it was of interest and concern to examine whether gender differences would also have explanatory value in helping us to understand the ways adults evaluate their own ageing and future old age. Gender for instance, has been found to be a significant factor in explaining the ways men and women understand their own behaviour, with women being significantly more conservative then men and significantly more likely to erroneously underestimate their own performances (e.g. see Beyer, 1990; 1998). Gender can also be a significant factor in explaining the ways adults experience and report health problems, with both genders reporting symptoms differently (e.g. see Philpott, Boynton, Feder, & Hemingway, 2001). In addition, there is evidence that the worries of both genders can be different, with women having greater concerns about changing appearances

with age and the nature and quality of relationships with others, while men can have greater concerns about job losses, work problems and legal issues (e.g. see Connidis, 1989; Kendler, Thornton & Prescot, 2001).

Significant gender differences have also been found in rates of mortality across the life course. As noted by Dunnell et al. (1999), the expectation of life at birth for women in 1996 was 80 years while life expectation for men was just 75 years. These authors also note that men are significantly more likely to die from many of the leading causes of death including heart disease, cancer and accidents. Yet unless this issue of gender is examined in its own right, rather than simply as a background variable to be controlled, many people will continue to lose their lives prematurely and fewer insights will be available about well-being in later years. Furthermore, in addition to the distress for others left behind, gender differences in longevity can have many adverse consequences for society at large which loses out on the skills, experiences and strengths that men (and women) accumulate over many decades of life.

As a consequence of gender differences in longevity, men and women can face very different experiences and challenges in the latter part of their lives; yet it is not yet clear whether these different challenges influence the way later life is evaluated. For instance, as a consequence of greater longevity for women, there is a higher probability that women will become widowed, have greater physical health problems and have a greater need for care and support from others, including professional carers. Gender can also be a highly significant factor in the experience of old age, particularly with regard to the financial inequalities and jeopardies being faced by older women. In the context of income for instance, Ginn & Arber (1994) have highlighted the way in which a lifetime of service and care to partners and children can be disadvantageous to the earning and pension rights of older women.

A range of biological and psychosocial explanations have been put forward to explain the significant relationships between gender and both physical and psychosocial health. Biological explanations cannot be ruled out given that males are more likely to die at all ages, including before birth (e.g. see Stillion, 1984). Nevertheless, given that women are more likely to visit GPs, especially during childbearing ages (e.g. see Dunnell et al, 1999), it could be assumed that women are significantly more likely than men to attend to their physical health, and as such be more predisposed to seek help and support when problems arise. However the evidence seems to suggest that men are the ones more likely to complain and to attend to health problems. For instance, when monitoring symptoms of colds using self-report and observer assessments, Macintrye (1993) notes that men were significantly more likely than women to over-rate the severity of their conditions.

Another possible explanation for gender differences in longevity is that women have had different and more stressful experiences (e.g. less environmental control, see Ryff & Singer, 1996), which accounts for their greater proneness to depressive and other illnesses; these experiences in turn may have an effect in protecting against many more hazardous activities and lifestyle behaviours. However, Kendler et al (2001) examined gender differences between exposure to stressful life events and sensitivity to depressive symptomatology among sets of male-male, female-female and male-female sets of twins from the population-based Virginia Twin registry; these authors conclude that gender differences in the frequency of stressful life events and sensitivity to their effects accounted for 'virtually none' (p591) of the greater prevalence rates of depression among women. Furthermore, differences in the work environments of men and women do not seem to explain excess male mortality. For instance, although men can face greater physical risks, women can face more negative risks from the psychosocial work environment (Hemström, 1999).

Many researchers have argued against simplistic views of gender stereotypes to query our expectations about behaviour for each gender, and whether these expectations lead us to view behaviour in ways consistent with social and cultural stereotypes for each gender. For instance, although many researchers have found that women score significantly more highly then men on a range of psychiatric and neurotic illnesses, other researchers have noted that these gender differences disappear when a wider range of psychiatric disorders are considered. This wider range of disorders can include schizophrenia, personality disorders, alcohol and drug dependence, all of which have a higher prevalence among men of all ages (e.g. see Dunnell et al., 1999; Haavio-Manila, 1986). In addition, many researchers have found no significant gender differences where these may have been expected. For instance, Kandrack, Grant & Segall (1991) found no significant gender differences on a range of measures, including self-reported past and present health status, or attitudes to days off work as a consequence of sickness.

In the specific context of age-associated attitudes, the relationship between attitudes to ageing and gender is not clear. Although there is little research on attitudes to ageing, gender differences have been found with regard to anxiety about ageing. For instance, Lasher & Faulkender (1992) found a significant effect of gender on anxiety about ageing; specifically, men were found to be more anxious about ageing then were women in this study. Similarly, Connidis (1989) found that women had more worries about ageing than did men. In contrast however, other researchers have found no significant gender differences amongst older adults in terms of anxiety (e.g. see Watkins, Coates, & Ferroni, 1998) or fears about ageing (e.g. see Montepare & Lachman, 1989). Similarly, Gething et al. (2002) found no significant effects of gender on the Reactions to Ageing Questionnaire.

In the current study, the relationship between attitudes to ageing and gender was examined. Given the evidence above about the significant role that gender can play in later psychosocial behaviour and health, gender may be a significant factor in explaining age-associated attitudes. However, although there can be fewer social desirability biases against women with regard to the display of negative affect, the benefit of attitudinal research is that it can access information not available to purely affectivity orientated researchers; as such one would expect to find no/few gender differences on attitudes if gender can be explained in the context of social desirability responses to negative affect.

6.2.2 Chronological Age

There is evidence in the gerontological and health literature (see Chapter 1) that chronological age can be a significant variable in explaining a range of health and psychosocial factors. To reiterate, chronological age has been found to be a significant factor in explaining levels of generativity (Erikson, 1950; McAdams et al, 1996), control (Lachman & Weaver, 1998), agreeableness and consciousness (McCrae et al, 1996) and psychosocial well-being (Ryff, 1991). In addition, although older adults can have higher levels of health worries by comparison with their younger counterparts (Martin, Grünendahl & Martin, 2001), younger adults are more likely to have anxiety and depressive problems (e.g. see Folkman et al, 1987; Powers, Wisocki & Whitbourne, 1992). Given this evidence, it was queried whether chronological age would also be a significant factor in contributing to the variance in adults' attitudes to their own ageing and future old age.

Some researchers have found evidence to support the view that attitudes to ageing can become more positive with age. For instance, Lasher & Faulkender (1993) have found significant age differences in anxiety about ageing; these authors report that the older adults are less anxious than younger adults about ageing. Similarly, in examining the ways adults viewed their future selves, Ryff (1991) found significant age differences especially between the youngest (mean age 19 years, SD = 1.46) and oldest age groups (mean age 73.4 years, SD = 5.62) with the latter group viewing themselves more positively in the future. Furthermore, in research with young (age range 18 – 22 years) and older adults (age range 62 – 85 years) Chasteen (2000) found that the older age groups had more positive attitudes about ageing as measured by the Anxiety about Ageing Scale of Lasher & Faulkner (1993). These more positive attitudes about ageing and later life were also expected to explain the more positive attitudes that older adults have about other older adults generally; evidence was found to support a significant relationship between attitudes to own ageing and attitudes towards older adults providing further evidence of the need for research on attitudes to ageing.

Other researchers however have reported either a non-significant or a negative relationship between chronological age and attitudes. For instance, Gething et al (2002) found no significant effect for age on the Reactions to Ageing Questionnaire. Similarly, Labouvie-Vief et al (1995) found that self-representations were not linked to chronological age; although mid-life adults scored highest in complexity of representations, the young adults were also found to score highly. Labouvie-Vief and colleagues conclude that the complexity of self-representations may be related to the 'evolution of cognitive structure, not strictly tied to age' (p 412). In contrast, Connidis (1989) found negative age differences in attitudes; in their study with 400 community-based older adults from Canada, these researchers report that the older participants were, the greater was the probability that they reported liking nothing about being old. Similarly, Watkins et al (1998) draw on the psychological stress model of ageing (see Chapter 1) to argue that ageing anxiety about ageing is higher for older people, as this group have 'less psychological and physical energy' to maintain health and well-being (p 319).

Given the above discrepancies, it is unclear in the current study whether there is likely to be a significant relationship between chronological age and attitudes to one's own ageing and future old age. It is possible that older adults will have more positive attitudes about ageing than other age groups, given that they have had more time not only to think about issues relating to ageing and later life, but also to recognise and appreciate the positive qualities that can also occur. The latter can include warm relationships with others, more time for hobbies and further development and growth including wisdom and gerotranscendence. On the other hand however, it has been noted earlier in this thesis (see Chapter 1) that people tend not to give much thought to their own ageing and future old age (e.g. see Karp, 1988; Kaufman, 1986).

A more likely possibility however is that the effect of current chronological age on attitudes will be influenced by other variables not yet fully understood, e.g. older adults who have experience of warm romantic relationships may view the latter part of their lives more positively, than older adults who have had more problematic personal relationships. Not only would such adults have greater confidence that their partners would provide support and help when needed but also potential concerns such as changes in appearance may have less salience. Similarly, older adults with children may have more positive attributes about the latter part of their lives, by comparison with their counterparts who have no children (see later section on marital and parental status). At the same time however, there are other ways adults can leave

legacies including through Eriksonion generativity (e.g. see McAdams, Diamond, De St. Aubin & Mansfield, 1997; McAdams, Hart, & Maruna, 1998; McAdams & de St. Aubin, 1992; McAdams, de St. Aubin, & Logan, 1993).

The current study aimed to examine the relationship between chronological age and age-associated attitudes as this variable has been found to have significant implications for a range of health and psychosocial experiences. Not only could such research shed light on the theoretical nature of attitudes for adults in different cohorts, but the greater insights offered could help researchers when thinking about interventions; this is especially the case when anxiety and worry about ageing and one's own future old age are impairing quality of life and health.

6.2.3 Education Levels

The relationship between education and adults' age-associated attitudes was examined in the study to follow as many researchers have found significant relationships between levels of education and a range of health and psychosocial variables. For instance, Winkleby, Jatulis, Frank & Fortmann (1992) found that education was the most significant socio-economic predictor of cardiovascular disease. Similarly, in a five-year follow-up study of 2,247 adults aged over 55, Grundy & Holt (2000) found that levels of education were significant factors in contributing to the variance in levels of health and disability. Furthermore, Herzog et al. (1998) found that education was a significant factor in facilitating better health and lowered levels of depression while Kaplan and colleagues (Kaplan, Newsom, McFarland & Lu, 2001) found education to be significantly related to physical activities in later life among Canadian based adults aged 65 and over (n = 12, 611). Crespo et al. (2000) also found education to be an important predictor in understanding physical health and activity; their argument is based on their analyses of data from the Third National Health and Nutrition Examination Survey involving over 18,000 adults aged 20 and over. Specifically, Crespo and colleagues found that greater levels of education were associated with more active leisure pursuits across all the racial and ethnic groups that were tested.

Not all researchers however have found significant effects for education on later health and well-being. For instance, Kempen et al. (2000) found that educational levels were unrelated to recovery of activities of daily living following injuries (fractures or sprains) to the hip, lower arm, wrists and hands, or lower leg, ankle or foot. Although one might have expected higher levels of education to be associated with greater resources and care when injuries occur, these

authors found education to be unrelated to later changes in levels of health among the 171 adults who had experienced a fall-related injury. Further evidence that education does not always play a significant role in understanding later health and behaviour comes from Petrella and colleagues (Petrella, Pedersen, Cunningham, Koval & Paterson, 1999). In their research these authors examined the relationship between demographic variables and contact with General Practitioners among non-institutionalised men and women ages 55-84 years (n = 375). Although higher levels of education may mean that such adults are more likely to be informed about potential health problems and to consult their GPs with actual and preventative issues, the evidence was not supportive of that possibility, i.e. no significant relationship was found between levels of education and physician contact.

In the specific context of attitudes to ageing it may be that adults who have been able to avail of educational opportunities will have more positive attitudes towards ageing and later life. For instance, in the context of knowledge about ageing, Palmore (1980) notes, "less educated groups have substantially more misconceptions than more educated groups" (p669). More highly educated groups have also been found to feel greater control over aspects of their lives including work, health and finances (Lachman & Weaver, 1998). In their research with over 2000 adults representing a cross-sectional probability sample of U.S based adults, Heckhausen & Brim (1997) found that participants who had attained lower levels of education rated financial and health related problems as being more serious by comparison with their more highly educated counterparts. Furthermore, given the significant associations between education and finances (e.g. see Keyes & Ryff, 1998) one might expect that adults with higher levels of education have less concerns about the financial aspects of later life. If finances are predictive of attitudes then education can have both direct and indirect effects in explaining adults' attitudes towards their own ageing and future old age.

Contrary results however have also been found for levels of education and attitudes. For instance, Gething et al. (2002) found no significant effects for education on the Reactions to Ageing Questionnaire. In addition, cohort differences in expectations and opportunities for educational uptake may mean that there are no significant relationships between education and attitudes to ageing. For instance, social constraints (e.g. fewer educational opportunities in the past) alongside personal resource limitations and a more urgent need for family survival may have meant that many older adults were simply not able to avail of formal educational opportunities

and advantages. In addition, generations of older women particularly may have been encouraged to take up family and maternal roles, sometimes at the expense of fulfilling their own educational and occupational potential. Consequently, many older adults particularly may be very skilled and able, but without necessarily having any associated formal educational qualifications and markers. As such, educational attainment may not necessarily distinguish between people and may not necessarily have an affect on the ways adults evaluate the experience of their own ageing and future old age.

In the current study, the relationship between education and age-associated attitudes was examined. Insights offered from this research can have theoretical and applied value in understanding the nature of adults' age associated attitudes, their origins and their consequences on later development and health. Given that education can play a significant role in a range of other psychosocial variables, adults with higher levels of education may have more positive age-associated attitudes. However, even if one does find a significant relationship between age-associated attitudes and levels of education, or other demographic variables, it is important to carry out further research to examine and understand better the mechanisms through which these variables have their effects.

6.2.4 Marital Status

There is evidence that marital status is related to a wide range of health and psychosocial outcomes, and it is of interest to examine whether a similar relationship exists with regard to adults' attitudes to their own ageing. In the literature for instance, married men have been found to be more healthy by comparison with married women or single adults (Chipperfield & Havens, 2001; Lee, DeMaris, Bavin & Sullivan, 2000); similarly single women have been found to be in better health by comparison with their married counterparts (Goldman, Korenman, & Weinstein, 1995). Conversely, adults who have been in multiple marriages, or who were married at young ages (less than 25 and 21 for men and women respectively) have been found to be at higher risk for poor health and disability (Grundy & Holt, 2000). Marital status has also been found to be significantly related to depressive symptomatology (e.g. see Gagnon, Hersen, Kabacoff & Hasselt, 1999; Kohn, Zislin, Agid, et al., 2001). Furthermore, Gliksman and colleagues (Gliksman, Lazarus, Wilson & Leeder, 1995) describe marital status as 'an important predictor of risk factor status' (p813), especially with regard to smoking behaviours and cardiovascular disease for men, though not for women.

Adults in different marital status groups have different experiences in later life and it is not yet clear whether these differing experiences are significantly related to the ways ageing and later life are being evaluated. For instance, in considering the experiences of adults within different martial status groups, married adults can have more finances at their disposal by comparison with their single counterparts (Ginn & Arber, 1992). Married men and women have lower levels of morbidity and mortality rates and are significantly less likely to be in institutions by comparison with widowed, divorced and single adults (Goldman et al., 1995). Single adults may evaluate the latter part of their lives more negatively because they are less likely to have children (Connidis & McMullin, 1996) and are less likely to have this avenue for support when needed (see section on parental status to follow). Given this evidence, it is possible that marital status has a significant effect on the ways adults consider and evaluate their own ageing and future old age.

The loss of a spouse can also have a significant effect on the ways adults experience and evaluate the latter part of their lives. Widowed persons are more likely to experience disability and to have health problems including limitations in activities of daily living, hypertension and stroke; Goldman et al. (1995) also note that widowed persons have higher odds of dying by comparison with their married counterparts. Furthermore, Bowling (1987) notes that widowhood is associated with unhealthy behaviour changes such as increases in smoking and drinking behaviours. Some researchers have noted that women do less well than men following the death of a spouse (e.g. see Umberson, Wortman & Kessler, 1991); this may be a consequence of greater proneness to depressive symptomatology and psychological distress alongside greater financial difficulties. However, other researchers have found that men become more distressed following the loss of their spouses. For instance, Lee, DeMaris, Bavin & Sullivan (2001) drew on data from the 1987-88 National Survey of Families and Households to select a subsample of respondents aged 65 and older who were married or widowed (n = 1,686). These researchers found that gender was significant in explaining the variance in depression, with older men adapting significantly less well than their female counterparts.

A number of mechanisms have been proposed through which marital status can impact significantly on later health and behaviour. The first of these is marriage protection theory, which suggests that there are a number of environmental, social and psychological factors that make the environment within marriage more healthy for adults, especially men. Adults for instance often rely on their spouses for support and help, during times of perceived and actual challenges to the self; this is especially the case for men, who often do not have such large social networks as their

wives. In contrast, women are more likely to serve caretaking roles and to be the ones to encourage more healthy dietary behaviours in their families. A second theory about the health benefits of marriage, relates to marital selection theory; within this perspective, it is assumed that marriage selects out more healthy adults, making single adults a group with a disproportionately large levels of problems and constraints. However research by Goldman et al (1995) found little evidence for the selection processes theory, i.e. these researchers found that single adults were not in more poor health by comparison with currently and formerly married individuals. If a relationship is found between marital status and age-associated attitudes further research can examine the mechanisms through which this relationship occurs.

In the literature on attitudes to ageing, evidence was found to indicate that marital status has a significant effect on adults' age-associated attitudes. For instance, Connidis (1989) found that adults who had never married were the most likely to hold negative views of being old. Adults who were previously married were also found to hold more negative attitudes than were adults who were currently married. In the initial pilot web study (see Chapter 3), evidence was found to indicate that spousal relationships were related to the expectations, fears and hopes adults had for the latter part of their lives; "I worry about my husband being alone" (Eileen, age 68); "After 44 years of marriage I wish for my husband to be well so we could ... travel a small bit" (Kathleen, age 62); "Primarily I would like to age in good health so my husband and I could travel. Ill health is a prime concern for me...." (Ellen, age 48); "I am looking forward to retirement and to spending more time with my husband and grandchildren" (Kay, age 48); "I worry about losing loved ones, especially my husband of 35 years" (Michaela, age 54); "I shall enjoy ageing and watching my grands grow up to be beautiful young people. The only sadness I will have to face is losing my husband. He has congestive heart failure and is in the last stage. I shall age as gracefully as I can with the Lord's help" (Mary, age 57) and "Since I have only my daughter and my only son is deceased, if my husband goes before me I would worry about being alone. Not forgotten but alone. ... That would bother me. Ageing is one thing but being alone is not pleasant" (Neill, age 63).

Many researchers however have found no relationship between martial status and other health and outcome variables. For instance, although marriage can act as a source of support and care for spouses, Bowling, Farquhar & Browne (1991) found no significant association between martial status and contact with health services including general practitioners. In this study, older

adults (n = 2058) were recruited from one of two different age groups (aged 65-84, and 85 years plus) and one of two different geographical areas (a deprived and more affluent area around London). Although household size was significantly related to health service use, no significant association was found with martial status.

In the current study, the relationship between martial status and age-associated attitudes was examined. In an attempt to be increasingly sophisticated about the nature of the relationship between marital status and age-associated attitudes it was also queried whether different types of relationships would have a significant effect on age-associated attitudes, e.g. distinctions were made between short-term partners and longer-term partners for single people. This type of analyses may be especially important given that the length of the relationship may be related to security and commitment for both partners, which in turn can be related to different types of experiences in later life, e.g. not only do adults in longer terms relationships know each other better, but there may be a higher probability that such adults will stay together in later years and have children together.

6.2.5 Parental Status

Many researchers have found that parenthood can be significantly related to subsequent development, health and behaviour in adulthood. For instance, being a parent can be related to better subjective well-being in adulthood (Mutran & Reitzes, 1984) and greater contentment and happiness in later life (Bowlby, 1986). However, becoming a parent early or later in life (under age 25 or over age 40 for men) or having large families (more than five children) has been found to be associated with greater pathology (Grundy & Holt, 2000; Kington et al., 1997). Parental status can also influence later behaviour, including the decision to retire (Szinovacz, de Viney & Davey, 2001). As discussed next, being a parent may also influence the experiences adults have in their later years, e.g. having and enjoying the company of grandchildren, having more avenues of emotional and instrumental support when needed, and/or as a form of symbolic immortality, i.e. a part of the self lives on in one's offspring. Given the significant effect that parental status can have on later levels of health and pathology it is of interest and concern to consider whether parental status is related to the ways adults think and evaluate the experience of their own ageing and future old age.

Parental status may be significantly and positively associated with more positive attitudes to ageing given the anticipated enjoyment and pleasure that children often give their parents. Evidence to support this possibility comes as follows from participants recruited to the initial

web-based pilot study (see Chapter 3); "Life is too short to worry about ageing. I live for the moment and the enjoyment of my children and grand children" (Michael, age 57); "Kids are grown, and I look forward to reaping the rewards of watching them graduate, marry, have children of their own" (Mary, age 30); "Enjoying life to the fullest! Be the Granny that my grands need in their lives. Let my children know they are loved, and I pray to meet them again in heaven" (Kathleen, age 62); "There are good things about old age; grandchildren, less expectations, and doing things for just your own pleasure occasionally" (Marie, age 62).

Another route through which parental status could influence the ways adults evaluate the experience of their own ageing and future old age is through a form of symbolic immortality, i.e. although the self dies eventually, aspects of the self can live on experientially and genetically through one's children. Evidence to support the generative influence of symbolic immortality on age-associated attitudes came from the initial pilot study: "my wife and I have lived a good life and been parents of two great kids and have 2 wonderful grandchildren. When we die our memory will live on in our kids and grandchildren" (John, age 57); and "I am reassured by having grandchildren that life will go on; this need not be mine" (Elizabeth, age 72). However, given that adults can offer care and guidance to a wide range of younger generations (e.g. as teachers, as carers), one does not need to be a parent to engage in generative immortality (McAdams, Diamond, de St. Aubin & Mansfield, 1997; McAdams, Hart, & Maruna, 1998; McAdams & de St. Aubin, 1992; McAdams, de St. Aubin, & Logan, 1993). This is especially the case given that many parents can have little time for their children, and can leave them with very negative and neglectful legacies (for more information on negative generativity, see Kotre, 1996).

Parental status could also be significantly related to age-associated attitudes given the support adult children can offer their parents. For instance, adult children can be caregivers of widowed or elderly parents (Gallagher & Gerstel, 2001); adult children are also more likely to provide support to elderly parents, especially when problems and challenges are being faced. For example, in a study with 210 spouse caregivers for adults with dementia, Miller & Guo (2000) found that adult children were often a significant source of support to their parents, especially in terms of the emotional support. Similarly, in a study with Liverpool-based adults aged over 65 years, Wrenger, Scott & Patterson (2000) found that childlessness had significant implications for the availability of support in later life especially for single men and married women. Several researchers have also argued for a hierarchy of support to older parents; specifically spouses offer

each other the most support, followed in turn by adult children, the wider social network and then formal services (Chatters et al., 1986). Given this evidence demonstrating the important supportive role that adult children can play in the lives of older adults, it is of interest to know whether parental status (having one or more children) is related to the ways adults think and evaluate the experience of their own future old age.

Within the context of support, it may be that the more children adults have, the more positively later life is viewed and evaluated given the greater avenues of support if needed from adult children. Alternatively, the significant effect may lie not in the number of children one has, but solely in having at least one child who is able and willing to provide support and help if needed. Evidence to support the possible role of parental status on age-associated attitudes also from the initial pilot study: "(ageing) is inevitable but hopefully one day when you reach old age your children will be there to help make it as easy as possible" (Marie, age 28) and "I believe I will slowly be unable to take care of myself, leaving my children with the duty of attending to my needs" (Maura, age 52). In addition, in her research with older adults Connidis (1989) found a significant relationship between the number of children participants had, and increasingly positive attitudes about old age.

However, evidence from the initial pilot study also suggested that many parents had no wish for their children to provide then with support or care in their later years. For instance: "My mother always said she didn't want to be a burden to her children, but I will go a step further and say I absolutely do not want the child to be my parent" (Irene, age 72); "I do not want to be a burden to anyone, especially my children" (Sarah, age 37); "Worried that I might have wasted life somehow, afraid of being burden on my children" (Sam, age not given); "My greatest concerns would relate to whether or not I will remain in a position to take care of me. I would not wish to be a burden on my family" (Josie, age 52); and "Caring for myself. This is on my mind a lot. I do not want to burden my children with the task of caring for me" (Irene, age 52).

In addition, there is evidence in the literature that parental status is not always associated with positive health outcomes as might have been expected. For instance, in the Longitudinal Study of Ageing (LSOA, 1984 - 1990), Goldman et al. (1995) followed a national sample of adults aged over 70 years (n = 7 500 at baseline); these researchers found that contact with children was not significantly associated with health for either gender. These researchers also

found that levels of disability were not significantly related to the potential availability of support in times of need. Wenger and colleagues (Wenger, Scott& Patterson, 2000) also examined the relationship between parental status and social support; as part of the Ageing in Liverpool Project – Health Aspects (ALPHA) these researchers drew upon data from over 5000 adults aged 65 and over, of whom just over 1000 remained childless (n = 1, 156). Findings indicated that women were more likely to be childless than men, and that childlessness had a significant impact on support networks, though only for married women and single men.

The study to follow also sought to examine the relationship between parental status and age-associated attitudes. There may be a significant relationship between parental status and age associated attitudes given different experiences open to parents by comparison with their childless counterparts, e.g. additional support and enjoyment in following the activities and lives of children and grandchildren. However, there is evidence in the literature that parental status can also be associated with greater levels of pathology. Similarly, in the current study it was expected that the quality of relationships adults have with others, rather than relationship type category, would be most significantly related to age-associated attitudes. Nevertheless, if a significant relationship was found between parental status and age-associated attitudes, further research can be carried out in order to examine the mechanisms underpinning this relationship.

6.3 Attachment-Related Explanatory Factors

The main aim of this study was to examine the influence of attachment-related variables on general attitudes to own future old age. Attachment relationships occur where a strong emotional bond occurs between people, and these relationships are said to be highly important and desirable from 'birth to old age' (Bowlby, 1979).

6.3.1 Past Relationships with Parents

Early relationships with parents can be significantly related to a wide range of health and psychosocial variables in adulthood: these include current coping strategies (Myers & Brewin, 1994), fulfilment of parents' expectations (Long & Martin, 2000), support to elderly parents (Whitbeck, Simons & Conger, 1991), and well-being in adulthood (Bowlby, 1986; Andersson & Stevans, 1993). Significant relationships have also been found between recalled physical punishment and impaired social networks (Parker, Barett & Hickie, 1992). Adults who recalled having had secure relationships with parents have also been found to score more highly on measures of positive functioning (Magai, Distel & Liker, 1995), while adults who experienced

parental divorce as children have been found to experience psychological\al distress in mid-life (Kuh et al, in press). Evidence to support the significant role of past experiences on the present also comes from research by Andersson & Stevens (1993); in a study with community based older adults (n = 267, age range 65 – 74 years), these authors argue for a strong relationship between experiences in childhood and current well-being as older adults. Given this evidence it was of interest and concern to understand whether past experiences with parents was also a significant variable in contributing to the variance in adults' age-associated attitudes.

Early relationships with parents are believed to retain importance through adulthood, even in later years, because these first relationships form the basis for other close relationships throughout life, including relationships with friends and romantic relationships. Early relationships have been described as having 'far reaching significance" (Frodi et al. 1984: 16), including in advanced old age. For instance, although there is still limited research on attachment relationships in later life, Magai, Cohen, Milburn, Thorpe, McPherson & Peralta (2001) examined patterns of attachment in 800 older adults of European Americans and African Americans ranging in age from 65 years to 86 years (mean age 74 years, SD = 6.0). Results from these analyses indicated that there were age differences in patterns of attachment (with higher rates of older adults having secure relationships) and that adults with insecure patterns of attachment may be at greater risk for social isolation and poor health.

In the context of age-associated attitudes, no studies were found examining the relationship between patterns of attachment and the ways adults experienced or evaluated their own ageing and future old age. In fact, as noted by Magai et al. (2000) there is a surprising paucity or research on patterns of attachment generally with older adults. Nevertheless, in the current study, experiences in early attachment relationships were expected to influence age-associated attitudes in adulthood via the representations people have about themselves and others (e.g. see Bartholomew, 1991; Bartholomew & Harowitz, 1991; Crittenden 1990; 2000c) and through strategies of adaptation and coping, developed in the context of close attachment relationships (e.g. see Crittenden, 1995; 1997b, Crittenden & Clausen, 2000). Both of these sets of variables are discussed in more detail in the section to follow.

To reiterate, in the current study, the relationship between experiences especially in relationships with parents and grandparents and present attitudes was examined. Past

relationships included relationships with both parents and grandparents. Given the complexities of behaviour and choices, it should be made clear however, that there is no assumption being made that the past always has a direct effect on the present. This position is based on work by many researchers (e.g. see Crittenden 1999; 2000; Main 1991; Sroufe et al., 1999) who argue for an earned balanced category of attachment; specifically, this category recognises that people can integrate adverse early conditions to become balanced, integrated and mature adults. In addition, maturation offers new opportunities for rethinking the past and integrating the past into more complex representational models that accept distinctions between who things appeared in the past and who they really were. Nevertheless, as noted by Schaffer (2000) although beliefs about the irreversibility of the past have had to be abandoned, much more research is needed to determine the ways in which past experiences do influence current functioning and health.

6.3.2 Representations of Self and Others

Researchers in the field of adult attachment have drawn upon the concept of mental representations to explain the ways in which past experiences in close relationships impact on later social and emotional development and behaviour. Building on the early pioneering work of Bowlby and Ainsworth (e.g. Ainsworth, 1985; 1989; Ainsworth & Bell, 1979; Ainsworth, Blehar, Waters & Wall, 1978; Bowlby, 1977; 1979; 1980) recent researchers in the field of attachment have drawn upon insights and principles from social cognition, developmental psychology and neuroscience, to define representational models in the context of generalised schemas that include information about the behaviour of other people toward the self, and about the value and acceptability of the self in relation to others. Representational models have also been described as being an integral part of the attachment system, enabling individuals to experience and interpret new experiences without having to re-think each from the beginning (Bowlby, 1979; 1980). Although representational models are thought to begin in childhood as a consequence of the quality of interaction with others, especially caregivers, representational models become increasingly complex through adulthood as a consequence of other factors including social networks and spousal relationships, educational and other opportunities as well as development and maturation (see also Crittenden 1990; 1995; 1997b).

The representations adults have of themselves and others have been found to be significantly related psychosocial variables such as well-being (Diehl, Hastings & Stanton, 2001), marital adjustment (Feeney & Noller, 19990; Kobak & Hazan, 1991), leisure activities (Herzog et al., 1998), adjustment following trauma (Classen, Field, Atkinson & Spiegel, 1998) and greater

difficulties managing stress (van Ijzendoorn, Schuengel & Bakermans-Kranenburg, 1999). Given their influence on a wide range of experiences, behaviours and attributes, it was of interest in the current study to consider whether representational models would also be significant factors in explaining the variance in the ways adults evaluated the experience of their own ageing and future old age.

Social psychologists have drawn upon the concept of representational models to understand the ways in which adults relate to themselves and others. For instance, drawing on the work of Bartholomew (1990; Bartholomew & Harowitz, 1991) representational models of self and others can be understood within specific sub-categories. People classified as a secure category for example are thought have positive representational models of themselves and others. In contrast, dismissing adults are thought to have negative models of others, but positive models of themselves. Although this model of Bartholomew's is very simplistic (e.g. assuming the self is relatively static and not making any appearance-realty distinctions), there is evidence that these representational models do have consequences for the ways in which adults relate to themselves and others. For instance, drawing on the work of social psychologists (e.g. Bartholomew, 1990; 1997; Collins, 1996; Hazan & Shaver, 1987) adults classified as secure tend to have confidence in the availability and willingness of others to provide support; this same level of confidence is not shared by avoidant or ambivalent adults. Milkuliner (1995) also found that secure and avoidant individuals have more positive views of themselves than did anxious ambivalent individuals. Furthermore, adults who were classified as secure had more 'balanced, complex, and coherent self-structures' (p 1203) by comparison with avoidant and anxious-ambivalent individuals.

Evidence to support the possible influence of self and other representations on attitudes to ageing again comes from the initial web-based pilot study (see Chapter 3). For many participants age-associated attitudes were linked to their views of themselves: "not being a burden is a problem for me. I have always considered myself independent of other people" (Michael, age 52); "ageing is difficult. I have based my identity on my youthfulness & sex. This is the time to evaluate myself and my role in society" (Judy, age 43). Similarly, representations of others as being supportive was an influencing factor on attitudes for many people: "I have many friends and family surrounding me and feel that in my old age I will continue to have friends and family to support me" (Sally, age 52); and "I have been married for 5 1/2 years ... I can truly say my marriage has gotten better every year .. I believe being married to a dependable

man who I feel I can turn to when in need will go a long way in nurturing my ability to enjoy old age" (Jo, age 28).

In the study to follow, it was expected that representations of self and others would be significantly related to adults' attitudes towards their own ageing and future old age. It was expected that adults who had experienced secure, warm relationships in childhood, would be more likely to become adults with positive representations of themselves and others, which would not be seriously threatened by the possibility of future declines in productivity, independence or change.

6.3.3 Strategies of Adaptation And Coping

Coping has been found to be related to a range of health related outcomes including psychological well-being (Freund & Baltes, 1998), psychological distress (Zautra & Wrabetz, 1991), quality of life (Hagedoorn, Sneeuw, & Aaronson, 2002) and the experience of chronic pain (Schmitz, Saile & Nilges, 1996). Given this significant relationship with other psychosocial variables, it was queried whether coping strategies would also be significantly related to adults' age associated attitudes. Although there are many theories about adaptation and coping, of particular interest in the current study were strategies of adaptation in the context of close relationships because it is within this context that adults learn ways to protect themselves and close others.

Patricia Crittenden, a past student of Mary Ainsworth, has contributed to this field (1995; 1997, 1999, 2000) by developing and extending work in the field of attachment relationships to include any experience in which the self is under threat; for some people this will include own prospective old age. Within Crittenden's dynamic maturational framework (e.g. see Crittenden, 1997b; 1999; 2000), patterns of attachment are examined in the context of information processing strategies to manage danger and threat; each coping strategy is seen as having adaptive value. For instance when people are anxious or distressed and others reliably offer support, such people learn to cope by using and trusting both cognitive and affective sources of information (B-pattern of attachment). However, when the display of negative affect results in prompt and predictable but unpleasant consequences (e.g. mockery or anger from the parent) people adapt over time by inhibiting negative affect, and organising the self around cognition (e.g. the stereotypic British stiff upper lip, Type A pattern of adaptation). Finally, adults classified as Type C have learned over time that others are sometimes supportive in ways that are only sometimes comforting; given

this unpredictability in others' responses, it is not possible for Type C adults to adapt around cognition and instead the strategy of adaptation is one of exaggerated affect (e.g. feigned helplessness, anger etc.). Within this developmental framework all patterns have strengths and limitations, e.g. avoidant adults are often very good organisers and managers, while preoccupied C adults can often be very good musicians, artists and actors/actresses.

In the study to follow, it was expected that strategies of adaptation would be related to age-associated attitudes. The preference was to examine coping strategies within the context of Crittenden's dynamic maturational model of attachment; however no self-report measure within this framework exists yet, and using Crittenden's Adult Attachment Interview was not feasible within the time constraints of a PhD. Nevertheless self-report measures of problem and emotion-based coping do exist (e.g. see Carver, Scheier, & Weintraub, 1989); these reflect, even in very small ways, some of the ideas inherent in Crittenden's model of attachment[1]. The reason Crittenden's framework was chosen was because of the need to examine coping strategies in the context of close relationships. Also, a strength of Crittenden's work is that it is based within life-span developmental psychology.

6.4 Rival Explanatory Variables

A range of possible non-attachment related explanations were also considered for age-associated attitudes. As can be seen in Figure 6.1, these rival variables included expected financial status, neuroticism and knowledge about ageing.

6.4.1 Financial Status

Financial stress has been found to impact significantly on a range of health and psychosocial variables including subjective well being (Pinquart & Sörensen, 2000), psychological distress (Krause et al., 1993), alcohol consumption (Peirce, Frone, Russell & Cooper, 1996) and anticipated support (Krause et al., 1998). Chou & Chi (2002) also found that financial status was significantly associated with poor life satisfaction; specifically, in a study of adults aged 60 years and over (n = 421) these researchers found an inverse relationship between financial stress and life satisfaction, even when controlling for rival coping variables. Furthermore, Goldman et al. (1995) found that adults with more poor financial status were more

[1] Drawing on Crittenden's work, attempts were also made to develop a self-report measure of experiences in close relationships based on two subscales: predictability and the display of negative affect. This measure called the Retrospective Measure of Childhood Attachment Relationships (ReMCAR) was developed mainly on data gathered as part of a follow up (Stage 2) of the current study; although not

likely to be non-respondents in research they were carrying out. Given this evidence indicating the significant role financial status can play on later health and behaviour, it was of interest to consider whether expected financial well-being was also related to the attitudes adults had about the latter part of their lives.

It is possible that financial status can contribute significantly to the variance in scores on attitudes to own ageing. For instance, participants may hold negative attitudes about the latter part of their lives not because of any particular experiences in close relationships, but simply because they do not expect to have the resources at their disposal in later years to avail of the many opportunities and potential that can then occur. As noted by many authors (e.g. Ginn & Arber, 1992) much heterogeneity occurs in later life with regard to income. While many adults do have adequate resources for the latter part of their lives, many others need to modify their lifestyles in response to lowered incomes. Adults who believe they have limited financial resources at their disposal may be more likely to evaluate the latter part of the life course negatively. This is particularly the case given that that some of the positive experiences into later life (e.g. hobbies, travel) will necessitate a minimum level of available funds and resources.

There is evidence in the literature and in the initial pilot study that age-associated attitudes were related to financial status. Connidis (1989) for instance found that adults who are less financially secure are more likely to hold negative views about being older. Evidence that adults' financial concerns were related to their attitudes about ageing also comes from the initial web study as can be seen in the quotes to follow: "I hope that I am financially comfortable and able to slow down to enjoy the simpler things in life" (Sam, age 30); "I am worried about getting older; the financial restraints that I had when my children were young are something I do not wish to repeat" (Marie, age 52); "I am concerned that I will be physically unable to remain independent. I am concerned about our financial status or what it will be as we were not very diligent in planning at a young age for our old age" (Sam, age 52); "Not looking forward to the really ancient part of it. The financial aspects are very worrying" (Michael, age 42); "The pension is a major financial worry, a burden to afford it now and a burden if it isn't enough when you need it" (James, age 25); and "I hope I don't make it to advanced old age. I am lacking in health, in finances and most of all, in usefulness" (Neill, age 67). Some adults with few financial concerns did express more positive attitudes and images for the latter part of their lives: "Getting older is not a problem; I expect I will enjoy freedom of worry from health and financial problems and the

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reported in this thesis mainly given space constraints and word limits, data from this scale will be available from this author.

ability to travel and live a full life watching and guiding my offspring through the challenges of life" (John, age 52).

On the other hand however, a number of researchers have found that financial status was not related to health and psychosocial variables. For instance, evidence that finances are unrelated to psychosocial well-being comes from Ruth & Öberg (1996). Although their sample is quite small these researchers found that material resources did not influence or ease the lives of the respondents in their research. In addition, many of the activities and pleasures adults often associate with later life do not necessarily have costs involved, e.g. walks in the country or on the beach, or time spent enjoying the company of others including children and grandchildren.

In the study to follow, the relationship between financial status and age-associated attitudes was examined. Financial status may be predictive of age-associated attitudes because adults who are experiencing financial stress may see fewer opportunities in their later years to make use of the many opportunities and benefits that can occur in later life. However, it was also expected that financial status would explain little of the variance in attitudinal scores once experiences in relationships were statistically considered and controlled.

6.4.2 Neuroticism

Neuroticism has been defined as an individual's proneness to experience negative emotions such as anxiety, worry and nervousness (Bennet-Martinex & John, 1998; Harris & Dollinger, in press). As noted by Neikrug (1998) worry has the potential to influence the ways information is perceived and interpreted, which in turn can impair effective problem solving and instead divert attention from the present to future events which may never happen. In addition, neuroticism has been described as a 'psychosocial vulnerability factor' (Oldehinkel, Ormel, Brilman, & van den Berg, 2002), and as a form of psychopathology or maladjustment (see Claridge & Davis, 2001; Freund & Baltes, 1998). Whatever definition is used, this dispositional trait has been associated with a wide range of illness and health outcomes and it was of interest to understand whether neuroticism would also be significant in explaining the variance in attitudes to ageing scores.

Neuroticism has been found to be significantly associated with a wide range of health and psychosocial outcomes. For instance, researchers have found neuroticism to be strongly related to the early on-set of depression (Van den berg, Oldehinkel, Bouhuys et al., 2001), distress in mid-life (Kuh, Hardy, Rodgers & Wadsworth, 2002) and even cognitive functioning (Jorn,

Mackinnon, Christensen, Henderson, Scott & Korten, 1993). Neuroticism has also been found to be the main or sole predictor of distress and health complains (Jorm, Christensen, Henderson, Korten, Mackinnon & Scott, 1993; Murray, Allen & Trinder, 2002; Pedersen, Middel & Larsen, 2002). For instance, in a study examining positive and negative affect with Melbourne based adults randomly selected from the electronically role (n = 1080), findings from Murray and colleagues were such that neuroticism was described as 'the sole predictor of mood variability' (p1217). Given this evidence that neuroticism is related to health and psychosocial variables, it was of interest and concern to examine whether neuroticism is also a significant variable in contributing to the variance in age-associated attitudes.

However some researchers have found that neuroticism was not associated with other psychosocial variables as might have been expected. For instance, Oldehinkel, Ormel, Brilman, & van den Berg (2002) have found evidence that neuroticism was not as predictive of later symptomatology as might have been expected. In their study, these authors examined the relationship between psychosocial and vascular risk factors of depression in later life. Participants were a group of individuals aged 57 years and higher diagnosed with depression; a comparable control group of adults were also recruited. Results however failed to indicate that neuroticism was a significant modifier between vascular risk factors and late life depression. Similarly, when Engelhard, van den Hout & Kindt (in press) examined neuroticism and both pre- and post traumatic stress in a group of 1370 women at about two monthly intervals through their pregnancies; of these participants, 126 suffered pregnancy losses and tested positively for post traumatic stress disorder (PTSD). Findings indicated that pre-trauma neuroticism was significantly predictive of PTSD symptoms, however this relationship was no longer significant once pre-trauma symptoms were controlled. Although the temperamental disposition of neuroticism and the event specific symptoms of PTSD are different these authors conclude that 'content overlap in symptoms' explains the relationship these two variables.

In the specific context of ageing, significant relationships have been found between neuroticism and adults' age-associated attitudes. Specifically, although there is little research in this area, Harris & Dollinger (in press) found that neuroticism was significantly related to the levels of anxiety students had about the experience of ageing. However, the undergraduate students recruited to this study were all under 25 years; given that young adults typically score more highly on levels of neuroticism by comparison with their older counterparts uncertainty remains about the relationship between neuroticism and anxiety about ageing among the general population. Specifically, it is not clear whether this significant relationship between neuroticism

and ageing anxiety found by Harris & Dollinger can be transferable and replicated to other groups of adults in different age groups. This gap in the literature is addressed in this study.

In the current study, the relationship between neuroticism and age-associated attitudes were examined. It is expected that neuroticism would have a significant effect on the ways adults evaluated the experience of their own ageing and future old age; however, once experiences in close relationships were examined and controlled it was expected that neuroticism would no longer be a significant factor in explaining the variance in adults' age-associated attitudes.

6.4.3 Knowledge or Information

In this section, the relationship between attitudes to ageing and three different sources of knowledge were considered; general knowledge about ageing and later life, knowledge based on current life styles including health behaviours (diet, exercise etc.) and knowledge based on genetic inheritance including the health and longevity of parents and grandparents.

6.4.3.1 General Knowledge About Ageing

There is evidence in the literature that knowledge has important consequences in terms of health outcomes. Knowledge about prescribed drugs has been significantly related to levels of compliance (McCormack, Lawlor, Donegan et al., 1997). Similarly, Williams, Bruno, Rouch & Marriott (1997) found that knowledge about stroke and its associated risk factors was related to delays in seeking medical care. In addition, levels of knowledge about prescribed drugs in samples of younger and older adults were found to be related to levels of compliance with medication (Cline, Björck-Linné, Israelsson, Willenheimer, & Erhardt, 1999). In examining the relationship between age-associated attitudes and knowledge about ageing it was queried whether attitudes about ageing and later life would be best explained simply by the level of general information adults have about the latter part of the life course.

Evidence to support the relationship between knowledge about ageing and adults' age-associated attitudes comes from one of the most eminent gerontologists today, Jim Birren. Birren & Schroots (1996) point out that people's attitudes about ageing are slow to be replaced by knowledge brought about by research. Neikrug (1998) also found a significant relationship between knowledge about ageing as measured by Palmore's Facts on Aging Quiz and age-associated worries; in this study with Israeli based adults aged 26-89 years (n = 361), more worry was associated with less knowledge about poor health and losses in later years.

Evidence to support a significant relationship between knowledge about ageing and adults' age-associated attitudes came from the initial pilot study data, i.e. adults with negative age-associated attitudes did seem to have erroneous and ageist information about the latter part of the lives: "It (old age) is scary. I don't want to get old and sick. I do not want to become incapable of performing any of my regular daily tasks" (Bob, age 22); "Scared of finances, pain, loneliness" (Anne, age 32); "loss of memory, loss of energy, loss of patience, loss of youth, death, nursing homes, watching your friends die, lots of hospital and doctor expenses as the body withers away" (David, age 54); "inability to enjoy life's pleasures, crotchety, in pain, boring, stupidity, inability to accept change, rigid thinking, loneliness, degradation, unfairness, pointlessness" (Helen, age 32) and "Cognitive and intellectual deterioration scare me .. but I do recognise that this does not represent the norm or the inevitable" (Eve, age 45)

In the literature on attitudes to ageing however there is evidence that knowledge and attitudes are not related. For instance, O'Hanlon, Camp & Osofsky (1993) examined two measures of knowledge about ageing with both direct and indirect measures of attitudes to ageing. Knowledge about ageing was measured by both the Facts on Aging Quiz (FAQ, Palmore, 1977) and the Knowledge of Aging and the Elderly (KAE) scale (Kline et al., 1990). Attitudes were measured directly by the Aging Semantic Differential (Rosencranz & McNevin, 1969) and indirectly by bias ratings on the FAQ and the KAE. To examine these relationships, 387 students (ranging in age from 17 – 85 years) were recruited from colleges in New Orleans. No relationship however was found between attitudes and knowledge about ageing and later life.

In the current study, attempts were made to develop a new scale, measuring adults' knowledge about potentially problematic and threatening aspects of one's own ageing and future old age. Drawing on the example of Palmore (1977) facts were based on current literature. In addition, possible items for this new scale were developed from the exploratory data of the first pilot study of this thesis (see Chapter 3).

6.4.3.2 Knowledge Based on Current Lifestyle Choices

A second form of knowledge is that based on current life-styles choices including engagement in physical activities, as well as smoking and dietary behaviours. Diet and exercise behaviours include fruit and vegetable intake, as well as sustained physical behaviours which increase breathing. Understanding the relationship between current health behaviours and age-associated attitudes can have significant value for attitudinal research, e.g. in understanding why adults have the attitudes they do and the contexts within which these can impact on later behaviour and health. These answers

are especially important given that health and dietary behaviours do impact significantly on later physical and psychosocial health as discussed next.

Physical activity has been found to be a significant factor in disease prevention and health promotion in later years. Physical activities for instance can be related to lower levels of cardiovascular disease (LaCroix, Leveille, Hecht et al., 1996; Wannamethee, Shaper & Walker, 1998), better control over hypertension (Folsom, Prineas, Kaye & Munger, 1990), lower levels of diabetes (Manson, Rimm, Stampfer et al., 1991), lower risk of both cancer (Bernstein et al., 1994) osteoporosis (Dalsky et al., 1988) and better psychological well-being (Morgan, Dallosso, Bassey et al., 1991). Although it is difficult to establish causation given that most of these studies are cross-sectional, Bath & Morgan (1998) examined the relationship between physical activities and physical health outcomes with adults aged 65 and over (n = 1042 at baseline) over a twelve year period. Results indicated that mortality rates were higher among both intermediate and low activity group of men, and low activity groups for women. Given this evidence for a significant relationship between physical activities and later health it was queried whether adults who do not engage in physical activities would associate the latter part of their lives with greater levels of pathology, and so evaluate their own ageing in more negative ways by comparison with their more active counterparts.

People who consume fresh fruit and vegetables are at a reduced risk for the aetiology and prevention of many major health problems including coronary heart disease (Key, Thorogood, Appleby et al., 1996) and some forms of cancer (Gandini, Merzenick, Robertson & Boyle, 2000; Greenwald, Clifford & Milner, 2001; Shike, 1999). Assuming that adults are aware of the health benefits of a more healthy diet, it was queried whether there would be a significant relationship between dietary behaviours and age-associated attitudes, i.e. whether adults who consume less healthy diets would also associate the latter part of their lives with greater levels of problems and threats and so hold more negative attitudes. Despite a detailed key word search, no studies were found examining the relationship between current dietary behaviours and age-associated attitudes. However, not only could such research have theoretical value in understanding better the nature of age-associated attitudes, but the insights gained could have applied value in facilitating and motivating more healthy dietary behaviours for adults in later life.

Cigarette smoking has also been negatively related to a range of health and psychosocial outcomes. Adults who smoke for instance, have been found to be at higher risk for developing major diseases including cancer (Larkin, 2001; Kreiger & Parkes, 2000; Khuder, Dayal, Mutgi,

Willey & Dayal 1998), heart disease (He & Whelton, 1999; Moraes, Fuchs, Moreira et al., in press) and lung problems (Higgins, Enright, Kronmal et al., 1993). Adults who smoke have also been found to be significantly less likely to engage in physical activities in later life (Kaplan et al., 2001), to be significantly more likely to be low consumers of fruit and vegetables (Thompson, Margetts, Speller & McVey, 1999) and to be more prone to premature death (Qiao, Tervanhauta, Nissinen & Tervahauta, 2000). Given these greater risks for smoking-related health problems, it was queried whether a pragmatic realism would mean that adults who smoke would evaluate the latter part of their lives more negatively by comparison with their non-smoking counterparts.

There was evidence from the initial pilot study (see Chapter 3) that current life style choices were important factors in influencing age-associated attitudes. For instance, data under this theme included the following: "I believe I may get osteoporosis because I don't drink enough milk or exercise as much as I should to keep my bones strong" (Mary, age 43); "I feel that I need to do things now to improve my health now for better health in the future - like getting more exercise and eating healthier" (Sally, age 32); "given a penchant for junk food and cigarettes I really don't expect to reach old age" (Martin, age 32), and "I eat a healthy diet, work out regularly and try to minimize stress. ... I expect my old age to be my most enjoyable and productive time of life" (John, age 48). No published studies were found examining the relationship between health behaviours and age-associated attitudes.

In the current study, the relationship between information about current lifestyle behaviours and age-associated attitudes was examined. It was expected that significant relationship between these variables would be present, however it was also expected that any significant relationships would be lost once the attachment related variables were considered and controlled.

6.4.3.3 Knowledge Based on Genetic Inheritance

Genes have been significantly related to a wide range of experiences in later life including longevity (e.g. Jazwinski, 1999; Rogina, Reenan, Nilsen et al., 2000; Vaillant, 1991), heart disease (Friedlander, Arogast, Schwartz et al., 2001; Friedlander, Siscovick, Arbogast et al., 2002) and even attitudes (Olson, Vernon, Aitken Harris & Jang, 2001). Genetic factors have also been related to dementia, particularly of the Alzheimer's type (Tilley, Morgan & Kalsheker, 1998). In the current study it was queried whether the personal knowledge that each participant has about his/her own family history would be a significant factor in influencing the ways adults thinks and evaluate the experience of their own ageing and future old age.

Evidence to support a relationship between genetic inheritance and age-associated attitudes again comes from themes generated from the initial pilot study. In this research many participants made reference to family traits, both positive and negative, inherited from their parents and grandparents when commenting on their attitudes about own ageing: "I feel that I will live a long life. This is based on the longevity of my parents who are both healthy in their 80s" (Sally, age 62); "Old age makes me a little nervous. There are a lot of debilitating diseases that run in my family, so I worry about having one of those" (Maria, age 27); "Having seen my grandparents' old age, I'm not aiming to live to 100" (Mike, age 35); "ageing makes me worried. I watch what my grandparents go through and it seems very difficult" (Sally, age 32); "given family traits and my area of work I am concerned about chronic ill health more than acute problems" (Mary, age 43); "My attitude probably reflects my parents and grandparent, they each lived long and healthy lives and took one day at a time. My grandmother is 94 and she is in perfect health and mind. She thinks she is going to live to be 300 and would stay busy every minute of it if the Lord allowed her to do so" (Josie, age 65); "most of the members of my family who have made it into old age have remained physically and mentally healthy, so there is a good chance that I will too" (John, age 45) and "it doesn't worry me too much - my grandparents lead very active lives and are generally happy and I suppose I'd wish to be like them really" (Marie, age 22).

Evidence for the important role that genetic factors can have on ageing and later life also comes from the gerontological literature. A number of researchers have found that longevity is heritable. For instance, Vaillant (1991) reports a longitudinal study of a group of 184 highly educated men followed from age 18 to age 65 and subjected to regular assessments involving questionnaires, interviews and a physical examination every five years from the time the men were aged 45 years. These assessments included questions asking about the age at death of both parents and grandparents. Results indicated that ancestral longevity was strongly related to both morbidity and mortality, but not psychosocial vigour or psychosocial adjustment and health. Kerber, O'Brien, Smith & Cawthon (2001) also found a moderate but significant effect of genetic factors on longevity; in this study the birth and death records were examined of 78, 994 Utah-based adults born between 1870 and 1907. Results using regression analyses indicated that between 10 and 20% of the variance in excess longevity was heritable. However, the correlation between parents or grandparents and offspring provides only an indirect assessment of the magnitude of genetic effects and more rigorous assessments are needed using twin and adaptation studies to separate shared environment from shared genes. In once such study, McGue, Vaupel, Holm & Harvald (1993) found longevity to be moderately heritable in a sample of Danish twins.

In the current study, the relationship between attitudes to ageing and family histories was examined. It was queried whether adults' attitudes to the latter part of their lives would be related to information based on genetic inheritance rather than to adults' experiences in close attachment relationships. Insights gained about the relationship between attitudes and genetic inheritance could have value in understanding the nature of adults' age-associated attitudes, their origins and consequences on later behaviour, health and development.

6.5 Summary and Goals

The current study sought to explain adults' attitudes to their own ageing and future old age. The chapter to follow will discuss the methodology used to collect Study 4 data including the ways in which participants were recruited, and the psychometric properties of the measures used. For now however, to reiterate, the specific goals of Study 4 were as follows:

1) to examine the relationship between demographic factors and attitudes to ageing; the former included gender, chronological age, education, and both martial and parental status,
2) to examine the relationship between attachment variables and attitudes to ageing: the former included representations of self and others, and coping strategies, and
3) to examine the relationship between attitudes to ageing and rival variables: the latter included financial status, neuroticism and knowledge about ageing (general knowledge, knowledge based on current lifestyles, and knowledge based on genetic inheritance, i.e. family histories)

Chapter 7
Method (Study 4): Explaining Attitudes to own Old Age

"Optimistic. I am not worried about ageing because I love and respect myself and I know that my family and true friends are not going to abandon me as I grow older" (Sue age 33, O'Hanlon, in prep).

7.1 Introduction and Chapter Overview

The aim of the current chapter was to outline methodological issues involved in Study 4 including: 1) the use of incentives to help recruit a more diverse groups of participants to the study, 2) ethical issues involved in quantitative research including the responsibilities of the researcher toward participants, and 3) the procedure and measures involved in addressing the Study 4 research questions. Also discussed in this chapter are the methods of data analysis to be used including the use of structural equation modelling; by comparison with other methods of data analyses it is argued that structural equation modelling offers more refined and accurate insights about the relationships between sets of variables in part because measurement error is controlled.

To consider attitudes within a range of contexts, three main sample groups of participants were recruited (n = 322): from mainstream Christian churches, from different social and musical events, and from the highstreet. In addition to expected group differences in religiosity and health, these groups were chosen because within each group, participants could be recruited from both genders and across the adult age range. Three other sample groups were recruited to this study in order to have additional contexts from which to examine the psychometric properties of the newly developed scales, and also to consider the impact questionnaire length can have on responses. These samples included nursing undergraduates (n = 85), potential students and their families attending a visit day at the University of Southampton (n = 108) and participants recruited from the world wide web (n = 1, 688). Three main sets of measures were used: 1) attitudes to ageing measures including the General Attitudes to Ageing Scale (GAAS), 2) attachment related measures including current representations of self and others, current coping strategies, and past experiences of threat in childhood, and 3) rival variables including expected financial status, knowledge about ageing, and neuroticism. Results will be discussed in the chapter to follow.

7.2 Methodological Issues

7.2.1. Use of Incentives in the Recruitment Of Participants

Participants to this study were offered material incentives for their time and involvement in the study. Although Study 2 offered participants the opportunity to take part in a raffle it is not clear whether this was sufficient motivation for involvement in a one hour research study. By contrast, offering generous incentives to every participant could function to increase the sample size by raising the probability that participants would return their questionnaires. Offering incentives would also help to facilitate the recruitment of a more heterogeneous sample group which in turn would: a) allow a more rigorous assessment of the psychometric properties of newly developed scales, and b) address possible criticisms in earlier studies that samples were biased towards adults more generative or altruistic; if differences were found in the mean scores of questionnaires distributed in the current study by comparison with questionnaires distributed in earlier studies, this would suggest that earlier studies were biased in recruitment and so the value of earlier studies could be reduced. Considering the reasons participants take part in research may be important when interpreting results and considering the generalisability of research findings. A final benefit of incentives was as a way of thanking participants for their valuable time and involvement in the research.

To organise the vouchers for the incentives to participants, meetings were set up with managers of large organisations around Southampton to discuss the possibility of distributing publicity material about their organisations in return for one free session to be available to all participants who took part in the research. Many meetings were held, including to organise the nature of the vouchers and publicity material, and also to discuss and manage potential problems, e.g. steps taken to reduce the possibility of illicit copying of the vouchers. All organisations were made aware that this collaboration could only proceed with ethical approval from the University of Southampton; as with all the studies reported in this thesis, ethical approval for Study 4 and the use of these incentives was later given. Incentives the researcher was finally able to offer all participants included vouchers for free family swims, free aerobics/fitness classes, free session in a weights room, and free dance classes to include either sequence, ballroom, line dancing or salsa dancing. These vouchers were on offer from local leisure centers and from local dance schools. A local college also offered vouchers for free beauty therapy, including free manicures and facials. Participants were under no obligation to use these vouchers, or to continue with follow-up sessions. However given that

these incentives were developed with participants' health and well-being in mind, it was hoped that the initial use of these vouchers might encourage even some people to adopt a more healthy life-style, particularly as any follow up sessions within these organisation were inexpensive. If participants did not wish to use any of the vouchers themselves, they were encouraged to offer them to friends and family; this additional distribution of vouchers was permitted mainly to encourage more people to try these activities especially those in the use of leisure centers and sports clubs. Designing the vouchers was carried out in collaboration with the mangers of these organisations. To reduce the probability of illicit duplicating of vouchers however, each voucher was stamped with 'the Attitudes to Ageing Study' in blue ink. Feedback from managers of these organisations suggested that there was a large uptake in the use of these vouchers. In addition all managers indicated that future collaborative projects with these organisations would be very feasible.

The use of incentives has many strengths, and some limitations. Offering incentives to participants not only increases sample sizes which facilitates higher quality of research, but it also lets participants know that their time and involvement in research are appreciated. Offering incentives also allows for more rigorous testing of measures and hypothesised relationships as participants are more varied and not necessarily generative or altruistically inclined. On the other hand however, it is often not feasible or desirable for the full costs of participants to be reimbursed, mainly because researchers and society at large often rely on mutual good-will and support. In the current study, incentives were typically offered more to maintain participants' involvement, rather than as a means of initial recruitment; an exception was for the church sample, when availability of vouchers was stated when announcing that participants were being sought for a psychology study (see section on procedure).

7.2.2 Ethical Issues

Ethical issues were a high priority in all the studies reported in this thesis. Participants must know they can withdraw from research at any time without penalty; the latter was made clear to participants both verbally and in the covering letter of the questionnaire. Participants' ability to withdraw from this research was made easier by the fact that at no point was identifying information requested when questionnaires through this thesis were being distributed. Privacy, confidentiality and anonymity were maintained through this research. Where questionnaires included contact information this was deleted; each participant was given an identification number which was used in all later analysis and reporting of the data without exception. In addition, in line with the Data Protection Act

2000, each participant was given information about the conditions and duration under which participant information would be kept; this included information on maintaining confidentiality and security. Furthermore, all participants were invited to indicate if they wished to receive information on the findings of the study, and the ways this information was being used to facilitate health and well-being for more people in later years. All participants had the university contact details of the researcher and were encouraged to get in touch if they wished to discuss in more detail any of the issues raised through this research.

7.3 Study 4: Method

7.3.1 Sampling

Three main sample groups of participants were recruited to this study (n=322): from mainstream Christian churches (n = 115), from health or dance events such as line-dancing (n = 109), and from the highstreet (n = 98). These settings were chosen for recruitment because they enabled adults from both sexes and all age groups to be recruited. These settings also enabled as assessment of attitudes with a range of populations. Specifically, recruiting participants from mainstream Christian churches enabled access to populations likely to have wide social networks while recruiting participants from a wide range of leisure and health clubs offering activities as diverse as line-dancing to weight lifting enabled access to participants likely to be more healthy.

The highstreet sample was recruited on the main city centre pedestrian precinct of a city in the south of England: this pedestrian precinct was chosen because it enabled access to a wide range of adults of all ages and different socioeconomic groups. Recruitment for the highstreet sample took place on all days of the week and at different times of the day but during daylight hours: however recruitment on the highstreet was never attempted on very cold or rainy days. At all times participants were approached by the same female researcher who was smartly dressed and wearing a visible university identity badge that was likely to be recognised by most people.

Potential participants from the highstreet and the leisure/health venues were approached in similar ways, i.e. these potential participants were approached individually and asked if they were interested in taking part in a psychology study, which would simply involve them completing a questionnaire at home to be returned at their convenience in an enclosed envelope. The questionnaire distributed can be seen in Appendix 8. It was made also clear to participants verbally that they would be given a range of free gifts in recognition

and appreciation of their valuable time. When participants expressed an interest in the study they were then told it was a research project aiming to explore adults' attitudes towards their own ageing and later life. It was also stated however that the questionnaire was on the long side thus making it easier for participants to decline involvement if they so wished. The numbers of participants who declined involvement in the study however were very small.

In contrast to the two groups above, practical contestants meant that participants from the mainstream Christian church samples were not approached individually. Typically for this group, an announcement was made by the priest or vicar that psychology questionnaires were being distributed at the back of the church and that people who were interested should take one. In this announcement, it was also made clear that a range of vouchers/gifts were also on offer thus again reducing the potential for self-selection towards adults more altruistic or generative. For all three sample groups participation was purely voluntary and no identification was requested. Once the completed questionnaires were returned using prepaid envelopes, the leisure vouchers were then mailed to each participant.

This research was carried out in two main stages. The first and main stage involved asking participants to complete the questionnaires at home at their convenience as summarised above. Nursing undergraduates, prospective university students on a visit day, and participants over the World Wide Web completed a shorter version of this questionnaire (see Appendix 9). Stage 2 however involved sending out a second questionnaire to participants from the three main sample groups only who indicated a willingness to be followed-up over time. As can be seen in Appendix 10, this questionnaire included scales measuring age-associated attitudes, current health and attachment measure of experiences in close attachment relationships (both past childhood relationships and current romantic relationships). To date, nearly seventy of these stage two questionnaires have been returned; however with the exception of the test-retest reliability data for the GAAS, Stage 2 data is not reported in this thesis given thesis word constraints and the volume of data already being presented.

7.3.2 Participants

As can be seen in Table 7.1 participants to date were of all ages but predominantly female, married, reasonably affluent and highly educated. More detailed information is given on participants in the sections and tables to follow given the importance of this information in interpreting the findings and considering possible methodological biases or limitations in the recruitment of participants.

Table 7.1

Demographic Differences for Main Sample Groups

Follow-Up Variables	Levels	Number (and %) by Sample Groups (n = 324)			Sample Total	Pearson Chi Square (sig.)
		Church (n = 116)	Health (n = 110)	Highstreet (n = 98)		
Gender	Male	46 (40%)	33 (30%)	30 (31%)	109 (33%)	2.93 (p = ..230)
	Female	70 (60%)	77 (70%)	68 (69%)	215 (66%)	
Age (years)	≤ 39	46 (40%)	34 (31%)	27 (27%)	107 (33%)	11.3 (p = .023)
	40-64	42 (36%)	57 (52%)	57 (58%)	156 (48%)	
	65+	28 (24%)	19 (17%)	14 (14%)	61 (19%)	
Marital Status	Single	48 (42%)	49 (45%)	40 (41%)	137 (42%)	0.35 (p = .837)
	Married	68 (58%)	61 (56%)	58 (59%)	187 (58%)	
Education	Non-Grad[1]	58 (50%)	65 (60%)	74 (75%)	197 (60%)	14.7 (p = .001)
	Graduate	58 (50%)	45 (40%)	24 (25%)	127 (40%)	
Finances	≤ Aver.	63 (54%)	67 (60%)	62 (64%)	192 (60%)	1.95 (p = .377)
	> Aver.	53 (45%)	43 (40%)	36 (36%)	132 (40%)	
Neuroticism	Low	65 (56%)	61 (55%)	36 (36%)	162 (50%)	9.89 (p = .007)
	High	51 (31%)	49 (45%)	62 (64%)	162 (50%)	

Note; [1] Nongraduate = participants with a maximum of school, certificate or diploma level of education,

7.3.2.1 Participant Differences on Demographic Variables

Chi-square tests using separate 2 X 3 and 3 X 3 contingency tables analysis were conducted to evaluate whether the three main sample groups differed in basic demographic variables. These sets of variables with their respective levels can be seen in Table 7.1. A significant sample group effect was found for education. Follow-up pairwise comparisons were conducted to evaluate the differences in education found. As can be seen in Table 7.2, results indicated that the church sample scored significantly higher than the highstreet but not the health sample in terms of education. This variable was then entered as a covariate in later analyses to control for this known sample difference.

Table 7.2

Follow-up Pairwise Comparisons Examining Educational Differences between the Church, Health and Highstreet Samples

Sample Comparisons	Pearson chi square	p-value	n	Cramér's V
Church vs. Street	14.6	.000	214	.26
Church vs. Health	1.8	.170	226	.09
Street vs. Health	6.3	.012*	208	.17

Note: *Not significant with Bonferoni adjustment

7.3.2.2 Participant Differences in the Expected Direction

A multivariate analysis of variance (MANOVA) was carried out to examine whether there were significant differences between the three main sample groups in the expected direction, i.e. in terms of physical health and the importance of religion. The independent variable was sample group (church, health and highstreet), while the dependent variables were the importance of religion, subjective health and energy levels, and the frequency of meeting with others for leisure activities. As can be seen in Table 7.3, a significant effect of group was found, Wilks' $\lambda = .58$, $F\ (7, 306) = 23.6$, $p < .001$, $\eta^2 = .24$. Univariate results indicated that there was a significant mean difference between the three sample groups on all four independent variables. A post hoc Sheffé test indicated that participants from the church sample scored significantly higher than the other two groups on the importance of religion. Post hoc analysis also indicated that the health sample scored significantly higher than the other two sample groups in terms of both

Table 7.3

Examining Differences in Physical Health and the Importance of Religion between the Church, Health and Highstreet Samples

MANOVA results and effect sizes										
Multivariate	Wilks' λ = .58, F (7, 306) = 23.6, p < .001, η^2 =.24									
	Church (n = 110)		Health (n = 106)		Highstreet (n = 92)		Univariate			Effect Size (η^2)
Variables	Mean	SD	Mean	SD	Mean	SD	*F*	*df*	*P*	
Imp of Rel.	2.59	0.70	1.78	0.81	1.56	0.75	53.8	2, 308	.00	.26
Phy. Health	3.42	0.81	4.00	0.84	3.17	0.99	23.6	2, 308	.00	.14
Energy	3.28	0.72	3.64	0.90	3.05	0.70	14.5	2, 308	.00	.09
Leisure[1,2]	3.16	1.12	3.11	0.72	3.87	1.02	19.0	2, 308	.00	.11

Note; [1] Leisure is reverse scored, [2] Frequency of meeting with others for leisure

health and energy levels (p < .001). Finally, post hoc Sheffé analysis indicated that the highstreet sample met with others for leisure activities significantly less often than did both the health and church samples. These results suggest that measures in use in the current study can be examined across three different contexts.

7.3.2.3 Participant Differences On A Range of Follow-Up Variables

Three separate 3 X 3 contingency tables analysis were conducted to evaluate whether the three main sample groups differed in terms of their wish to take part in future research (yes, no, anonymous), or to be sent either a summary of the research (yes, no, anonymous), and/or gift vouchers (yes, no, anonymous). Participants who had identified themselves, but left one or more of these questions blank were classified as 'maybes' and included with the 'yes' group. Results from these three analyses are put in the one table for convenience, see Table 7.4. It can be seen that there were no significant differences between the three sample groups on any of these variables. Specifically, although the church sample scored significantly higher on levels of education they were not significantly more likely to request a summary of the research findings. Similarly, although

Table 7.4
Contingency Table Analyses Examining Differences in Follow-up Variables between the Church, Health and Highstreet Samples

		Number (and %) by Sample Groups				
Follow-Up Variables	Levels	Church (n = 110)	Health (n = 106)	Highstreet (n = 92)	Sample Total	Pearson Chi Square (sig.)
Send a summary of research findings?	Yes	64 (55%)	62 (56%)	52 (53%)	55%	.42 (.981)
	No	16 (14%)	16 (14%)	16 (16%)	14%	
	Anon[1]	36 (31%)	32 (30%)	30 (30%)	30%	
Send gift vouchers?	Yes	64 (55%)	62 (56%)	57 (58%)	62%	2.6 (.611)
	No	16 (14%)	15 (14%)	11 (11%)	8%	
	Anon	36 (31%)	32 (30%)	30 (30%)	30%	
Take part in future research?	Yes	71 (60%)	67 (61%)	55 (57%)	60%	2.1 (.905)
	No	9 (8%)	11 (10%)	12 (13%)	10%	
	Anon	36 (31%)	32 (30%)	30 (30%)	30%	

Note; [1] Anonymous = participants who did not give identifying information, [2] 55% of participants within the church sample

religion was more important to the church group, these participants were as likely as the other groups to ask for their gift vouchers. Much more research needs to take place to understand the factors that motivate people to take part in research; this question is critical when considering the implications and generalisability of research findings.

7.3.2.4 Stage Two Participants

All participants were invited to take part in follow up research, and analysis was carried out to consider whether participants who agreed to follow up research differed on basic demographic and health variables by comparison with participants who declined involvement in the follow-up research. As can be seen in Table 7.5, there was no significant difference on any of the demographic or health variables on the sample groups, i.e. although it is not yet clear why participants did take part in the follow-up Stage 2, findings suggest that levels of education, current stress, or current finances did not impact upon this decision.

Table 7.5

Contingency Table Analyses Examining Differences in Demographic and Health Variables for Participants who Agreed to be Followed-up (Stage Two) in the Current Study

Demographic and Health Variables	Levels	Sample Groups for Follow-up Stage 2			Pearson Chi Square (sig.)
		Yes Willing (n = 193)	No Id. Given (n = 99)	Prefer Not (n = 32)	
Education	Non-Grad.	119 (61%)[1]	63 (64%)	15 (46%)	2.9 (p = .223)
	Graduate	74 (38%)	36 (36%)	17 (53%)	
Finances	≤ Aver.	112 (58%)	60 (60%)	20 (62%)	.33 (p = .846)
	> Aver.	81 (42%)	39 (40%)	12 (38%)	
Current stress	Fairly	47 (25%)	17 (17%)	9 (28%)	3.2 (p = .525)
	Some	107 (56%)	58 (59%)	15 (46%)	
	None	38 (20%)	23 (23%)	8 (25%)	
Felt Control?	A little/Some	69 (36%)	39 (40%)	11(34%)	.51(p = .305)
	A lot/Total	123 (64%)	59 (60%)	21(66%)	

Note; [1] 61% of participants willing to take part in follow-up research were non-graduates

Table 7.6

Descriptive data on the Main Attitudes to Ageing Variables For Participants who Agreed to be Followed-up over Time (Stage 2)

MANOVA results and effect sizes										
Multivariate	Wilks' λ = .96, F (6, 313) = 1.8, p =.086, η^2 =.01									
	Yes (n = 189)		No, no ID (n = 106)		Prefer Not (n = 31)		Univariate			Effect Size (η^2)
Variables	Mean[1]	SD	Mean	SD	Mean	SD	*F*	*df*	*p*	
GAAS	11.0	3.3	12.1	3.1	10.5	3.7	4.8	2, 313	.009	.03
CLP-Scale	39.8	6.6	41.1	6.0	39.6	5.8	1.5	2, 313	.226	.01
FOAM	14.3	6.5	15.1	6.3	12.8	6.4	1.6	2, 313	.212	.01

Note; [1] Higher scores = more negative attitudes

A MANOVA was also carried out to consider whether there was a difference in the three follow-up groups in terms of respondents' attitudes to ageing. In this analysis the independent variable was follow-up group (yes, no, prefer not), while the dependent variables were the GAAS, the CLP-Scale, and the Fears about own Ageing Measure (FOAM). Results however again indicated that there was no significant main effect of attitudes on follow-up status, Wilks' λ = .96, F (6, 313) =1.8, p =.086, η^2 =.01 (see Table 7.6). These results indicate that there were no significant mean differences in age-associated attitudes between participants who agreed to take part in follow up research, and those who either did not offer any identification, or who declined involvement in future research.

Three separate contingency tables analysis were then conducted to evaluate whether participants who actually returned their questionnaires were different from remaining participants in terms of education, finances, or the venue of recruitment. Results from these three analyses are put in the one table for convenience, see Table 7.7. It can be seen that there were no significant differences between participants who returned their questionnaires at the time of writing, and the remaining sample in terms of either education levels, financial status or the recruitment group, i.e. whether participants had been recruited via mainstream Christian church groups, the health samples or via the highstreet.

Table 7.7

Contingency Table Analyses Examining Basic Differences in Demographic Variables for Participants who did and did not Return their Stage 2 (Follow-up) Questionnaires at the Time of Writing

Demographic and Health Variables	Levels	Questionnaires Returned Follow-up Stage 2 at the time of Writing?		Pearson Chi Square (sig.)
		No (n = 263)	Yes (n = 61)	
Education	Non-Grad.	154 (58%)	43 (71%)	2.9 (p = .08)
	Graduate	109 (41%)	18 (30%)	
Finances	≤ Aver.	153 (58%)	39 (64%)	.68 (p = .47)
	> Aver.	110 (42%)	22 (36%)	
Sample group	Church	96 (36%)	20 (32%)	2.6 (p = .26)
	Health	84 (32%)	26 (42%)	
	Highstreet	83 (31%)	15 (25%)	

A MANOVA was then carried out to consider whether there were differences in attitudes to ageing between participants who had returned their questionnaires and those who had not at the time of writing. In this analysis the independent variable was return of questionnaires (yes, no) while the dependent variables were the GAAS, the CLP-Scale, and the Fears about own Ageing Measure (FOAM). Results however indicated that there was no significant main effect of attitudes on the return of questionnaires, Wilks' λ = .99, F (1, 314) =1.0, p =.36, η^2 =.00. These results indicate that there were no significant mean differences in age-associated attitudes between participants who had not returned their questionnaires at the time of writing, and those participants who had done so.

7.3.2.5 Participant Summary

Understanding the motivations for involvement in research has important implications for interpreting results, and considering their generalisability. In this study, participants were recruited from all age groups, both genders, and across the range of educational attainment. Results indicate: 1) there were significant differences between the three main sample in the expected direction (i.e. importance of religion and health), 2) there were significant differences between the three main samples in terms of education which need to be controlled in later analyses, and 3) there were no significant demographic or health differences between participants who identified themselves and those who did not, or between those who agreed to take part in follow-up research and those who declined. Funding has been secured to follow participants over time (post doctoral research) with in-depth interviews; a question about participants' motives for taking part in this study is expected to be included.

7.3.3 Measures

Data on the measures used, including their reliability and validity are given in the following section.

7.3.3.1 Attitude to Ageing Measures

The General Attitudes to Ageing Scale (GAAS): This scale was used to measure adults' general attitudes towards ageing and alter life. Participants were asked to rate all items on a five point Likert-type scale from *strongly agree* to *strongly disagree* in the direction of negative attitudes to own old age. As can be seen in Table 7.8, the internal reliability of the GAAS in Study 4 was acceptable with Cronbach's alpha for all sample groups ranging from .71-.79.

Table 7.8

Basic Descriptive Data on the GAAS for Study 4 Sample Groups

	General Attitudes to Ageing Scale (GAAS)		
Samples	Mean (SD)	Alpha	N
Church	10.7 (3.1)	.71	116
Health group	11.2 (3.2)	.79	106
Highstreet	12.2 (3.3)	.74	96
University visit day[1]	12.2 (3.4)	.78	84
Undergraduates	12.0 (3.1)	.79	106
Internet sample	11.8 (3.8)	.76	1, 688

Note: Table showing similar GAAS data for all thesis sample groups can be seen in Chapter 10

Concurrent validity is normally tested with other scales measuring a similar construct. In the current study, no other general attitudinal measures were included, nevertheless, the GAAS was found to correlate modestly with measures of specific age-associated challenges including the Constraints, Losses and Positives sub-scales ($r = .37$ - $.52$, $p > .001$) and the Fears about Own Ageing Measure ($r = .41$, $p < .001$). Modest correlations were also found with the Pessimism about Ageing Scale ($r = .34$, $p < .001$). These correlations indicate that adults with negative attitudes to own future old age believed their own old age would have more constraints, more losses, more health problems and fewer positive experiences, by comparison to adults with more positive age-associated attitudes. Moderate correlations also suggest that each of these scales measures distinct aspects of age-associated evaluations.

The current study also sought to extend findings by examining the test-retest reliability of the GAAS over an eight-ten week period. This analysis was carried out with a

[1] Three other sample groups were recruited to this study and asked to complete a shorter version of the questionnaire administered to the three main sample groups (see above). These groups included convenience groups of participants recruited via the world wide web (n = 1, 688), from potential psychology undergraduates on a visit day at a large university (n = 106) and a group of nursing undergraduates (n = 85). In addition to providing a wider range of contexts from which to test the psychometric proprieties of the main attitudinal measure, analyses of data with these subgroups was carried out to consider the possibility that the length of the questionnaire administered to the three main sample groups. Results however indicated no significant differences in the main attitudinal scales as a consequence of questionnaire length, i.e. questionnaire length did not have a significant effect on participants' responses to the scales administered.

subset of participants (n = 61, mean age = 50.3 years, age range 24-80 years, 80% female) who had returned their stage two questionnaires at the time of writing. Results indicated that the GAAS had good test-retest reliability over this time period ($r = .61$, $p < .001$).

The Constraints, Losses, and Positives Scale (CLP-Scale) The Constraints, Losses, and Positives Scale (CLP-Scale) was developed in Study 3 to provide more detailed insights about the nature of age-associated threats. In the current study, confirmatory factor analysis was carried out to test the three-factor structure of the CLP-Scale identified in study 3 (see Chapter 5), i.e. to determine the extent to which this three factor structure fits or adequately describes data gathered. In line with EQS notation (see Byrne, 2001, Dunn et al, 1993), latent constructs or factors were labelled as 'F's, observed or measured variables were labelled as 'V's, and measurement errors were labelled as 'E's (see Figure 7.1 overleaf). Measurement models were set up with direct paths from each factor or subscale to the items in that scale. It was expected that the three factor solution identified in Study 3 would provide a good fit for Study 4 data.

The input file for this analysis was a variance/covariance matrix. The method for estimation was maximum likelihood. Goodness-of-fit was assessed using a variety of statistical methods including the Comparative Fit Index or the CFI (which needs to be above .9 for an acceptable fit), the Root Mean Square Error of Approximation or RMSEA (which needs to be below .06 for an acceptable fit) as well as the Adjusted Goodness-of Fit Index (AGFI), which adjusts for model complexity; this indices also needs to be above .90 for a good fit or explanation of the data.

As can be seen in Table 7.9, the fit of separate factor structures for the CLP-Scale were examined. In Model 1, parameters were set at zero so that the three factors were completely independent. These results however provided a poor fit to Study 4 data, χ^2 (170) = 479, CFI = .64, RMSEA = .12. In Model 2, the three factors were correlated freely. Results indicated that this three factor structure did provide a good fit of this data $\chi^2 = 175$, df = .74, $p < .001$, CFI = .91, RMSEA = .06. The values of each of the pathways can be seen in Figure 7.1.

Figure 7.1: Three factor model of the Constraints, Losses and Positive Scale (CLP-Scale)

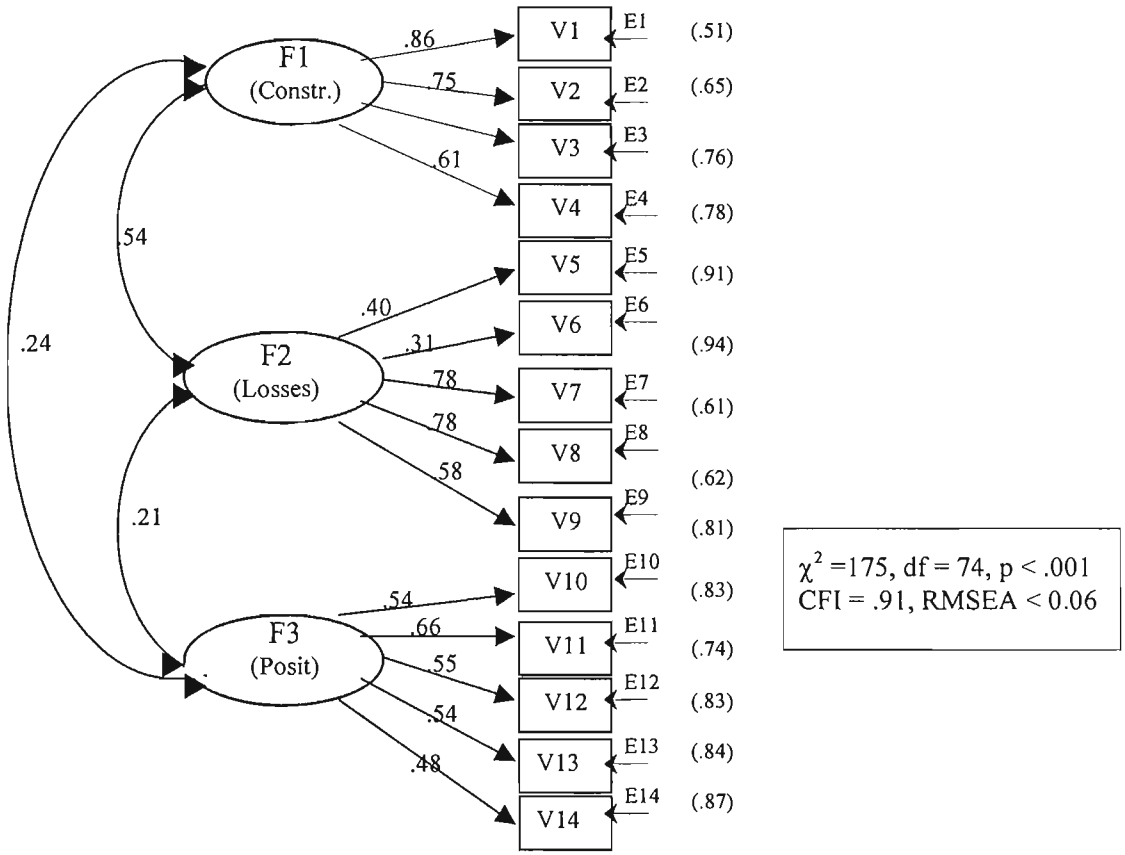


Table 7.9

Confirmatory Factor Analysis on the CLP-Scale Examining the Fit of Different Models

Model	Type	χ^2	df	AGFI	CFI	RMSEA
Model 1	Factors (r = 0)	479	77	.81	.64	.12
Model 2	Factors (r = *)	175	74	.90	.91	.06

*Note: r = 1 = perfect correlation (1 factor), r = 0 = 3 factors completely independent, r = * = 3 factors correlated*

Table 7.10

Basic Descriptive Data for the Main Attitudinal Measures for the Church, Health and Highstreet Samples

	Church Sample (n=116)			Health Sample (n=109)			Highstreet Sample (n=98)		
Variables	Mean	SD	α	Mean	SD	α	Mean	SD	α
Constraints[1]	9.7	3.0	.83	10.5	3.1	.77	10.9	3.3	.80
Losses[1]	17.3	3.2	.74	18.3	2.9	.70	18.2	3.0	.70
Positives[1]	11.6	2.6	.73	11.9	2.5	.68	11.9	2.7	.67
FOAM	13.4	6.2	.82	14.1	6.6	.88	15.7	6.4	.87

Note: n = 323, [1] Subscales from the Constraints, Losses and Positives Scale, FOAM = Fears about Own Ageing Measure

As can be seen in Table 7.10, the three CLP subscales each had good internal reliability for all the sample groups. Results also indicated that the other main attitudes to ageing measures also had good internal reliability.

As can be seen in the lower part of Table 7.11, the CLP subscales also correlated with the GAAS and with other attitudinal measures. In a more detailed test of external validity, further correlations indicated that these significant relationships remained even when partialing out the effects of neuroticism and education (see the upper part of Table 7.11). These results indicate that these measures do have good psychometric properties.

Table 7.11

Zero-order (below line) and Partial Correlations (above line, Controlling for the Effects of Neuroticism and Education) Between the Attitudes to Ageing Measures

Variable	1	2	3	4	5	6
1. GAAS[1]	-	.47**	.39**	.38**	.41**	.28**
2. Constraints[2]	.52**	-	.37**	.23**	.28**	.17**.
3. Losses[2]	.40**	.42**	-	.07	.55**	.26**
4. Positives[2]	.37**	.23**	.10	-	.12	.16*
5. FOAM[3]	.41**	.38**	.55**	.16*	-	.53**
6. PAAS[4]	.34**	.26**	.32**	.17*	.55**	-

Note: n = 323, [1] The General Attitudes to Ageing Scale, [2] Subscales from the Constraints, Losses and Positives Scale, [3] Fears about Own Ageing Measure, Pessimism About Ageing Scale, ** = < .001, * = <.01.

Fears about Own Ageing Measure (FOAM); The FOAM sought to measure the level of fear people had about possible challenges associated with own future old age. This scale has just five items remaining; these loaded onto one factor (see Table 7.12), but reflected possible age-associated fears across physical, social, health and economic areas of life. Across the three main sample groups, alpha scores of .82 - .88 were found which indicates that this measure has good internal reliability. To determine the external validity of the FOAM correlations would need to be carried out with other affective measures such as the Anxiety about Ageing Scale (Lasher & Faulkender, 1992). Nevertheless, if the FOAM is a valid measure of age-associated fears one would expect modest correlations with the GAAS; this was found to be the case ($r = .41$, $p < .001$).

The Pessimism About Ageing Scale (PAAS) The final attitudinal measure to be used in Study 4 was The Pessimism About Ageing Scale (PAAS); this scale sought to examine beliefs about the probability or likelihood of certain challenges or problems occurring in one's own future old age. On a six-point scale, participants are asked to rate the likelihood of a range of experiences occurring to them in their own future old age; higher scores equated with a greater degree of pessimism about own future old age. (Although fears and pessimism about ageing address specific components of threat, little overlap was found in items between the GAAS and these scales, see Table 7.13; these results indicate that relationships between these items cannot be attributed to similarities in phrasing or content.)

Table 7.12

Items from the Unrotated Factor Matrix for the Fears about Own Ageing Measure (FOAM)

Scale Items	Alpha[1]	1
Factor 1 'Fears'	.83	
1) Physical problems so cannot go to shops without help[2]		.87
2) Reduced mental functioning so can't read a paper		.82
3) Having reasonable quality accommodation or housing		.81
4) Being devalued by others solely because of age		.77
5) Being in moderate pain		.74
Eigen Value		3.2
% of Variance Explained		65%

Note: [1] For the three main samples combined, [2] Items rated on Likert-type six point scale (no fears-many fears)

Table 7.13

Items from a Factor Matrix for the Fears about Ageing Measure (FOAM) and the Pessimism About Ageing Scale (PAAS)

Scale Items	Alpha[1]	1	2	3
Factor 1 'FOAM*'	.85			
1) Physical problems so cannot go to shops without help		**.84**	.25	.02
2) Reduced mental functioning so can't read a paper		**.82**	.29	.10
3) Having reasonable quality accommodation or housing		**.77**	.16	.21
4) Being devalued by others solely because of age		**.73**	.20	.14
5) Being in moderate pain		**.65**	.02	.45
Factor 2 'Mental and Physical Health' (PAAS)	.83			
6) Reduced mental functioning so can't read a paper		.19	**.77**	.13
7) Being a burden on others		.24	**.75**	.23
8) Physical problems so cannot go to shops without help		.22	**.74**	.28
9) Being in moderate pain		.18	**.69**	.22
Factor 3 'Economic and Psychosocial Well-being' (PAAS)	.85			
1) Having sufficient financial resources for basic needs		.25	.13	**.81**
2) Having problematic relationships with immediate family		.10	.23	**.78**
3) Having reasonable quality accommodation or housing		.02	.20	**.63**
4) Being alone, though with family visiting at week- ends		.16	.38	**.53**
Eigen Value		5.5	1.6	1.2
% of Variance Explained		43%	12%	9%

Note: [1] For the three main samples combined (n = 257), The FOAM was included in this factor analysis to consider overlap in items which distort the results of later analysis examining the relationship between these two variables.

Cronbach's alpha indicated that this scale had good internal reliability. For the full scale (two factors combined), Cronbach's alpha was .85 for the three samples combined, and between .82 - .87 for each of the three main samples groups. For the mental and physical health subscale, Cronbach's alpha ranged between .83 - .85 for each of the three main samples, while for the psychosocial well-being subscale, Cronbach's alpha for each of the three main samples ranged from .70 - .78. Given high correlations between the two subscales (r = .58) these were combined to form one scale. This scale was also found to correlate with general attitudes to ageing (r = .34p < .001), with attitudes to age-associated

constraints ($r = .26$, $p < .001$), age associated losses ($r = .32$. $p < .001$), age-associated positive attitudes ($r = .17$, $p < .01$) and fears about own ageing ($r = .55$, $p < .001$); these results indicate this scale has acceptable psychometric properties.

7.3.3.2 Attachment Related Variables

Representations of Self; Ryff (1991) subscales were used to measure self-acceptance, autonomy, and environmental mastery. As can be seen in Table 7.8 the internal reliability scores between these subscales in Study 4 were moderate-to-high and at an acceptable range. In addition, the Ryff subscales were also found to have moderate to high correlations with each other (see Table 7.14).

Representations of others: Participants were asked to indicate how willing they perceived others to be in offering support should this be needed; groups of others included friends, family and governmental agencies. (It should be noted that other-representations are related but distinct from social support; the latter can be understood practically in terms of the utilisation of assistance, while the former is a theoretical construct, referring to the level of confidence people have that support is available if needed e.g. see Collins & Read, 1994.) As can be seen in Table 7.15 overleaf, reliability data were acceptable for these scales measuring representations of others. No internal alpha scores are available for current or expected support within spousal relationships as these were single-item scales.

Table 7.14
Reliability and Validity for Scales Measuring Self-Representations

	Total Sample			Correlations Between Self-Representational Measures		
Variables	Mean	sd	α	1	2	3
1. Accept[1]	12.6	2.8	.64	-		
2. Autonomy[1]	13.4	3.0	.67	.59**	-	
3. Env. Mast.[1]	35.4	6.2	.75	.37**	.44**	-

Note: ** = < .05, *** = < .001, [1] Ryff Subscales

Table 7.15

Reliability and Validity of Scales Measuring Representations of Others

	Total Sample			Pearson's Correlations					
Variable	Mean	Sd	α	1	2	3	4	5	6
1. Friends.[1]	11.7	2.2	.90	-					
2. Govt.[2]	9.9	2.0	.68	.37**	-				
3. Spouse rel[3]	5.9	1.3		.24**	.47**	-			
4. Fut. Sp. rel[3]	4.5	1.2		.17**	.17**	.26**	-		
5. Emot Supp.[4]	6.0	1.5	.84	.29**	.22**	.12**	.11**	-	
6. Inst Support[4]	5.9	1.3	.77	.42**	.36**	.27**	.25**	.42**	-

Note: [1] Representations of friends, [2] formal avenues of support, [3] these were single item scales measuring respectively the quality of the spousal relationships and the probability of support from spouse in the future if needed, [4] Carver subscales of emotional and instrumental support, ** = < .01.

Childhood Experiences; Within the contest of lifespan developmental psychology, it was expected that experiences early in childhood would have an impact on later representations and coping in adulthood. Participants were asked if they had lost either parent before age 10 and before age 18. A number of single item measures were also included asking participants to rate the quality of the relationship they had with each parent, on a five point scale; participants were also asked to rate the general level of financial stress in their families when they were children, and their level of stress under age 10 and between 11 and

Table 7.16

Reliability and Validity of Scales Measuring Retrospective Experiences in Childhood
Descriptive Data indicating Past Measures have Acceptable Reliability and Validity

	Total Sample		Pearsons Correlations				
Variable	Mean	sd	1	2	3	4	5
1. Paternal Rel[1]	2.9	1.1	-				
2. Matrnal. Rel[1]	2.6	0.9	.39**	-			
3. Finances	2.9	1.0	.15**	.15**	-		
4. Stress < 10	3.0	0.9	.34**	.34**	.19**	-	
5. Stress 11-16	2.3	0.8	.33**	.27**	.11*	.52**	-

Note: ** = < .01, *** = < .001

16. Given the single time nature of these questions internal reliability cannot be computed; however in stage 2 of this study this measurement limitation will be addressed by using specific measures of attachment including the newly developed Retrospective Measure of Childhood Attachment Relationships (ReMCAR, O'Hanlon, in prep). The ReMCAR was not used during Stage 1 mainly given space constraints in the questionnaire packs. In terms of validity however, all measures were significantly related to each other (see Table 7.16).

Coping Strategies A range of coping measures were used drawing both on the developmental and health psychology literature. Primary and secondary control strategies were used by drawing on the work of Wrosch et al (2000). In addition, *the Brief COPE* is a shortened version of the COPE Inventory, developed by Carver and colleagues (Carver et al, 1989). Although the Brief COPE consists of 14 subscales, only seven of these were used in the current research; Active Coping, Planning, Denial, Venting, Distraction, Substance Use, and Disengagement. These particular subscales were chosen because there were theoretical links between these and attachment related variables, e.g. with denial, distraction having some basic similarity with avoidant strategies, while strategies of venting and blaming have similarities with the Type C strategies of attachment adaptation. Participants were asked their use of each coping strategy on a scale from 1 to 4, in the direction of greater use of a given strategy. As can be seen in Table 7.17 the internal reliability scores

Table 7.17
Reliability and Validity of Scales Measuring Coping Strategies

	Reliability	Pearson's Correlations							
Variables	α	1	2	3	4	5	6	7	8
1. Active Coping	.55	.							
2. Planning	.59	.61**	.						
3 Reframing	.57	.53**	.45**	.					
4. Control 1	.67	.53**	.43**	.40**	.				
5. Contrrol 2	.55	.50**	.36**	57**	.57**	-			
6. Venting	.61	-.09	-.15*	-.05	-.11*	.08	-		
7. Control 3	.70	-.05	-.06	-.04	-.10	.02	.52**	-	
8. Denial	.73	-.08	-.09*	-.01	-.04	.04	.48**	.26**	-
9. Disengagemen	.61	-.37**	-.27**	-27**	-.34**	-.26**	.32**	.34**	.30**

Note: [1] Carver subscales, ** p < .001, * p < .05, Factor 1 = measures 1 to 5, Factor 2 = measures 6 to 9.

for all these measures in Study 4 were moderate but within an acceptable range .55 - .73; Carver reports similar internal reliability scores for the COPE-scale ranging from .50 to .73. Within each factor, reliability of these measures was also acceptable.

Factor analysis with principle components analysis was carried out to examine the ways the coping measures related to each other. From an analysis of the scree plot, two factors emerged which were then rotated using Varimax rotation. As can be seen Table 7.18, these two factors explained 54% of the total variance in scores. Only one of the scales, disengagement, cross-loaded onto two factors. The two factors were called cognitive and emotion coping, reflecting even in very small ways the dismissing and preoccupied strategies inherent in Crittenden's Dynamic Maturational Model of Attachment (see Crittenden, 2000).

Table 7.18
Factor Analysis on the Coping Measures

Scale Items	1	2
Factor 1 'Cognitive coping'		
1. Active coping[1,*]	**.82**	.00
2. Reframing[*]	**.77**	.00
3. Control 2	**.77**	.00
4. Control 1	**.74**	.11
5. Planning[*]	**.71**	.1
Factor 2 'Emotion Coping'		
1. Venting[*]	.01	**.83**
2. Control 3	.00	**.76**
3. Denial[*]	.00	**.71**
4. Disengagement[*]	.43	**.56**
Eigen Value	3.3	1.9
% of Variance Explained	37%	54%

Note: [*] COPE Subscales, [1]

7.3.3.3 Rival Measures

A range of rival variables were considered which may impact or explain the variance in general age-associated attitudes; as outlined briefly next these rival factors included financial status, neuroticism, and knowledge of later life.

Financial Status; Participants were asked about their expected finances status in later years; this included available pensions and savings, finances within the family to support the self and others (e.g. care if needed, and life insurance) and financial control (e.g. making a will). Participants were asked about the availability of each of these sources of financial support; responses were requested on a Likert-type scale. Using a five point scale, participants were also asked to rate their current financial situation (much worse than average – much better than average) and their current knowledge about financial matters (very knowledgeable - not knowledgeable) as these factors may help shed light on the expectations participants had with regard to their anticipated financial situation in later life. With single item measures however, it was not possible to calculate internal reliability. Nevertheless if measures are valid one would expect them to be significantly related to each other, e.g. if participants had made preparations to have a top-up pensions for their future old age, they might also be expected to have other preparations in place including other savings, a will and arrangements for care if needed. As can be seen in Table 7.19, results using contingency table analyses indicated that adults who had pensions in place, were indeed significantly more likely to have in place other savings, life insurance, a will and arrangements for care. These results indicate that the measures of financial preparations used have good external validity.

Table 7.19
An Examination of the Relationship Between Measures of Financial Preparation

Items	Levels	Pension Groups		Sample Total	Pearson Chi Square (sig.)
		No (n = 103)	Yes (n = 221)		
Care if needed?	No	73 (70%)	68 (30%)	141 (44%)	47.1 ($p < .001$)
	Yes	9 (9%)	66 (29%)	75 (23%)	
	Maybe	21 (20%)	87 (40%)	108 (34%)	
A will?	No	24 (22%)	9 (4%)	33 (10%)	27.1 ($p < .001$)
	Yes	80 (74%)	201 (91%)	281 (85%)	
	Maybe	3 (3%)	11 (5%)	14 (4%)	
Insurance?	No	48 (45%)	37 (16%)	85 (26%)	90.9 ($p < .001$)
	Yes	56 (52%)	165 (75%)	221 (67%)	
	Maybe	3 (3%)	19 (8%)	22 (7%)	
Savings?	No	27 (25%)	18 (8%)	45 (14%)	17.8 ($p < .001$)
	Yes	80 (75%)	203 (92%)	283 (86%)	

Note: n = 324

Neuroticism: Neuroticism in the current study was measured by the neuroticism subscale within the Big Five Inventory (BFI, John et al, cited in Benet-Martínez & John, 1998). This neuroticism measure used was found to have good internal reliability across the three main sample groups, Cronbach's alpha .80 - .88. Although no other measures of neuroticism were included in this study, other researchers have also reported good validity for this scale (see Benet-Martinez & John, 1998).

Knowledge About Later Life

Facts on Ageing Threats Quiz: To measure the level of knowledge adults had about ageing and later life, the Facts on Ageing Threats Scale (FAcTS) was developed again from the statements people made in earlier exploratory research (see Chapter 2). This scale attempted to build on the work of Palmore (1971), to assess the level of knowledge adults have about age-associated challenges or threats. These challenges include questions about the level of knowledge people have about the possibility of dependency on others, of rates of dementia, and about controllability in later life. Cronbach's alpha was used to examine the internal reliability of the newly developed Facts on Ageing Threats Scale (FAcTS). With a group alpha score of .66 results indicate that this scale does have acceptable internal reliability. This score is also much higher than Palmore's Facts on Ageing Quiz (1977). Further research will need to take place to examine the external validity of the FAcTS and particularly to examine the relationship between this scale and Palmore's Facts on Ageing Quizzes.

Current lifestyle choices: A second source of information or knowledge that may impact upon general attitudes to own future old age is the current life-style choices of the individual, e.g. in terms of current diet, levels of exercise undertaken (see Morgan & Clarke, 1997, Morgan, Armstrong, Huppert, Brayne, & Solomou, 2000). To measure health behaviours a range of scales were used particularly by drawing on the work of Morgan & colleagues (Morgan et al, 1999; Morgan & Clarke, 1997). Specifically, to assess quality of diet participants were asked about the frequency with which they consumed fresh fruit, green vegetables and salads or raw vegetables during both summer and winter months. Following the example of Morgan et al (1999) these items were coded on a Likert-type scale, from 1 (never) to 6 (more than once a day). Given high correlations for summer and winter months ($r = .7 - .9$, $p < .001$) these time points were combined to provide one mean frequency consumption score for each of fresh fruit, green vegetables and salads or raw

vegetables. Participants had also been asked about their current smoking habits (no never, no not any more, yes light, yes heavy). With less than 3% of participants reporting heavy smoking, the latter two categories for smoking were summed.

Exercise participation was assessed by asking participants about the number of times they engaged in a range of activities for at least 15 minutes in the previous six weeks; activities included exercise outdoors (including gardening, hour or car maintenance), indoor exercise (including heavy housework, or decorating), and active leisure activities (including cycling, dancing and aerobics). The period of six weeks was chosen to gain a general picture of exercise behaviours over a short period of time. Although Cronbach's alpha scores could not be computed for single item measures, further analyses can be carried out at a later date to examine the consistency and stability of a these health measures over time. In addition, measures were significantly related to each other, $r = .26 - .56$, $p < .01$ indicating that adults who consumed fresh fruit frequently, were also significantly more likely to consume green vegetables and salads or raw vegetables; and to engage in exercise and more active lifestyles. These results indicate that these measures do have good external reliability.

Genetic Inheritance; The final source of information or knowledge to be considered was genetic inheritance. To consider the influence of genetic inheritance on age-associated attitudes, participants were asked both objective and subjective questions about the health of their grandparents. Specifically, participants were asked to indicate the age to which both sets of grandparents lived; participants were also asked to rate the health of all their grandparents on a five pint Likert type scale from very poor to excellent. Surprisingly however, there was a large amount of missing data to these questions, and a significant proportion of the sample reported a lack of knowledge about the health and longevity of their grandparents. Given this response, and the large amount of data already being presented, no further analyses of this data will be reported in this thesis. Nevertheless, genetic inheritance is assumed to be an important influence on age-associated attitudes which warrants further research.

7.4 Data Analyses

All quantitative data were analysed using *SPSS Version 10 for Windows.* Data were analysed for each of the main research questions as outlined next.

7.4.1 Initial Data Treatment

Before the main analysis was carried out, several steps were taken to prepare the data for analysis. Although missing data can bias the conclusions drawn about given relationships, Byrne (2001) notes there are few guidelines regarding the nature or treatment of missing data. In the current research, decisions about missing data were based on the amount and pattern of missing values. Specifically, some participants had omitted one page of the questionnaire; where contact information was available copies of the relevant page were mailed to these participants and then entered in SPSS at a later date. Where less then 10% of data were missing and given the large sample size in the current study, listwise deletion was used to allow only full data sets to be used. However, in only a few instances where larger amounts of data were missing (above 10%) an analysis of variance was carried out to see if participants with missing data differed from participants without missing data. Where no significant difference was found, group mean scores were substituted for missing values. In this way, the sample size was allowed to remain high for later data analyses.

7.4.2 Examining Linear And Multivariate Relationships

To examine the psychometric properties of the newly developed attitudes to ageing scales, the internal reliability, factor structure and validity of all measures were assessed and reported using SPSS-v10 and where appropriate EQS. To asses the internal consistency of measures, Cronbach's alpha coefficients were calculated and a value of .7 or higher taken as demonstrating good internal consistency.

Where dependent variables were continuous, multivariate analysis of variance (MANOVA) was carried out mainly to examine whether attitudes to ageing were influenced by a range of independent variables. The multivariate F statistic evaluates whether the population means on a set of dependent variables vary across level of a factor. In contrast the univariate F statistic indicates whether the population means for just one dependent variable vary across levels of the factor. When a significant effect was found between two or more groups, post hoc analysis was carried out to examine the direction of effect. With no covariates a post hoc Sheffé test was used as this test is the most robust and stringent test of effect. When measures were entered as covariates, planned comparisons/contrasts were used instead of the post hoc Sheffé test. (The assumptions underpinning this test have been discussed in earlier chapters, along with some of the strengths and limitations of this test.)

7.4.3 Assumptions of Normality

Assumptions of normality underpin many multivariate tests including Pearson's correlations, MANOVA and multiple regression analysis. The one sample Kolmogrov-Smirnov goodness of fit test was used to determine whether continuous variables followed a normal distribution. In all but a minority of cases, the measures did conform to normality as assessed by the one sample Kolmogorov-Smirnov Test. In only a few cases were data mildly skewed or kurtotic; in these instances, non-parametric alternatives were used where possible. Although consideration was given to variable transformation, this was not used mainly because of the complexity and difficulty in interpreting findings, particularly when comparing data with established measures already published and in wide use. In addition, according to Tabachnick & Fidell (1996) structural equation modelling using EQS is 'the program of choice when data is nonnormal' (p 767), because it is the only program that offers adjusted standard errors for the evaluation of given models.

7.4.4 Structural Equation Modelling (SEM)

Structural equation modelling is a set of statistical techniques which allow the researcher to measure the strength or association between groups of dependent and independent variables. This method was used over other multivariate statistical techniques such as multiple regression analysis because SEM is essentially a confirmatory technique, which can test expected and observed relationships, and examine the fit of data to a number of hypothesised models. From earlier studies in this thesis is it expected that experiences of threat in childhood, influence both current copings strategies and representations of self and others; these in turn are expected to the ways adults evaluate and experience own future old age (see Figure 6.1). SEM is also advantageous in that it includes an explicit estimate of measurement error.

The hypothesised full model for Study 4 data can be seen in see Figure 6.1. Latent variables or factors are typically represented by circles in path diagrams, while the relationship between variables is represented by lines with arrows. In terms of model specification, variables were classified as being either independent or dependent variables; the parameters for estimation were the variances and covariances of the independent variables. Residual variables or errors of measured variables were labelled E, while disturbance terms or errors of latent variables were labelled D.

In examining the fit of the above model, the first step was to consider the fit of each individual latent variable using confirmatory factor analysis. As noted by Byrne (2001), confirmatory factor analysis using structural equation modelling is one of the most rigorous methods for testing the validity of factorial structures. CFA is one of the most rigorous ways to test a priori patterns of relationships between multiple variables (Byrne, 1994). An additional advantage of SEM is that it is free from error measurement, as error has been estimated and removed leaving only common variance (Tabachnick & Fidell, 2001).

CFA involves writing a program to examine the fit or loading of specific items or measures onto specified latent factors or variables. The fit of alternative models can also be tested, to see if there is an improvement in fit with more or fewer factors or paths. Although modifications to a given model should be based on theoretical arguments, EQS also provides tests which offer suggestions for change based on statistical procedures; these include the Lagrange multiplier test which evaluates whether a model could be improved statistically freeing/adding previously fixed parameters, or the WALD test, which determines whether certain pathways could be removed or dropped without significant degradation of the model fit.

Examining the fit of CFA data in the current research was carried out in a number of ways, including the Comparative Fit Index (CFI) and the Root Mean Square Error of Application (RMSEA). For a good fit of data, one would expect the CFI to be .90 or above and a RMSEA value of .08 or less. To consider the fit of data in the current the CFI and RMSEA are used alongside regard for theoretical issues. Disturbance terms were also used to examine the fit of rival variables in the current model. Given this error term measures the amount of variance explained by a particular latent variable, an examination of any changes to this error term should help understand whether an additional variance is being explained by the inclusion of these rival variables.

7.4.5 Large Number of Measures

A large number of measures were used in this study which could be problematic for two reasons; firstly, participants may become fatigued and not discriminate between different measures, and secondly, persons who complete and return the questionnaire may be biased towards those more altruistic or generative. To consider the impact of questionnaire length on responses several steps were taken: 1) alphas were adjusted using Bonferoni's adjustment, 2) the questionnaire was in sections and participants were

encouraged to complete the questionnaire over a number of sittings, and 3) three additional sample groups completed a one page questionnaire and no significant differences were found in measures used between these groups and the three main samples who completed the main questionnaire. In addition, analysis on participants who agreed to continue with follow-up research, indicates these participants were not biased in any way, particularly towards adults less stressed, or more religiously inclined. Furthermore generous gift vouchers were available to encourage all participants to complete and return the questionnaire.

7.5 Summary

To explain adults' attitudes to own future old age participants were recruited from a wide range of venues: mainstream Christian churches, health and social clubs and directly from the highstreet. Participants completed questionnaires in their own homes to be returned by post with enclosed prepaid envelopes. Many questionnaire measures were administered; these included measures of attitudes to ageing, attachment related measures (representations of self and others, and coping strategies) and rival variables (knowledge about ageing, expected quality of life and neuroticism). Measures were found to have good psychometric properties. To minimise attrition rates and to encourage a more diverse group of people to the study, participants were offered generous incentives for their time and involvement in the research. Data were analysed using a range of methods including MANOVA and structural equation modelling using EQS. Results from this research are outlined in the chapter to follow.

Chapter 8
Results (Study 4): Explaining Attitudes to own Old Age

"Like a good wine I feel better with age. I am more comfortable now with myself.. than .. in my 20s or 30s. I see (old) age as a time for more experience and understanding of myself and others" (Jane, age 45, O'Hanlon, in prep)

8.1 Overview

Results from this study will be reported in three main sections consistent with the . In the first section the relationship between demographic variables and age-associated attitudes will be examined; this analyses is carried out first in order to have a context from which other analyses can be understood. The second section the relationship between attachment related variables and attitudes to ageing; it will be shown that attachment related variables do provide a good fit or explanation for age-associated attitudes. Nevertheless, the final section examines the role of rival explanations on age-associated attitudes; these include financial status, neuroticism and knowledge about ageing. By examining changes disturbance terms, it is argued that these rival variables do not contribute significantly to the variance in general attitudinal scores.

8.1.1 Descriptive Data on Main Attitudinal Measures

A MANOVA was carried out to examine mean differences in the main attitudinal measures across the three main sample groups; this question is important in deciding whether the three main samples should be combined in later analysis, or kept separate. Given significant sample differences in education (χ^2 = 14.7, $p < .001$) and neuroticism (χ^2 = 9.89, $p < .007$) but not finances (χ^2 = 1.9, $p = .377$), this analysis was carried out with and without education and neuroticism as covariates. The independent variable was sample group (church, health, highstreet). The dependent variables were the GAAS, the three CLP-subscales (Constraints, Losses and Positives) and the FOAM. Results indicated that there was a small but significant main effect of sample group on age-associated attitudes, Wilks' $\lambda = .93$, $F(10, 614) = 2.3$, $p = .01$, $\eta^2 = .04$. As can be seen in Table 8.1 however, this effect was lost once education was controlled, Wilks' $\lambda = .94$, $F(10, 612) = 1.7$, $p = .08$, $\eta^2 = .03$.

Table 8.1

Examining Differences in Attitudes to Ageing in the Church, Health and Highstreet Samples*

	MANOVA results and effect sizes										MANOVA results with covariate			
Multivariate	F (10, 614) = 2.3, p = .01, η^2 = .04										F (10, 612) = 1.7, p = .08, η^2 = .03			
	Church (n = 114)		Health (n = 107)		Highstreet (n = 98)		Univariate			Effect Size (η^2)	ANCOVA (with ed. & neuro. as covariates)			Effect Size (η^2)
Variable	Mean	SD	Mean	SD	M	SD	*F*	*df*	*p*		*F*	*df*	*p*	
1. GAAS	10.6	3.1	11.1	32	12.2	3.3	6.7	2, 309	.001	.04	4.6	2, 309	.010	.03
2. FOAM[1]	13.5	6.1	14.0	6.6	15.7	6.4	3.4	2, 309	.035	.02	0.9	2, 309	.391	-
3. Constraints[2]	9.7	2.9	10.5	3.2	11.0	3.3	4.3	2, 309	.013	.02	1.5	2, 309	.205	.01
4. Losses[2]	17.3	3.2	18.2	2.9	18.2	3.1	3.5	2, 309	.032	.02	2.4	2, 309	.095	.01
5. Positives[2]	11.6	2.6	11.9	2.5	11.9	2.6	0.5	2, 309	.640	-	0.4	2, 309	.653	-

Note: [1] FOAM = Fears about Own Ageing Measure, [2]CLP = Constraints, Losses and Positives about Ageing Subscales, * Health sample = adults recruited from leisure and health clubs, e.g. adults engaged in line dancing

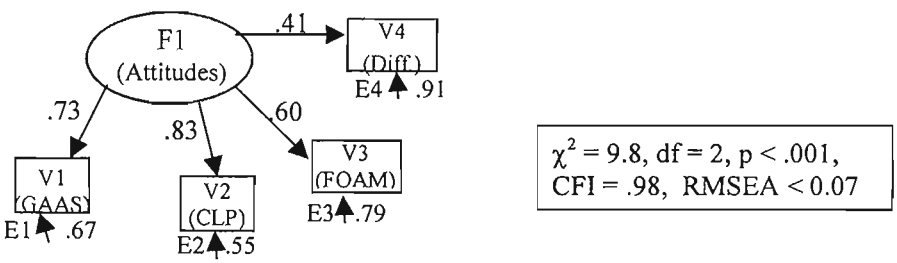
The Pessimism with Ageing Scale (PAAS) was not included in the above analysis to keep the cases high and also because this scale measures beliefs about the probability of potentially aversive experiences occurring rather than the level of unfavourability being associated with those experiences. Nevertheless, to examine whether there were significant group differences in the PAAS a one-way ANOVA was carried out, with and without education and neuroticism as covariates. The independent variable was sample group (church, health and highstreet) while the dependent variable was the PAAS. Results indicated there were no significant sample difference in this measure, with or without education and neuroticism controlled, F (2, 321) = .21, p = .805, and F (2, 323) = .64, p = .526

The above results indicate that there are no significant mean differences between the three main samples in terms of age-associated attitudes; given these sets of results, the samples are combined in later analysis examining explanations for age-associated attitudes.

8.1.2 Latent Variable of Attitudes

Confirmatory factor analysis (CFA) using structural equation modelling (SEM) was carried out to examine the fit of the GAAS, the CLP-Scale and the FOAM into one latent variable called age-associated attitudes. To examine the relationship between the measured variables paths were set from each measured variable to a latent variable called attitudes. As can be seen in Figure 8.1, the fit of this attitudinal latent model was very good, CFI = .98, RMSEA = .07, χ^2 = 5.7 (df = 2, p < 001). The standardised solution indicated that the strongest relationship was between the CLP-Scale and the latent variable F1, with the difficulty measure showing the highest error variation. Given the good fit and the appropriateness of this measurement model, no additional pathways were added or removed. Additional analysis in later sections will examine the relationship between this and other latent variables.

Figure 8.1: Fit of model for general attitudes to own future old age (F1)



8.1.3 Summary about Relationship Between the Main Attitudinal Measures

As no significant differences were found between the main sample groups, the three groups were combined into one group for analyses. Results using confirmatory factor analysis indicated that the main attitudinal measures do provide a good fit for Study 4 data. Further analysis will examine the relationship between this and other latent variables.

8.2 Examining the Relationship between Demographic Variables and General Attitudes

8.2.1 Gender

To examine the effects of gender on attitudes to own future old age a multivariate analysis of variance was carried out. The independent variable was gender (male, female) and the dependent variables were the GAAS, the FOAM and the three CLP-subscales (constraints, losses and positives). As can be seen in Table 8.2, results indicated that there was a small but significant main effect for gender. However, given significant gender differences in education and neuroticism (but not finances), this analysis was repeated with education and neuroticism entered as covariates. This second analysis indicated a main effect which remained significant. Univariate results indicated that there was no signfiinat gender difference in general attitudes as measured by the GAAS; however women scored significantly higher (more negatively) than men on age-associated fears and age-associated losses.

8.2.2 Chronological Age

A multivariate analysis of variance was carried out to examine the relationship between chronological age and attitudinal variables (se Table 8.3). The independent variable was age group (<40, 40-64, and 65+); although consideration was given to having four age categories for greater precision and detail, three categories were chosen to maintain higher numbers in each of the age groups. The dependent variables were the GAAS, the three CLP-subscales, and the Fears about own Ageing Measure (FOAM). Given significant mean differences between the three age groups in levels of neuroticism and education but not finances (see Table 8.4), these two variables were entered as covariates.

As can be seen in Table 8.3, results indicated that there was no significant main effect of age group on the attitudinal measures, Wilks' $\lambda = .96$, $F(10, 614) = 1.1$, $p = .327$. When neuroticism and education were controlled, results were still non-significant, Wilks' $\lambda = .96$, $F(10, 608) = 1.3$, $p = .224$. However, significant correlations were found between current

Table 8.2

Examining Gender Differences in Main Attitudes to Ageing Measures

	MANOVA results and effect sizes								MANOVA results with covariate			
Multivariate	F (5, 308) = 2.7, p = .018, η^2 = .04								F (5, 306) = 2.5, p = .026, η^2 = .04.			
	Men (*N*=107)		Women (*N*=207)		Univariate			Effect Size (η^2)	ANCOVA (neuroticism and education as covariates)			Effect Size (η^2)
Variable	Mean	SD	Mean	SD	*F*	*df*	*p*		*F*	*df*	*p*	
1. GAAS	11.1	3.3	11.4	3.3	0.3	1, 312	.592	-	0.1	3, 310	.624	-
2. FOAM	12.9	5.9	15.1	6.6	8.6	1, 312	.003	.02	3.6	3, 310	.058	.01
3. Constraints (CLP 1)	10.4	2.8	10.4	3.3	0.0	1, 312	.951	-	2.1	3, 310	.144	-
4. Losses (CLP 2)	17.2	3.0	18.2	3.1	7.4	1, 312	.007	.02	3.7	3, 310	.053	.01
5. Positives (CLP 3)	11.6	2.6	11.9	2.6	0.8	1, 312	.373	-	0.6	3, 310	.408	-

Note: n = 314, FOAM = Fears about Own Ageing Measure, CLP = Constraints, Losses and Positives about Ageing Subscales

Table 8.3

Examining Age Differences in Main Attitudes to Ageing Measures

	MANOVA results and effect sizes										MANOVA results with covariate			
Multivariate	F (10, 614) = 1.1, p = .327										F (10, 608) = 1.3, p = .224			
	< 40 years (n =105		40-64 years (n=151)		65+ years (n=58)		Univariate			Effect Size (η^2)	ANCOVA (neuroticism and education as covariates)			Effect Size (η^2)
Variable	Mean	SD	Mean	SD	Mean	SD	F	df	p		F	df	p	
1. GAAS	11.4	3.2	11.3	3.4	10.9	3.1	0.5	2, 313	.597	-	.06	2, 312	.945	-
2. FOAM	14.5	6.2	14.6	6.6	13.5	6.5	0.6	2, 313	.540	-	.05	2, 302	.950	-
3. Constraints (CLP 1)	10.7	3.1	10.3	3.2	10.0	2.9	0.7	2, 313	.455	-	.48	2, 302	.617	-
4. Losses (CLP 2)	18.0	2.9	17.9	3.2	17.7	3.1	0.1	2, 313	.809	-	.01	2, 302	.989	-
5. Positives (CLP 3)	11.5	2.4	11.8	2.6	12.5	2.8	2.6	2, 313	.070	.01	4.06	2, 302	.011	.03

Note: FOAM = Fears about Own Ageing Measure, CLP = Constraints, Losses and Positives about Ageing Subscales

Table 8.4

An Examination of the Relationship Between Both Neuroticism and Demographic Variables Between Participants in Different Age Groups Measures of Financial Preparation

MANOVA results and effect sizes

Multivariate					F (6, 316) = 6.7, p < .000, η^2 = 06					
	< 40 years (n = 106)		40-64 years (n = 153)		65 years + (n = 60)		Univariate			Effect Size (η^2)
Variables	Mean	SD	Mean	SD	Mean	SD	*F*	*df*	*p*	
Neuroticism	23.5	5.1	21.9	5.2	19.6	4.8	10.9	2, 316	.00	.06
Education	2.5	0.9	2.0	0.9	2.0	1.0	7.6	2, 316	.00	.04
Finances	3.2	0.9	3.3	0.8	3.2	0.7	1.1	2, 316	.33	.00
Old age in years?	66.6	9.2	72.3	7.7	80.6	8.6				

Note; A post hoc Sheffé test indicated that the younger adult scored significantly higher on neuroticism by comparison with both the mid-life and older age groups. Post hoc Sheffé tests also indicated that the youngest age group had attained higher mean levels of education by comparison with both the mid-life and older age groups. Both these variables were controlled in later analyses.

chronological age and beliefs about the onset of old age (r = .57, p < .001); for young, mid-life and older adults, old age was seen as occurring at about 66, 72 and 80 years respectively. Consequently, the above analyses was repeated, entering beliefs about the age of old-age onset as a covariate. However, results again failed to find a significant effect, i.e. current chronological age was not found to influence age-associated attitudes, even when controlling for known sample differences including beliefs about the onset of old age.

8.2.3 Education Levels

To examine the influence of education status on age-associated attitudes, a multivariate analysis of variance as carried out. The independent variable was maximum education levels with three groups; school, certificate or diploma, and graduates with at least a bachelors degree. The dependent variables were the GAAS, the three CLP-subscales, and the Fears about own Ageing Measure (FOAM). Given that education and finances were significantly related (see Table 8.5), this analysis was carried out with and without finances entered as a covariate. As can be seen in Table 8.6, results indicated that there was a significant main effect of education group on attitudes, Wilks' λ = .92, F (10, 614) = 2.7, p = .002, η^2 = .04; these values were still statistically significant even when finances were entered as a covariate, Wilks' λ = .91, F (10, 612) = 2.6, p = .002, η^2 = .04.

Table 8.5

An Examination of the Relationship Between Education Levels and Financial Status

Items [1]	Levels	Number (and %) by Sample Groups		Sample Total	Pearson Chi Square (sig.)
		Non Graduate (n = 197)	Graduate (n = 127)		
Finances	At/below average	131 (66%)	61 (48%)	192 60%)	10.9 (p = .001)
	Better than aver.	66 (34%)	66 (52%)	132 (40%)	

Note: n = 324

Follow-up analyses of the univariate data indicated that the only variables to have a significant effect of education group were the FOAM ($p < .001$) and the Constraints subscale of the CLP-Scale. Even when controlling for finances, posthoc follow-up comparisons indicated that participants with at least a bachelors degree had significantly lower mean scores (less negative) on both the FOAM and the constraints subscale, by comparison with participants with a maximum of a certificate or diploma level of education. Given this small but significant effect, education was entered as a covariate where possible in the analyses reported through this study.

8.2.4 Marital Status

Further analyses were carried out to examine whether there was a significant relationship between marital status sand attitudes to ageing. For greater precision in this study, distinctions were made between being 'single', 'single and searching', 'single with short term partner, and 'single with long-term partner', as well as the more usual categories of 'married', 'divorced or separated' and 'widowed'. In the first MANOVA, the independent variables were marital status (categories as above), and the dependant variable were the GAAS, the FOAM and the CLP-Scales. However, no significant main effect was found, Wilks' $\lambda = .96$, $F(12, 302) = 1.1$, $p = .257$. To consider overlap in marital status categories above and to keep cases high, a second MANOVA was carried out; in this analysis the independent variable was current partner status (with a partner, without a partner) and the dependant variables were the GAAS, the FOAM and the CLP-Scales. Again however, results indicated there was no significant main effect for romantic status on age-

Table 8.6

Examining the Relationship between Levels of Education and Attitudes to Ageing

	MANOVA results and effect sizes										MANOVA results with covariate			
Multivariate	F (10, 614) = 2.7, p = .002, η^2 = .04										F (10, 612) = 2.6, p = .002, η^2 = .04			
	School[1] (*n* = 88)		Cert/dipl. (*n* = 103)		Graduates[2] (*n* = 123)		Univariate			Effect Size (η^2)	ANCOVA (finances as a covariate)			Effect Size (η^2)
Variable	Mean	SD	Mean	SD	M	SD	*F*	*df*	*p*		*F*	*df*	*p*	
1. GAAS	12.1	4.2	10.9	2.8	11.0	2.9	3.5	2, 311	.030	.02	3.6	3, 310	.026	.02
2. FOAM	16.4	6.6	13.7	6.5	13.4	6.0	6.5	2, 311	.002	.04	6.7	3, 310	.001	.04
3. Constraints[3]	11.5	3.4	10.1	3.1	9.9	2.9	7.4	2, 311	.001	.05	7.2	3, 310	.001	.04
4. Losses[3]	18.5	3.1	17.8	3.2	17.5	2.9	2.8	2, 311	.063	.02	2.7	3, 310	.064	.01
5. Positives[3]	11.7	2.5	12.1	2.6	11.7	2.7	0.8	2, 311	.440	-	0.7	3, 310	.453	-

Note: [1] Participants with a maximum of school level of education, [2] Participants with at least a bachelors degree, [3] FOAM = Fears about Own Ageing Measure, CLP = Constraints, Losses and Positives about Ageing Subscales

associated attitudes, Wilks' $\lambda = .99$, $F(7, 308) = 0.3$, $p = .907$. These results suggest that marital status itself does not explain age-associated attitudes; however, in the second stage of this research, the quality of romantic relationships is examined and expected to be a significant influence on age-associated attitudes.

8.2.5 Parental Status

To examine whether increasing numbers of children influenced attitudes to own old age (given more possible avenues for support in later years), Pearson's correlations were carried out; no significant relationship was found ($r = .04$, $p > .10$). To examine whether attitudes were influenced simply by parental status (being a parent v. not being a parent) a multivariate analysis of variance was carried out. The independent variable was parental status (yes, no) and the dependent variables were the GAAS, the FOAM and the CLP-subscales. No significant main effect was found, Wilks' $\lambda = .97$, $F(10, 614) = 0.9$, $p = .495$. However, given that young adults were significantly less likely to be parents by comparison with mid-life and older adults, ($\chi^2 = 98.5$, $df = 4$, $p < .001$, Cramér's $V = .39$), this analysis was repeated with age entered as covariate; yet again there was no significant effect of parental status on age-associated attitudes, Wilks' $\lambda = .97$, $F(10, 612) = 0.8$, $p = .562$. To consider whether parental status might impact on age-associated attitudes only for older age groups (when support is more likely to be needed), another MANOVA was carried out. The independent variables were parental status (yes, no) and age group (≤39, 40-64, 65) and the dependent variables were the GAAS, the FOAM and the CLP-subscales; results again indicated no significant effect for either variable alone, ($p > .10$), and no interaction between parental status and age group on general attitudes, Wilks' $\lambda = .98$, $F(10, 606) = 0.6$, $p = .815$. These results indicate that parental status in itself does not influence or explain age-associated attitudes; however, in Stage 2, the influence on attitudes of the quality of relationships with children is examined and expected to be significant.

8.2.6 Interaction Effects Between Demographic Variables

Further analysis was carried out to consider additional interaction effects between the main demographic variables, e.g. although finances alone were not related to general attitudinal measures, finances by age group may be more significant, particularly for older adults who may have more limited financial resources. Similarly, chronological age may have a stronger effect on attitudinal measures for women rather than for men, particularly as there is a growing literature on double or triple jeopardies women particularly can face in

later years. To keep cases sufficiently high, just two sets of interaction variables were examined at one time. It will be shown however that interaction effects are generally non-significant and contribute little to the variance in attitudinal scores.

In the first MANOVA, the relationship between chronological age, educational attainment and attitudes to own future old age were examined. The independent variables were age group (≤ 39 years, 40-64 years, and 65 years+) and educational attainment (school, certificate/diploma, graduate). The dependent variables were the GAAS and the FOAM only, to keep analysis manageable. Results however indicated that there was no interaction effect between chronological age and education for the main attitudinal variables, Wilks' $\lambda = .98$, $F(8, 610) = 0.6$, $p = .744$. In a second MANOVA, the relationship between chronological age, gender and attitudes were examined. The independent variables were age group (≤ 39 years, 40-64 years, and 65 years+) and gender (male, female). The dependent variables were the GAAS and the FOAM only. Again however, results indicated that there was no significant interaction between chronological age and gender for the main attitudinal variables, Wilks' $\lambda = .97$, $F(4, 616) = 2.2$, $p = .062$. These results indicate that demographic variables have little effect on age-associated attitudes.

8.2.7 Summary of Demographic Variables and the Main Attitudinal Measures

The second main aim of this study was to examine the influence of demographic factors on general attitudes to own future old age. It was shown that demographic factors (i.e. age, parental status, and financial status) had little effect on age-associated attitudes, with only two exceptions, gender and education. Although the effect sizes were small the latter variable was entered and controlled statistically where possible in later analyses.

8.3 Examining Attachment Related Variables

This section reports data aiming to examine the influence of attachment related variables on attitudes to own future old age. For each set of measures, it will be shown that scales: 1) are significantly correlated with general attitudes to own future old age, and 2) can be combined effectively into sets of latent variables each reflecting the same theoretical construct. In the final set of analyses the relationship between all latent variables is examined and it will be shown that attachment related variables are significant factors in explaining the level of threat associated with own future old age.

8.3.1 Representations of Self (F2)

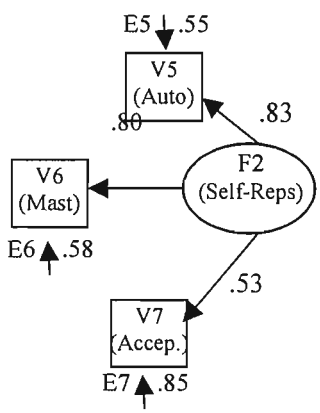
8.3.1.1 Relationship between Self Representational Measures and the GAAS

A significant relationship was found between all the self-representational measures and general age-associated attitudes ($r = .32 - .27$, $p < .001$). The significant relationship between these scales provides a basis for more rigorous statistical analyses using structural equation modelling.

8.3.1.2 Latent Variable of Self-Representations (F2)

Confirmatory factor analyses using structural equation modelling (SEM) was conducted to test the appropriateness or fit of the three self-representational measures, into one latent variable called self-representations; later analyses can then examine critically the relationship between all latent variables including the relationship between attachment related variables and age-associated attitudes. As can be seen in Figure 8.2, the fit of this self-representational model was good. Given this good fit no additional pathways were added or removed.

Figure 8.2: Representations of Self (F2);



$\chi^2 = 2.3$, df = 2, p = .30.
CFI = .99, RMSEA = .03

8.3.2 Representations of Others (F3)

It was expected that adults with representations of others as being generally supportive and helpful when in need would evaluate own future old age in less threatening ways, by comparison with participants who have less positive representations of others.

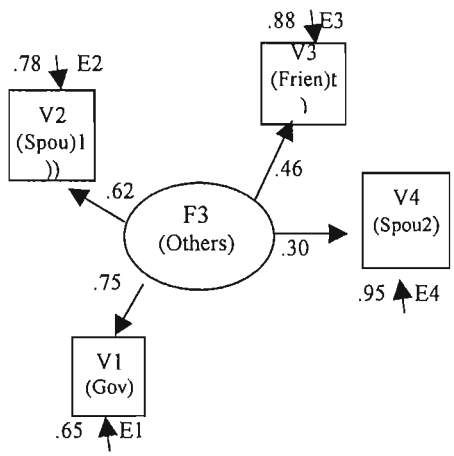
8.3.2.1 Relationship between Representations of Others and Attitudes to Ageing

Small but significant relationships were found between representations of others and general attitudes to own future old age ($r = .18$ - $.26$, $p < .001$). Finding this significant relationship provides a base from which more complex statistical analysis can take place using confirmatory factor analysis in structural equation modelling.

8.3.2.2 Latent Variable for Other Representations (F3)

Using confirmatory factor analysis, this analysis sought to examine the fit of other representations into one latent variable; in later analysis the relationship between this and other latent variables can be examined. To assess the fit of this latent variable a range of fit indices were used, as summarised in section 8.2.2.1. As can be seen in Figure 8.3, the fit of this 'other representational model' was good, and no additional pathways were added or removed.

Figure 8.3: Representations of Others *(F3)*



$\chi^2 = 7.7$, df = 2, $p < .05$,
CFI = .96, RMSEA = .09

8.3.3 Early Childhood Experiences (F4)

Within the context of lifespan developmental psychology, it was expected that early experiences of adversity and threat would have a significant effect on current age-associated attitudes. Although the measures used were not ideal (e.g. single item measures) results supported expectations, i.e. early experiences were found to be significantly related to evaluations about own future old age.

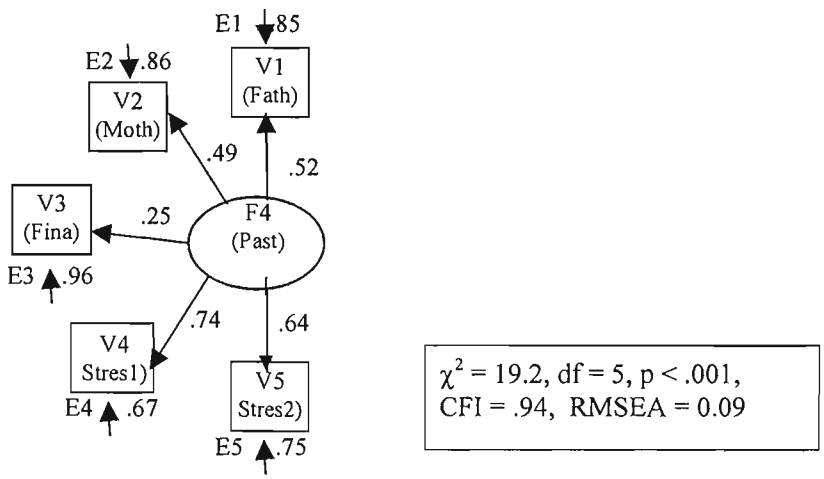
8.3.3.1 Relationship Between Early Childhood Experiences and the GAAS

Pearson's correlations were used to examine the relationship between past childhood experiences and current age-associated attitudes. Significant correlations were found between current attitudes as measured by the GAAS and early maternal relationship ($r = ..21$, $p < .001$), financial stress in the family home as a child ($r = .10$, $p < .001$); the general level of stress under age 10 ($r = .14$, $p < .001$), and the general level of stress between ages 11 and 16 ($r = .15$, $p < .001$). These results indicate that adults who have experienced more threat and dissatisfaction in early relationships are more likely to evaluate own future old age in negative and more threatening ways.

8.3.3.2 Latent Variable of Childhood Experiences (F4)

Confirmatory factor analysis was used to examine the fit of past variables onto one latent variables called 'past experiences'. As can be seen in Figure 8.4, the fit of this latent model was good.

Figure 8.4 Representations of Past Childhood Experiences



8.3.3.3 Summary of Early Childhood Experiences (F3)

This section sought to explore the influence of early experiences on later attitudes to own future old age. It was argued: 1) that early experiences are related to general attitudes to own future old age, and 2) that measures of early childhood experiences fit a latent variable called past or past experiences.

8.3.4. Organisational or Coping Strategies

The main coping measures used in this study included the Brief COPE (Carver, 1997) and measures of primary and secondary control (Wrosch et al, 2001).

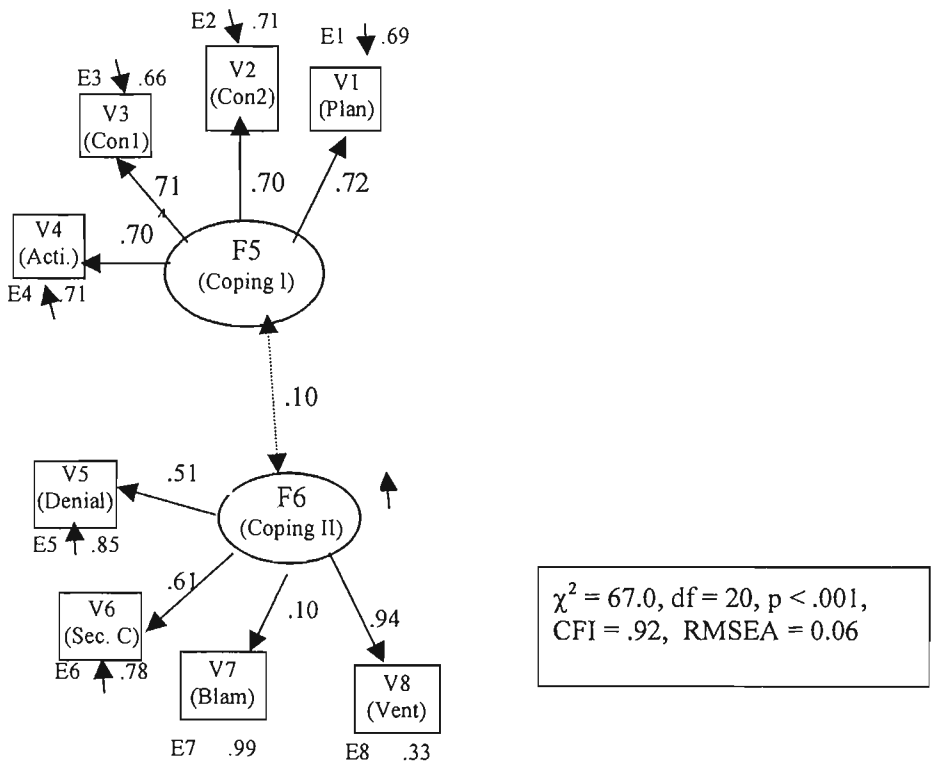
8.3.4.1 Relationship Between Coping Strategies and the GAAS

The coping measures within both factors also correlated with scores on the GAAS (r = .10 - .30, $p < .05$). These results provide a base for further analyses examining the relationship between coping and age-associated attitudes.

8.3.4.2 Latent Variable for Coping Strategies.(F5 and F 6)

Confirmatory factor analysis was carried out to test the fit of the coping measures into two latent variables; cognitive and affective coping. As can be seen in Figure 8.5, a good fit of the data were found.

Figure 8.5: Coping strategies (F5 and F6)

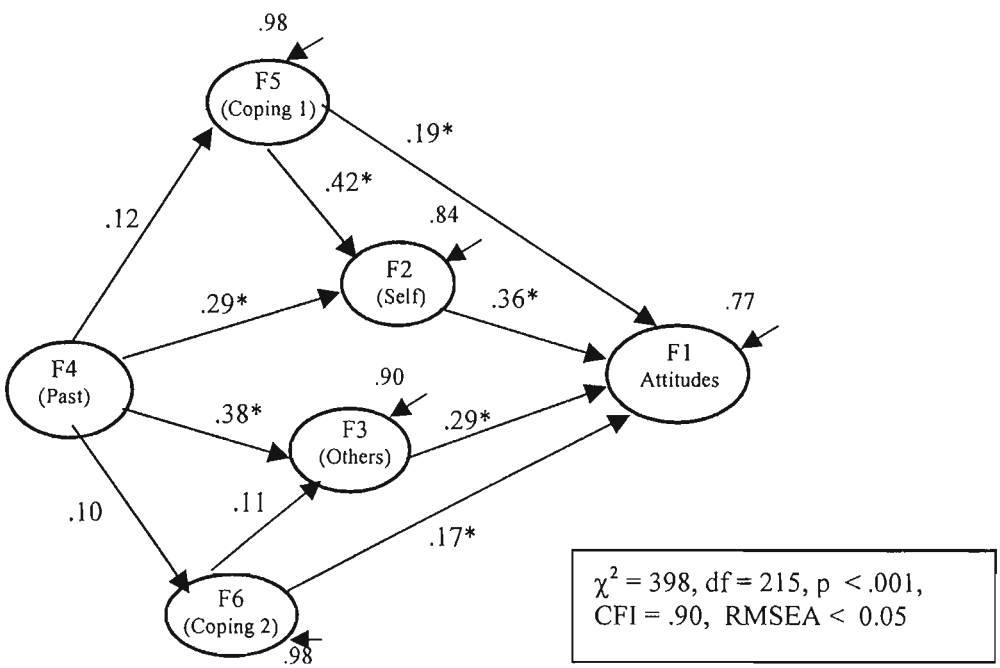


8.3.5 Examining the Relationship between Attachment-Related Variables and General Attitudes

Having established that there is a basic linear relationship between attachment related variables and attitudes, and that the attachment related variables do load well onto their own latent variables, the relationship between attitudes and attachment related variables was now examined in more detail. It was expected that experiences of past threat, would significantly influence both current coping strategies, and current representations of self and others; it was also expected that both these variables in turn would predict age-associated attitudes. Only the latent variables will be discussed in this section to minimise complexity and given that values for individual measured variables have already been summarised.

As can be seen in Figure 8.6 results indicated that the attachment-related variables were significant in predicting age-associated attitudes. Early experiences in childhood significantly predicted representations of self and others, which in turn were significant predictors of general attitudes. In addition, both cognitive and emotion focused coping were significant predictors of general age-associated attitudes, however, only emotion focused coping strategies were significantly predicted by experiences in early childhood. Furthermore, the addition of a direct pathway from early childhood experiences to general attitudes did not significantly improve the fit of this model, CFI = .90, RMSEA = .05, χ^2 = 401 (df = 217, p < .001). Disturbance terms were used to examine the amount of variance

Figure 8.6: Fit of Attachment Related Variables to Explain Attitudes to own Future Old Age



explained by this model; using the equation 1 - d^2, attachment related variables were found to explain 41% of the variance in attitudinal scores (1 - $.77^2$). Although much more research is needed, these results suggest that attachment-related variables are significant factors in explaining age-associated attitudes.

8.3.6 Summary of the Relationship Between Attachment and Age-Associated Attitudes

This section sought to examine the relationship between attachment related variables and age-associated attitudes. Results suggest: 1) that past childhood relationships influence age-associated attitudes via current representations of self and others, 2) that current coping strategies influence age-associated attitudes directly, and via representations of self and others, 3) current coping strategies were only partly explained by early experiences in childhood, and 4) that these factors explained over 40% of the variance in attitudinal scores.

8.4 The Relationship Between Rival Variables And General Age-Associated Attitudes

In the above model, a good fit of the data were found indicating a significant relationship between attachment related variables and age-associated attitudes. Nevertheless, in an attempt to be thorough and detailed, rival explanations for attitudes were also examined. Rival variables included financial status, neuroticism, and knowledge about later life. It will be shown however that these variables do not provide a good fit or explanation for Study 4 data.

8.4.1 Actual and Expected Financial Status

8.4.1.1 Relationship between Finances and Attitudes to Future Old Age

To examine the relationship between the main attitudinal measures, current and expected financial status, and current knowledge about financial matters Spearman's correlations were used as the latter variables were non-parametric. As can be seen in Table 8.7, there was no relationship between any of the main attitudinal variables and either financial situation or knowledge about finances. These results suggest that current financial situation is not related to age-associated attitudes.

To examine the relationship between expected financial situation and the main attitudinal measures, a multivariate analysis of variance was carried out. The independent variables were top-up pensions group (yes, no, maybe) and savings group (yes, no); the numbers of participants in the 'no' group for top-up pensions and savings were 100 and 40 respectively. The dependent variable was the GAAS, the FOAM and the CLP-Scale. Results

Table 8.7
The Relationship Between Attitudes to Ageing and Current Financial Status

Variable	1	2	3	4	5
1. GAAS	-				
2. CLP-Scale	.60**	-			
3. FOAM	.42**	.52*	-		
4. Current Finances	.01	-.06	-.01	-	
5. Knowl. About Finances	.01	.07	.07	.20**	-

Note: ** = < .001, * < .01

indicated that there was no significant effect of pensions group on general attitudes, Wilks' $\lambda = .98$, $F(6, 606) = 0.7$, $p = .58$, no significant effect of savings group on general attitudes to future old age, Wilks' $\lambda = .97$, $F(6, 606) = 1.1$, $p = .31$, and no interaction on attitudes between pensions and savings, Wilks' $\lambda = .95$, $F(12, 801) = 1.1$, $p = .32$. These results indicate that expected future financial status does not impact significantly on current age-associated attitudes.

However, the above analyses was repeated with age group controlled; this was because younger adults (n = 71, 66%) were significantly more likely than mid-life (n = 74, 47%) or older adults (n = 25, 41%) to be in the yes-group, in terms of having top-up pensions in old age, ($\chi^2 = 25.6$, df = 4, $p < .0001$, Cramér's $V = .19$). Gender was not controlled, as there was no significant effect of gender on pensions-group, $\chi^2 = 2.1$, df = 4, $p = .357$. In this second analysis the independent and dependent variables were as above, but with age-group (≤ 39, 40-64, 65+) entered as a covariate; no significant effect however was found for savings group alone, for pensions group alone, or the interaction between pensions and savings, $p > .10$. These results indicate that age-associated attitudes are not influenced by future financial status; nevertheless, the central question for future research in this field may be the quantity of finances available rather than simply status group (i.e. having a pension, or not having a pension). Future research should also re-examine this issue with participants, less affluent and less privileged by comparison with the current sample.

To examine the influence of financial support (for the self and for family) on attitudes, a third multivariate analysis of variance was carried out. In this analysis the independent variables were physical care for the self (yes, no, maybe) and life insurance (yes, no, maybe); the dependent variables were the GAAS, the FOAM, and the CLP-Scale. Results indicated there was no significant effect on attitudes of expected physical care, Wilks' $\lambda = .97$, $F (6, 6081) = 1.2$, $p = .28$, or life insurance group, Wilks' $\lambda = .99$, $F (6, 606) = 0.2$, $p = .97$, nor was there any interaction effect, Wilks' $\lambda = .65$, $F (12, 801) = 1.1$, $p = .32$. This test was repeated with age-group and care as the independent variables, in order to consider if final care particularly might be relevant or salient only for older adults. Results again however, failed to find a significant effect of age group or care group on age-associated attitudes, nor was there any interaction between the two sets of independent variables, Wilks' $\lambda = .96$, $F (12, 801) = .86$, $p = 58$. Although further research needs to take place on this issue, particularly with less affluent samples, the above results nevertheless indicate that expected financial support is not significantly related to age-associated attitudes.

In this last set of analyses, a multivariate analysis of variance was used to examine the relationship between having made a will and general attitudes. Although again the direction of causality is unclear, it may be that adults who have accepted the process of ageing and prepared accordingly may have more positive attitudes, than their less organised counterparts. In this analysis the independent variable was will group (yes, no) and the dependent variables were the GAAS, the FOAM and the CLP-Scale. Results indicated that there was no significant main effect of having made a will on general attitudes to own future old age, Wilks' $\lambda = .98$, $F (6, 618) = .97$, $p = 44$. Although more research in this area needs to take place, the above results repeated indicate that neither current nor expected financial status influences age-associated attitudes.

8.4.1.2 Summary of Financial Preparations and Attitudes to Ageing

No significant relationship was found between these measures and any of the main attitudinal measures. Given the lack of a basic association between finances and attitudes, financial status was not entered into the main model.

8.4.2 Neuroticism

8.4.2.1 Relationship Between Neuroticism and Attitudes

As can be seen in Table 8.8 results across many sample combinations indicated that there was a significant relationship between neuroticism and attitudes.

Table 8.8
Correlations between Neuroticism and the Main Attitudes to Ageing Measures Across a Range of Sample Groups

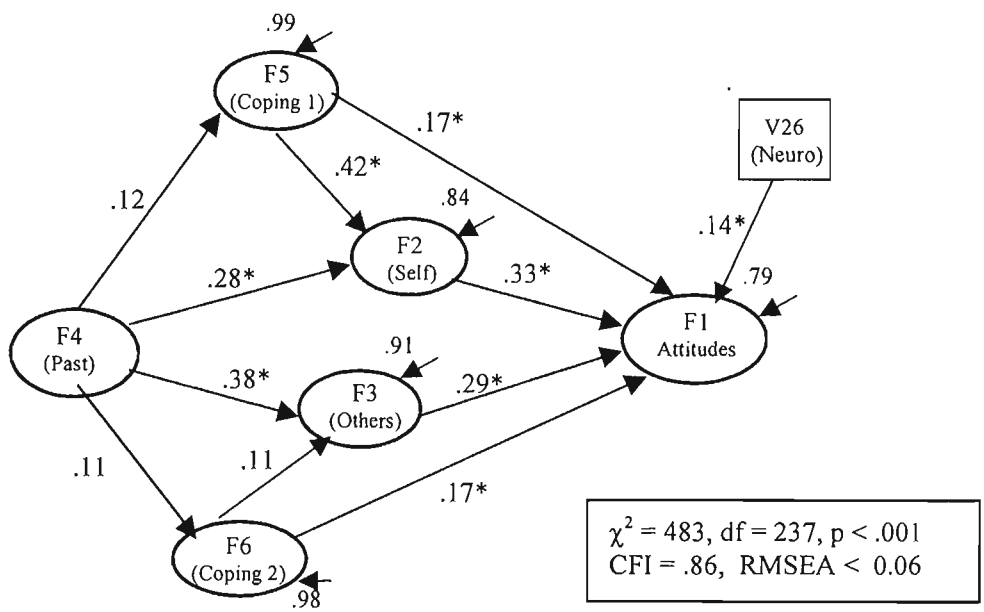
Variables	Whole Sample	Gender		Age Groups		
		Men (n = 108)	Women (n = 214)	< 40 (n = 106)	40 – 64 (n = 153)	65+ (n = 58)
1. Neuroticism	(22.0[1])	(20.6[2])	(22. 7)	(23.5[3])	(21.9)	(19.5)
2. GAAS	.214**	.156	.236*	.207	.228*	.179
3. CLP-Scale	.331**	.233*	.357**	.266*	.394**	.337*
4. FOAM	.281**	.240*	.262**	.384**	.249*	.051
5. Difficulty	.191*	.286*	.153	.199*	.130	.421**

Note: * < .001, ** < .0001, [1] mean scores with sd of 5.3, [2] mean scores with sd of 4.7 and 5.5 for men and women respectively, [3] mean scores with sd of 5.1, 5.2 and 5.0 for each age group respectively.

8.4.2.2 Addition of Neuroticism to Model

When neuroticism variable was added to the attachment model already developed, it can be seen that the addition of this variable did not explain any additional variance in attitudinal scores (see Figure 8.7).

Figure 8.7: The Addition of Neuroticism to the Model



8.4.2.3 Summary of the Relationship Between Neuroticism And General Attitudes

The main aim of this section was to examine the relationship between neuroticism and age-associated attitudes. Results indicated there was a significant relationship between neuroticism and age-associated attitudes; however, with a disturbance term of .79 explaining 38% of the variance in scores ($1\text{-}d^2 = 38\%$), the addition of neuroticism to the model did not explain any additional variance to the attachment-related model of age-associated attitudes.

8.4.3 Knowledge or Information

The final set of rival explanations for adults' attitudes was knowledge or information including: 1) general knowledge about typical aspects of ageing and old age, 2) personal knowledge, based on current life style choices such as diet and exercise, and 3) genetic information or genetic inheritance i.e. knowledge or information based on own family history.

8.4.3.1 General Knowledge: the Facts on Ageing Threats Scale (FAcTS)

The Facts on Ageing Threats Scale sought to assess the accuracy of information people had about possible threats or challenges associated with old age, e.g. probability of dependence on others, or information about leading causes of health problems.

8.4.3.1.1 The Relationship between the FAcTS and the GAAS

To examine the relationship between the FAcTS and the main attitudinal measures, Pearson's correlations were used for the samples combined. As can be seen in Table 8.9 the FAcTS correlated significantly with the GAAS, the CLP-Scale, and Fears about own Ageing Measure (r = .16- .30). These correlations suggest that adults with more negative attitudes were significantly less knowledgeable about the nature of challenges in later life.

Table 8.9

An Examination of the Linear Relationship between the Knowledge-based Facts on Ageing Threats Scale (FAcTS) and the Main Attitudinal Measures

Variable	Mean	(SD)	1	2	3	4	5
1. FAcTS	12.0	(2.8)	-				
2. GAAS	11.3	(3.0)	-.28**	-			
3. CLP-Scale	41.7	(6.7)	-.30**	60**	-		
4. FOAM	4.2	(1.5)	-.16*	.42**	.46**	-	
5. Difficulty	28.7	(10.3)	-.28**	.35**	.30**	21***	-

Note: ** = < .001, * = <.01, n = 326, CLP-Scale - Constraints, Losses and Positives Scale, FOAM = Fears about Ageing Measure, Difficulty = difficulty associated with own future old age

8.4.3.1.2 Summary of the Facts on Ageing Threats Scale (FAcTS)

A significant relationship was found between knowledge about ageing and participants' attitudes towards the latter part of their lives. Shortly further analyses will be carried out with other knowledge-based measures, to examine further the relationship between knowledge and age-associated attitudes.

8.4.3.2 Lifestyle knowledge; Diet, Exercise and Smoking Habits

A second source of information which may influence attitudes to own future old age are current health behaviours including fresh fruit and vegetable intake, smoking habits and level of engagement in a sustained period of physical exercise.

8.4.3.2.1 Relationship Between Health Behaviours and Age-Associated Evaluations

Pearson's correlations were used to examine the relationship between health behaviours and evaluations about own future old age. As can be seen in Table 8.10, results indicated that all measures were significantly related to general attitudes to own future old age ($r = .12$ - $.16$, $p < .05$). To examine the relationship between smoking behaviours and general attitudes, a one-way ANOVA was used; the independent variable was smoking behaviour (no, not any more, yes) and the dependent variable was the GAAS. Results indicated there was a small but significant effect of smoking behaviour category/group on general attitudes, $F (3, 320) = 3.4$, $p = .02$, $\eta^2 = .03$. Although the direction of causality is not clear, information about current health behaviours is not unimportant in influencing age-associated attitudes.

Table 8.10

Correlations between Information on Current Lifestyles and the GAAS

Variable	Mean	(sd)	1	2	3	4	5
1. Fruit	4.8	1.2	-				
2. Vegetable	4.6	1.0	.42**	-			
3. Salad	3.9	1.2	.44**	.56*	-		
4. Exercise	1.7	0.5	.26**	.26**	.32*	-	
5. GAAS	11.3	3.3	-.16*	-.12*	-.13*	.16*	-

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

8.4.3.2.2 Summary of Health Behaviour Information

Information about current lifestyle choices has a significant influence the ways adults think and evaluate their own future old age; lifestyle choices of particular interest included fresh fruit and vegetable intake, smoking habits and exercise behaviours. It was shown that diet and exercise behaviours are significantly related to general attitudes to own future old age. Shortly, further analyses is reported examining the relationship between this latent variable called knowledge about ageing and other knowledge and attitudinal latent variables.

8.4.3.3 *Genetic Inheritance*

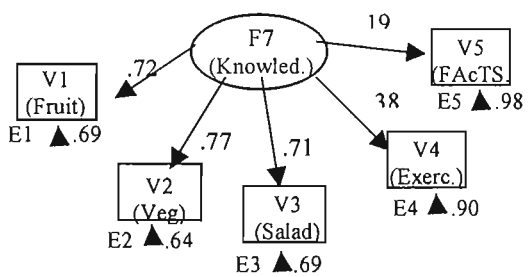
The final source of knowledge or information was genetic inheritance. Surprisingly however, there was a large amount of missing data to questions on the health and longevity of grandparents, and a significant proportion of the sample reported a lack of knowledge about the health and longevity of their grandparents. Given this response, and the large amount of data already being presented, no further analyses of this data will be reported in this thesis. Nevertheless, genetic inheritance is assumed to be an important influence on age-associated attitudes which warrants further research.

8.4.3.4 Adding the Knowledge Variables to the Model

8.4.3.4.1 *Latent Variable for* Knowledge Variables

Confirmatory factor analysis using structural equation modelling was used to examine the fit of the knowledge or information based measures into one latent variables called 'knowledge'. As can be seen in Figure 8.8, a good fit of this data were found. In the section to follow the relationship between this and other latent variables is examined.

Figure 8.8: Knowledge Variable (F7)



$\chi^2 = 15.1$, df = 6, p < .02,
CFI = .95, RMSEA = .07

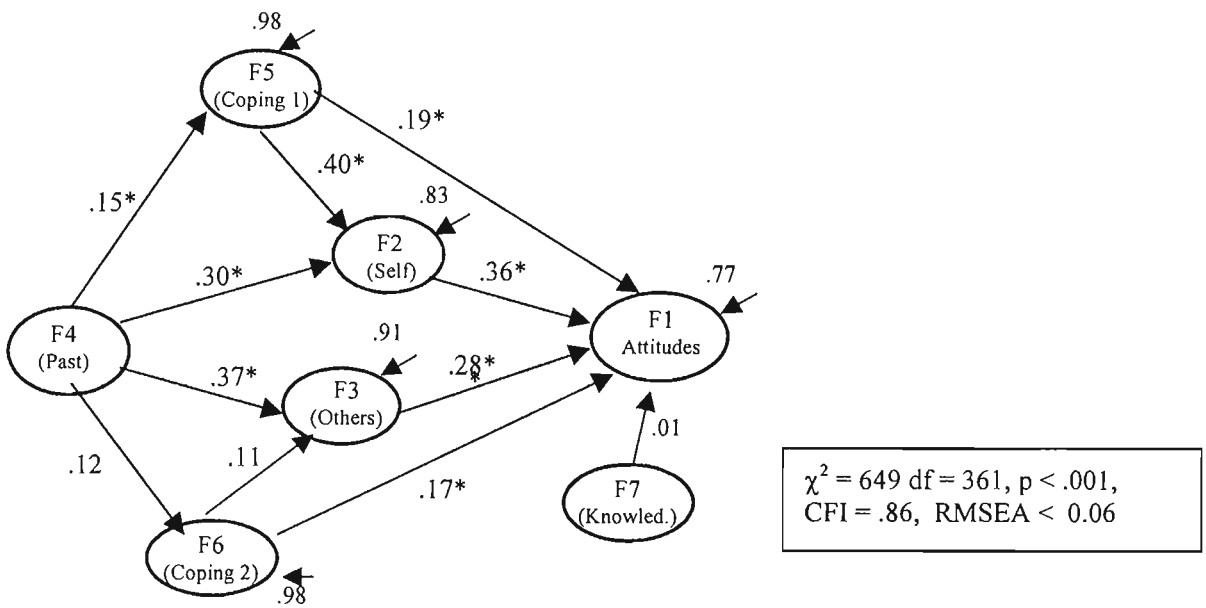
8.4.3.4.2 Fitting Knowledge Latent Variable to Model

In this section, the relationship between the knowledge based latent variable and the attachment-related variables was examined. As before, only the latent variables are discussed to minimise complexity in the model. As can be seen in Figure 8.9; the addition of the knowledge-based items did not provide a good fit for Study 4 data, and the amount of variance explained did not increase, $1\text{-}d^2 = 41\%$. Although knowledge-based factors are significantly related to age-associated attitudes, they do not add to the variance explained, above the variance explained by the attachment-related variables.

8.4.3.4.3 Summary of the Relationship Between Knowledge and Attitudes

This section sought to examine the relationship between age-associated attitudes and three sources of knowledge or information; knowledge about typical aspects of later life, knowledge based on current life style choices, and genetic inheritance. Results indicate; 1) that the newly developed scale to measure knowledge about typical age-associated challenges does have good psychometric properties, 2) that current lifestyle choices including diet and exercise behaviours, are related to age-associated attitudes, 3) that these domains of knowledge do fit onto one knowledge-based latent variable, and 4) that this latent variable of knowledge does not add to the attitudinal variance explained

Figure 8.9: The Addition of the Knowledge-Based Variables to the Main Model



above the attachment-related variables. Given space constraints, and the fact that many participants reported not knowing about the health and longevity of grandparents, data on genetic inheritance was not reported.

8.5 General Chapter Summary

In addressing the three main aims of this study, results indicated: 1) that demographic factors have little influence or impact on attitudes to own future old age, 2) that attachment related variables are significantly related to age-associated attitudes, and 3) that rival variables including neuroticism and knowledge about ageing contributed little to the variance in attitudinal scores. These results are discussed in the chapter to follow.

Chapter 9
Discussion (Study 4): Explaining Attitudes to own Old Age

"I expect to have white, beautiful hair. Gentle eyes. Physical fragility, yet a lot of inner strength. Wisdom. Loving relatives. Sadness for ... loved ones passed, but joy too .. and hope' (Sam, age 34, O'Hanlon, in prep)

9.1 Introduction and Chapter Overview

The main aim of Study 4 was to attempt to explain adults' attitudes to their own prospective old age. Possible explanatory variables included demographic factors, attachment-related factors (representations of self and others, and coping strategies), and rival factors such as neuroticism and knowledge about ageing and later life. Results indicated: 1) that demographic factors contributed a small but significant amount of the variance in some of the attitudinal measures, 2) that there was a strong relationship between attachment-related variables and age-associated attitudes, and 3) that knowledge-based factors were related to attitudes, but explained little additional variance beyond that explained by the attachment-related variables. In this chapter, it is argued that these findings contribute to the current field because there is little systematic research examining age-associated attitudes, their origins or consequences on behaviour, development and health. Furthermore, insights gained from the current research can have applied value in enhancing health and well-being in later life; the latter is especially the case where attitudes are so negative that interventions need to be considered to help improve quality of life and health. The findings from Study 4 are now discussed.

9.2 The Relationship between Demographic Variables and Attitudes to Ageing

As discussed next, demographic variables contributed only a small amount of the variance in general age-associated attitudes.

9.2.1 Gender

No significant gender differences were found in general attitudes as measured by the GAAS. These results were encouraging in that no gender differences in general attitudes were expected given the assumption noted in Chapter 1 of this thesis that research on general attitudes could access information not typically available to purely affectively orientated researchers. Specifically, although many researchers have noted significant gender differences

in adults' fears and worries (e.g. Croake, Myers & Singh, 1988), the fact that there are no gender differences in general attitudes to ageing despite significant gender differences in fears about ageing (see next section) suggests that the GAAS is a scale that both genders feel comfortable completing. That adults feel able to express general age-associated attitudes, especially when such attitudes are negative, is especially important for men, if there are still social desirability biases in some environments against men expressing negative affect. However, another possible explanation to be considered for the above findings is that the GAAS is not sufficiently refined to pick up gender differences where these would be expected. This possibility is unlikely however given evidence from other studies (see Chapters 3-5) which indicates that this measure does perform well. Nevertheless, further research should test the psychometric properties of this scale further among different health, cultural and/or socio-economic groups of adults; this research should also test the discriminant validity of the GAAS and its relationship with social desirability measures.

Results also indicated that gender plays a small but significant role in explaining specific attitudes to one's own future old age, i.e. women scored more negatively on age-associated fears. These findings support the importance and value of a multi-dimensional perspective on attitudes, i.e. cognitive, affective and behavioural attitudes can be different for each gender and each can have different consequences on behaviour, development and health. A strength of the current study therefore is it's use of cognitive and affective age-associated evaluations targeted towards both general and specific aspects of ageing and later years. Thee above finding, indicating the women scored more highly (negatively) on age-associated fears, is also consistent with the wider literature which indicates that women tend to score more negatively on a range of negative affective measures (e.g. see Connidis, 1989). There are many reasons why women may score less positively than men on measures of negative affect, including as just discussed the negative biases against the expression of negative affect for men. In addition, however, the experiences of both genders can be very different in later years, and as noted next, women may have a wider range of experiences to fear by comparison with their male counterparts.

In the current study, women scored more negatively than did men on measures of age-associated losses. As already noted, both genders face different experience in later years; women especially face a greater probability of losses in finances and independence which are items directly addressed in the loss-based subscale used in the current study. These gender differences support both the validity of the loss-based subscale, and views in the wider

literature (e.g. see Davies, 1999) that gender should be treated not as a variable within the individual, but as a socially constructed process from which other features of life develop, including unequal power and resource distributions. When women lose their spouses, other losses can occur, including losses of finances, health and positive experiences that can be linked to relationships and resources. Much more research is necessary to examine these issues further. It is expected that further analyses will be carried out examining in more detail the nature of age-associated losses, and the strategies being used to accommodate these.

Future studies should also examine specific gender differences in age-associated attitudes. For instance, although the general effect for gender on age-associated attitudes was small, the specific concerns of men and women in the latter part of the life course may be qualitatively different. Concerns for women may be more strongly related to changes in physical appearance or changes in relationships, while men may hold more negative attitudes for potential changes to work roles or health. Using the PSP-Ageing Scale developed in Chapter 5 (which measures physical, social and psychological domains of later years) research examining gender differences in specific attitudinal domains is now more feasible. However, correlations and causations are not the same, and even if one finds a significant relationship between two variables further research is needed to understand the mechanisms through which those relationships occur. There are also some limitations to this study that should be addressed in future studies as these limitations can influence the ways in which Study 4 results are interpreted and understood. Specifically, there was nearly twice the number of women to men in this research and future research should attempt to recruit men more systematically in order to examine further the relationship between gender and age-associated attitudes.

Gender is a significant variable that should examined further in studies in health and life-span developmental psychology. As already noted (see Chapter 6), gender has been found to be a significant factor in a range of health and psychosocial outcomes. Even at younger ages, gender can play a significant role in understanding the rates and nature of different health problems. For instance, as noted by Courtenay & Keeling (2000) men are significantly more likely to be injured in violent activities, and to have accidents, especially accidents associated with cars. In contrast, evidence suggests that women are significantly more likely to have long-term psychosomatic problems, including neurotic and psychotic illnesses such as anxiety and depressive disorders, obsessive-compulsive disorders and panic

disorders (e.g. see Kendler, Thornton & Prescott, 2001; Yee & Schulz, 2000). Given the relevance of gender as an explanatory variable, many researchers (e.g. Khoury & Weiseman, 2002) have argued for greater gender sensitivity among health professionals in order to help facilitate better treatment and health for adults in later life. Evidence from the current study which found a small but significant effect for gender, does support such as position.

9.2.2 Chronological Age

Results indicated that there was a significant effect of current chronological age on age parameters, i.e. younger adults placed the onset of old age much earlier in the life course than did mid-life and older adults. These findings are similar to those of Unsworth, McKee & Mulligan (2001). There are a number of possible explanations for such findings. For instance placing the onset of old age later in the life course may signify a coping attempt, either to allow the self more time to adjust to experiences, or else to move a feared condition further away from the self. Alternatively, the placement of the onset of old age further in the life course may be indicative of genuine development and wisdom, i.e. that later life is a stage of life that can be pushed further away given that current generations of older adults are in better health and with more resources by comparison with past generations of older adults. However, further research in this area is necessary to understand better the meaning behind different age parameters, and the effects of such placing on adults' health, development and behaviour.

Additional results indicated that there was no significant relationship between current chronological age and attitudes to own prospective old age. Specifically, results indicated that there were no significant age differences in age-associated general attitudes, fears about ageing, age-associated constraints or age-associated loss evaluations. The fact that these findings were replicated across almost all the attitudinal measures adds robustness to the conclusion that chronological age does not typically have a significant effect on age-associated attitudes. In an attempt to be more detailed and thorough however, it was also queried whether the relationship between chronological age and age-associated attitudes would be influenced by other variables such as marital status or levels of education. Such analyses is important if researchers are to be increasingly detailed about the mechanisms and processes that influence and explain attitudes to ageing. However, although this analyses is still ongoing, results to date have not indicated the presence of these more complex relationships between chronological age and attitudes to ageing, i.e. attitudes to ageing cannot be explained by chronological age.

The above lack of a relationship between chronological age and age-associated attitudes was surprising. It might have been expected that younger adults would have had more negative attitudes to ageing because they may adhere more strongly to dominant ageist stereotypes without yet having sufficient experience or insight to be able to challenge those stereotypes. Other researchers (e.g. Kafer et al, 1980; Lasher & Faulkender, 1993; Neikrug, 1998) have found a weak but significant relationship between anxiety or worry about ageing and chronological age. Alternatively, older adults may have had more negative attitudes by comparison with their younger counterparts. Not only do age-related issues and experiences have more salience for older adults, but older adults will have memories of the behaviour, health and lifestyles of previous generations of older adults which may continue to have a strong and negative hold on the expectations and attitudes of current generations of at least some older adults. However, with only one exception discussed next, there was almost no evidence to support such possibilities.

One exception to the above findings however was that of age-associated positive experiences and attitudes; findings indicated that older adults evaluated possible positive attributes and experiences in their later years more positively than did the other age groups. Assuming the above results can be replicated, there are a number of possible explanations for the above findings. Older adults may deliberately inflate evaluations about positive attributes and experiences in order to maintain their own status and the respect of younger generations. Alternatively, the above results may indicate a form of coping, involving downward shifts in the importance attributed to impaired abilities and experiences, while increasing the levels of favourability being associated with potentially more positive and feasible attributes and experiences. Future studies can be designed to examine these possibilities in more detail. A more likely explanation however is that adults in later life evaluate positive attributes and experiences more positively as a consequence of continued positive development and growth. Specifically, with more time and life experience older adults may have a greater awareness of the skills and strengths that occur in the latter part of the life course which may include a greater appreciation for the smaller things of life. Given that the bulk of gerontological research is focused on deficits and problems with age, there is an urgent need for further studies examining the occurrence and potential for continued genuine growth and development in later years.

There are difficulties in research of this nature however, particularly in separating age from cohort effects; this problem has been well documented by researchers examining attitudes towards older adults (e.g. see Slotterback, 1996; Slotterback & Saarnio, 1996). One solution is longitudinal research, where the attitudes of given participants can be examined at different time periods. As described elsewhere, participants in the current study were invited to take part in further longitudinal research. Funding has been secured to carry out in-depth life-story interviews on two occasions (n = 100). In the first part of this research the Adult Attachment Interview (see Crittenden 1999) will be used which asks about experiences in relationships from the past to the present. Participants will then be given the new Attitudes to Ageing Interview under development, which continues the life-story in the present, and in the future, including questions about adults' thoughts, hopes and fears for their future old age. Using this longitudinal design, this data should offer additional insights about the role of demographic factors on age-associated attitudes.

Future research needs to examine further the relationship between chronological age and age-associated attitudes; this research should examine the possibility that chronological age only has an effect on age-associated variables under certain conditions and contexts, particularly given that many negative experiences often associated with later life (e.g. death, poor health) are also experiences of relevance throughout the life course. For instance, it may be that chronological age is only a significant factor in exploring attitudes if individuals are poorly, in advanced old age, or have experienced significant problems or adversity in early close relationships. Future research in this field should also examine attitudes towards possible positive experiences in later life; it may be that age has a stronger effect on positive attitudes than the negative attitudes.

9.2.3 Education

Results indicated that education played a small but significant role in explaining adults' age-associated attitudes. Specifically a significant relationship was found between levels of education and both fears and constraints being associated with own future old age; these findings also remained even when controlling for the effects of financial status. Given the strong arguments put forward by Keyes & Ryff (1998) about the significant consequences and effects of education on behaviour, health and development, it may be that future research should consider social and educational structural processes much more actively. This is

especially the case given evidence in the literature that levels of education do play a significant role in the ways certain experiences are being viewed and evaluated throughout life as well as old age (see Chapter 6).

In the current study however, no significant relationship was found between levels of education and any of the following: general attitudes to own future old age, age-associated losses, or the ways in which positive attributes and experiences in later years were evaluated. These results were surprising. Education levels are the most widely used indicator of socio-economic status (see Crespo, Smit, Andersen, Carter-Pokras & Ainsworth, 2000; Herzog, Franks, Markus & Holmber, 1998; Kempen, Scaf-Klomp, Ranchor, Sanderman & Ormel, 2001) and can be indicative of certain levels of resources which can be expected to be related to quality of life and health in later years. As noted for instance, Keyes & Ryff (1998) have put forward a compelling case arguing that social stratification processes inherent in different educational attainment levels profoundly shape adult development. These researchers argue that educational attainment does group adults in ways that have significant consequences on later thoughts, feelings and behaviour across a wide range of human experiences though the life course. Consequently, one could reasonably have expected to find a stronger relationship between education and attitudes in the current study. It may be however that these social stratification processes just discussed are only evident with younger generations given that education itself may not be so informative or equivalent for younger and older generations given that the latter generation may not have had the opportunities to engage in education. Future research should address these puzzles.

The above findings were also surprising at a subjective level. For instance, if education levels are indicative of opportunities and resources as suggested by Keyes & Ryff (1998) then one would have expected that adults who perceived themselves to have had more opportunities than others would expect the same for the future and as such to evaluate the experience of their own ageing and future old age more positively. This fact that this was not the case has a number of implications that need to be considered. It may be for instance that past experiences do not inform current beliefs and expectations. This seems unlikely, although future research needs to consider the contexts, mechanism and conditions through which the past informs the present and the future. (Drawing on Crittenden's 1997b model of attachment relationships, the past is assumed to influence the present in terms of offering

vital information about protecting the self and close progeny.) A second possibility is that positive experiences in the past have their effects through other mechanism such as generativity (caring, guiding the next generation, see Erikson et al., 1986) rather than in terms of the expectations and opportunities adults associate with the latter part of their lives.

Future research should examine in more detail the relationship between education levels and age-associated attitudes, and the mechanisms through the former may influence the latter. To address some of the puzzles noted above, further analyses of Study 4 data will be carried out; in addition, the follow-up interviews of Study 4 participants will include questions addressing these issues. It should also be noted however that the current study is biased towards adults' reasonably affluent and educated who had attained compulsory levels of education. Further research with more educationally and financially disadvantaged groups may have quite different results and implications.

9.2.4 Marital Status

No significant relationship was found in the current study between attitudes to own future old age and marital status. Specifically, there was no significant relationship between marital status and age-associated attitudes, nor did any significant relationship emerge between marital status and age-associated attitudes emerge when base variables such as neuroticism were controlled. Attempts were made to examine marital status in more detail by examining adults in different types of relationships. Nevertheless, although a wide range of martial categories were used to examine the relationship between different marital groups and age-associated attitudes, no significant relationship was found. These findings were contrary to expectations, and contrary to findings by Connidis (1989); in her study with 400 community–dwelling older Canadian adults, she found that adults who were never married had the most negative view of later life.

Although the current study found to evidence to suggest that marital status itself was significant, it is assumed that the quality of relationship adults have with others in romantic relationships is an important factor worthy of much more research. As noted by Field & Minkler (1988) it is very important to distinguish between social behaviours of adults (e.g. contact with family members), and the level of commitment or feelings with regard to family relationships. In a similar way, there is a very important distinction that needs to be made

between marital status per se, and the quality of relationships adults have with others. In the current study, it is assumed that the quality of the attachment relationships is what has the effect on later behaviour and elopement. The quality of close relationships rather than marital status per se, is discussed in more detail in the section to follow.

Future research needs to examine the nature and influence of marital status on later health and psychosocial well-being. This need is especially acute given that research on marital status with adults in advanced old age is scarce, despite evidence that marital relationships can have such a significant effect on later development and well-being (e.g. see Lee, DeMaris, Bavin & Sullivan, 2000; Grundy & Holt, 2000; Gagnon, Hersen, Kabacoff & Hasselt, 1999; Gliksman, Lazarus, Wilson & Leeder, 1995; Kohn, Zislin, Agid, et al., 2001). Although no significant interactions were found when martial status was examined as a categorical variable, future research should examine this issue in more detail by controlling for the number of years in a specific marital category or the number of spouses. The latter is especially important given evidence that adults in multiple marriages can tend to have greater levels of psychopathology by comparison with their more usual counterparts (Grundy & Holt, 2000). Future research should also differentiate between marital status and the quality of romantic relationships. This issue is addressed in the follow-up stage of Study 4, where a series of questions about current romantic relationships were included.

9.2.5 Parental Status

It was surprising to find no significant effect of parental status on age-associated attitudes. Adult children can not only be a source of instrumental support, but their presence and activities can also influence health and well-being, particularly when children seek support and advice from parents. Not only do adult children benefit form the experience and support of older generations (e.g. see Bellah et al, 1991; Gutmann, 1997), but this generative outlet can also be important for the health and well-being of older adults (Erickson et al, 1986; O'Hanlon, Coleman & Horn, in prep). There is evidence in the literature that parental status is significantly related to health and well-being in later years and also the absence of loneliness (e.g. see Long & Martin, 2000). Adult children can also be an important avenue of care for their parents in their later years (Gallagher & Gerstel, 2001). Furthermore, in the initial pilot study many parents reported finding/expecting to find enjoyment and pleasure in following the lives of their children and grandchildren.

Nevertheless, despite the logic of a significant relationship between parental status and age-associated attitudes, no such significant relationship was found. Although greater numbers of children might have been associated with more avenues of support in later years and hence lead to more positive evaluations about later life, the evidence did not support such a possibility, i.e. there was no significant correlation between number of children and more positive attitudes to ageing. Further analyses was carried out to examine whether parental status (having one child) would have a significant effect on the ways adults evaluated their own ageing and future old age; however again no significant relationship was found. Furthermore, the above results remained even when further analyses was carried out (not shown) controlling for current health; the latter is important given evidence that adults who are parents can score differently in health by comparison with their counterparts who never had children (e.g. see Murtran & Reitzes, 1984).

Connidis (1989) found similar results indicating the lack of a significant relationship between attitudes to ageing and parental status. Although greater numbers of children was related to fewer worries about old age, the number of children respondents had were not related to old age being viewed in positive or negative ways. However the fact that numbers of children were significantly related to worries about ageing suggests that respondents do view children as a source of support. In this thesis, it was suggested that the quality of the relationship with children was likely to be a more significant factor in influencing age-associated attitudes, than simply whether or not a person is a parent.

Future research should examine interactions between parental status, attitudes to ageing and other variables including chronological age. For instance, Maas (1985) reports that mothers who reported the highest life satisfaction in old age were not happy with their family roles as young adults, but in mid-life and later years they became happily involved in occupations or social organisations. By contrast, among the least satisfied in old age were a cluster of mothers who were very contentedly engaged as wives and mothers all through their early and middle adult years but no so in later years when they were described as being bereft. In a similar way, parental status may not interact with attitudes to ageing when samples are examined collectively, but a significant relationship may occur between these variables for different genders, or for adults at different ages. Further analyses of Study 4 data will be carried out to examine this issue in more detail. Future research should also examine different experiences which may mediate or moderate a relationship between

parental status and attitudes to ageing; such factors could include the experience of illness, or other normative life events including retirement or adult children leaving the parental home.

9.2.6. Summary and Conclusions

Demographic variables can play a significant role in contributing to the variance in a range of health and psychosocial outcomes. Given this potential explanatory value, it is most important that demographic variables are examined in their own right and not solely as background variables to be controlled. Although demographic variables contributed just a small amount of the variance to age-associated attitudes, much more research is needed on this topic, including with adults of different socio-economic groups. For theoretical and applied reasons, it is also important for researchers to begin to explain the mechanisms through which such variables can be related.

9.3 Attachment Related Variables

The second set of possible explanations was attachment related variables. As was shown in the Figure 6.1, close attachment relationships were believed to be a significant influence on later age-associated attitudes via representations of self and others. Within close relationships people also develop strategies for adapting to challenges and managing a sense of control, predictability and safety.

9.3.1 Past Experiences with Parents

Significant relationships were found between experiences as a child and current representations of self and others. These findings were consistent with other researchers who have also found significant relationships between patterns of relationships as a child and a range of health and psychosocial variables (Long & Martin, 2000; Magai, Distel & Liker, 1995; Parker, Barett & Hickie, 1992). Relationships with others can play an important role, particularly in later life when there is an increased probability of dependence on others in meeting basic needs across physical, social and psychological domains. The quality of those relationships may impact significantly on the health, behaviour and expectations adults have for their own prospective old age. Results from this study indicate that the way adults view themselves and others are related to their experiences in past relationships with parents and grandparents.

Nevertheless, it was surprising that past relationships with parents did not play a stronger role in contributing to the variance in coping strategies. Within close attachment relationships, it was expected that adults developed strategies for managing stress and keeping themselves and close others safe. The fact that there was no significant relationship between past relationships and current coping strategies may be a factor associated with the measures being used. Retrospective memories about early relationships can be outside the conscious awareness of the individual to recall accurately. In the next stage of the current study, in-depth interviews using the Adult Attachment Interview are being carried out; this assessment will allow an independent coder to determine the likely experiences an individual had as a child based on the participants own descriptions. Using this data, it will be possible to compare responses to self-report and interview based measures of attachment experiences; in this way this issue of measurement can be understood better, not only in the context of understanding and interpreting results from the current study, but also for the benefit of researchers more generally who are also working in this field, and who need to make decisions about the types of attachment measures to use.

Although there are many positive attributes and experiences which can also occur in later years, older people are at increased risk challenges which necessitate effective coping strategies; these challenges can include failing health, reduced finances and unscrupulous others. As noted by Dittmann-Kohli (1990) one must negotiate and address the "gradual recognition of temporal limitations, diminishing opportunities and the finitude of current life attainments" (p282). Nevertheless, there ways adults experiences and evaluate these potential dangers is related to their own earlier experiences of dependence and need: adults who had had experience of others as being supportive and helpful were more likely to evaluate the experience of their ageing more positively than their less secure counterparts. However, it was interesting to note that the addition of a direct path between past experiences and current attitudes to ageing did not add significantly to the variance in scores, i.e. past experiences did not have a direct effect on current attitudes, but instead, were routed via representations of self and others. Again, there could be as issue to do with measurement here which needs to be considered further when interpreting these results; this issue will be addressed in the follow-up study.

Future research should attempt to replicate and extend the above data, including through the use of other indirect methods of assessment (e.g. interviews, dot probe tasks), and with external raters to provide independent data. Retrospective measures of experiences in close relationships are not unproblematic; not only do adults have biases in terms of the information that is being recalled, but recalled information can be subjected to a range of biases, e.g. information is recalled in ways that do not impact on current ongoing relationships including with ageing parents.

9.3.2 Representations of Self and Others

Evidence was found to indicate that self and other representations were significantly related to the ways in which adults evaluated the experience of their own ageing and future old age. Adults who had more confidence in their own abilities and intrinsic worth evaluated the experience of their own ageing and future old age more positively by comparison with their counterparts who had more negative self-representations. These results remained even when controlling for current mood state and neuroticism (results not shown but available from the author). The challenge for future researchers however will be to identify which aspects of the multi-faceted self and other representations carry the effect on age-associated attitudes. For instance, as noted by Bowlby (1979) individuals have a number of representational models linked to different relationships and different memory systems. Each of these representational models is hypothesised to guide behaviour and development under different conditions but although exciting inroads are being made in terms of understanding the nature, mechanisms and consequences of these models (e.g. see Collins & Read, 1994; Crittenden & Claussen, 2000; Crittenden, 2000c) much more research in this field is necessary.

Future research in this field needs to be aware of the complexities of this topic. Specifically, self-other representations are further complicated by the fact that the nature of representations can often be outside the conscious awareness of individuals, particularly under conditions of stress. Specifically, although often interchanged representational models are distinct from working models in that the former can include information which is not accepting of new information, and unable to process alternative behavioural strategies (see Crittenden, 1990). One way around this issue is to use a form of discourse analysis which allows appearance-reality distinctions to be made; this is carried out in a range of ways, including the systematic use of comparisons, between different memory systems, between different parts of the transcript, and between a comparison of judgments made by the participants and the

researcher as an objective observer (see Crittenden, 1996; 1997; 1990). Furthermore, representations also include reference to the past, present and future selves, as well as future and ideal selves (Markus & Nurius, 1986). The degree to which representations converge with each other can also have significant consequences for health and well-being. For instance, greater distances between current and ideal selves have been significantly related to more serious pathology (e.g. see Higgins, 1987). Future research should examine these multiple representations in their own right, and their possible origins in early experiences with parents.

Measuring the representations adults have of themselves and others are not unproblematic. Researchers using self-report measures of attachment concepts assume that individuals are able to accurately understand and report the quality of their relationships with close others. In contrast, such an assumption is not made by attachment researchers using the Adult Attachment Interview (Crittenden, 1999); in these instances researchers use a form of discourse analysis to understand better the nature and consequences of attachment relationships. Future research should examine these different theoretical and methodological frameworks in more detail, and contrast their findings. One of the aims of Stage 2 of the current Study 4 is to examine the relationship between self-other measures and similar scales developed by attachment researchers. Self-report attachment measures from Stage 2 in turn will be compared with responses from the Adult Attachment Interview (Crittenden, 2002) and the Attitudes To Ageing Interview, currently being prepared. It is hoped that the results from this analyses will be useful for other researchers in this field, especially those trying to decide on the measures they need to use in their own research.

9.3.3 Attachment as Strategies of Adaptation and Coping

One of the main arguments through this thesis that there are threats for the self in later years, which can pose a challenge for many adults. To reiterate, ageing is often associated with multiple losses, physical decline and an increased probability of chronic disease and pain. In addition, not only are losses said to be 'ubiquitous' in old age (Pfeiffer, 1977: 651), but there is an increased probability with age that one will be perceived in negative ways by others (Bytheway & Johnson 1990; Cohen 1996; Gatz & Pearson 1988; Kimmel 1988). Furthermore, according to McCrae (1982) older people have to deal with a disproportionately larger number of 'exit events' than younger adults, who have to adjust to more 'entrance events'. Even at best, for many adults, the challenge may simply involve strategies to manage uncertainty given that no one knows in advance what one's experience of later life is likely to be.

However, it is not assumed that some adults simply become passively overwhelmed; instead, it individuals are active from early childhood in developing a range of strategies for managing themselves and close others. These can include strategise of primary and secondary control (Heckhausen & Schultz, 1995; Wrosch, Heckhausen & Lachman, 2000); selection, optimisation and compensation (Baltes & Baltes, 1990) as well as Crittenden's dynamic maturational model of attachment discussed in earlier chapters (Crittenden, 1997; 2001). Nevertheless, it is assumed that strategies of adaptation develop in the context of close relationships, and that some strategies may no longer be so effective in creating safety, security and predictability. By examining strategies of adaptation in a range of ways, it is possible to determine their impact on psychosocial well-being as well as attitudes to ageing and one's own future old age, i.e. if attitudes can be understood in the context of threat, one would expect strategies to minimise threat to be significantly related to age-associated threats. Evidence to support this position comes from the current study, when coping strategies were found to be significantly related to both representations of self and others, and the level of danger adults associated with their own ageing and future old age. Given that coping strategies are assumed to take place in the context of close relationships with others, one would expect significant relationships to occur between coping strategies and self-other representations; this was the case. Furthermore, emotion and problem-focused strategies were significantly related to attitudes to ageing, and contributed significantly to predicting the variance in age-associated scores. Although it was not possible in this study to examine strategies of coping and adaptation in the context of Crittenden's dynamic maturational model of attachment,

Understanding the ways the coping strategies above relate to each other, and contribute to the variance in age-associated attitudes is an urgent issue for future research; this is especially the case were attitudes are so negative that changes in coping strategies are needed to improve quality of life and well-being. From a professional perspective, research on the subjective experience of ageing is very urgent if the health and well-being of older adults is to be maintained. As Coleman (1993) argued, older adults are not automatic experts at adjusting and dealing with problems experienced. Similarly, according to Pfeiffer (1977) late life pathology 'is the result of failure to adapt to the various crises, problems and losses frequenting this phase of the lifecycle' (650). Better insights about the nature of strategies available to adults to mange threats and challenges is information which can be used by health professionals and others to aid quality of life and well-being for more adults for longer in the latter part of the life course.

To summarise, a significant relationship was found between experiences in early relationships, current representations of self and others, and age-associated attitudes. This data is consistent with the view that from experiences in early relationships adults develop representations of themselves and others that influence in turn how own future old age is being viewed. However, there was no significant relationship between coping strategies and early experiences, although Stage 2 of Study 4 continues this inquiry by using more direct and detailed measures of attachment.

9.4 Possible Rival Explanatory Variables

Although attachment-related factors provided a good fit for Study 4 data a range of rival explanations were also considered; these included knowledge about ageing, neuroticism and expected quality of life.

9.4.1 Actual and Expected Financial Status

The first of the rival variables to be examined was expected financial status, i.e. the expectation that adults would have sufficient resources to meet their basic needs. In the current study it was queried whether adults who evaluate the experience of their own future old age negatively not because of their experiences in close relationships, but because they anticipate having problems financially. Financial stress, a marker of socio-economic status, has been described as a 'chronic stressor' (Wu & Rudkin, 2000; p258). This stressor is an issue of significant concern to many gerontologists and can influence a wide range of factors including access to heath care, engagement in leisure pursuits, and the achievement of a basic level of quality of life. It was expected that financial status would impact significantly on adults attitudes to their own future old age; however no significant relationship was found between these measures and any of the main attitudinal measures. Given the lack of a basic association between finances and attitudes, financial status was not entered to the main model.

The lack of a significant relationship between attitudes to ageing and financial status was surprising given evidence in the wider gerontological literature regarding the important influence that finances can have on later health and psychosocial well-being. In the gerontological literature for instance, higher socio-economic status has been associated with less worry about age-associated experiences (Neikrug, 1998); in this study over 40% of blue collar workers were highly worried about their own ageing and future old age, while the same figure for professionals or senior administrators was just 15%.

The lack of a significant relationship between attitudes to ageing and financial status could be down to the nature of the measures being used and future research would examine this issue again with other measures. For instance, the current study used mainly single item measures of expected financial resources, and although these did correlate well with each other (indicating good external validity), additional research should be carried out examining further the reliability and validity of these measures. An issue relating to reliability and validity of measurement is the sensitivity of the data being requested. Specifically, not only may some people feel uncomfortable divulging such personal information, but they may also respondent in ways that may not yield reliable data, e.g. by leaving this question blank or by being very optimistic about the amount of available resources they expect to be available. Participants have the freedom to leave any question blank that they wish; although this option is not something researchers should attempt to change researchers should try to understand the reasons behind any blank questions. The latter might include framing questions precisely and in ways that are not offensive or difficult for participants; participants might also be encouraged in free responses to give their thoughts in relation to specific open-ended questions,

9.4.2 Neuroticism

Evidence was found to support this association between neuroticism and attitudes. Specifically. correlations were found between age-associated attitudes and neuroticism. One has to consider whether these findings could be explained by factors other than as above, e.g. overlap in content or meaning, or self-report errors. The latter is unlikely given that the correlations found were quite small. However, the former cannot be ruled out given that no additional variance in scores was found when this personality trait was added to the model, i.e. although neuroticism is not unimportant in contributing to the variance in health and psychosocial outcomes its effect is not as large as one might have expected once the attachment related variables were controlled. These findings echo those of other researchers in which neuroticism was found to be a significant variable in explaining a range of health and psychosocial variables (e.g. see Jorn, Mackinnon, Christensen, Henderson, Scott & Korten, 1993; Jorm, Christensen, Henderson, Korten, Mackinnon & Scott, 1993; Kuh, Hardy, Rodgers & Wadsworth, 2002; Murray, Allen & Trinder, 2002; Pedersen, Middel & Larsen, 2002).

Although correlations were found between attitudes and negative experiences in later years, no significant relationship was found between neuroticism and age-associated positive evaluations. This evidence is consistent with the view that that the positive and negative aspects of own future old age are not opposite ends of the same continuum, but separate issues each needing to be examined in their own right. Specifically, although neuroticism can contribute to some of the variance in age-associated negative evaluations, this variable is not significant in understanding the positive attributes and evaluations adults can make about aspects of the latter part of their lives. In addition, given the bias in gerontological research towards deficits, declines and problems in later years (with good reason, see Chapter 1), future research should examine in more detail the nature of the positive attributes and experiences adults can associate with the latter part of their lives. Such insights could have theoretical and applied value, especially where interventions are needed (e.g. giving people information) in order to change attitudes and improve quality of life and well-being.

Future research in this field should also address difficulties and limitations in assessment methods. Although retrospective mood assessments are a valid way to gather such data, they are not unproblematic (e.g. see Stone, Hedges, Neale, & Satin, 1985). An alterative way to measure affective states could involve averaging mood assessments made at different time points through each day and each week. Although more time consuming and prone to errors (including of omission), the resultant data would not be limited or prone to errors of sole reporting or retrospective recall. A second possibility would be to recruit an independent rater (e.g. a family member, friend or spouse of participants), and ask this person to provide an independent assessment of negative affect for participants. In this way one could examine the relationship between neuroticism and age-associated anxiety or threat with less distortion or errors involved in measurement. These methodological issues are important in interpreting the results and considering their theoretical and applied implications.

9.4.3 Knowledge about Ageing and Later Life

It was queried whether knowledge or information would be significantly related to the attitudes adults had about their own ageing and future old age. Areas of knowledge addressed crossed three separate domains: 1) general knowledge about ageing and later life, 2) personal knowledge based on current life-style choices and behaviours, and 3) biological knowledge based on genetic inheritance.

9.4.3.1 General Knowledge

It was queried whether adults had the correct information about later life, and whether adults' knowledge about later life would be significantly related to their attitudes. Given that most of our everyday actions and choices are based on knowledge and beliefs (e.g. Downey, Freitas, Michaelis & Khouri, 1996) it would be surprising to find no significant relationship between general knowledge about ageing and age-associated attitudes. At the same time however, some sources of knowledge (e.g. knowledge about danger and threat) are likely to be more significant than other sources of information (e.g. information about height or lung capacity).

The newly developed Facts on Aging Threats Scale seeks to address limitations in the current gerontological literature by examining the information adults have about threats and dangers being associated with later years. To measure the level of knowledge people had about challenges and possible problems in later life, a new measure was developed; this was subsequently labelled the Facts on Ageing Threats Quiz. This scale was modelled on the work of Palmore (1977); each item is documented in the current literature, but focused on facts related possible danger and threat in later life. Underpinning this scale is the assumption that some facts are more important than others. Results from the current study indicated that this measure did perform well; internal reliability scores were acceptable.

In terms of understanding why people hold the attitudes they do, it is clear that people are basing their attitudes on erroneous and ageist information. For instance, in the Israeli based study of Neikrug's (1998), strong arguments are made for the need to have formal courses on ageing to transmit knowledge about ageing and hence change maladaptive belief systems about ageing which can impair quality of life and health. Some researchers have sought to change negative attitudes about own ageing by educational interventions. Although these interventions can have some effectiveness in changing attitudes about older adults generally (e.g. see Angiullo, Whitbourne & Powers, 1996; Palmore, 1977; however see also Carmel, Cwikel & Galinsky, 1992), they are not usually effective in changing attitudes about one's own ageing and own future old age (e.g. see Harris & Dollinger, 2001). These researchers however have not spent much time considering the nature of adults' age associated attitudes (in the framework of threat and so any educational intervention to inform people is likely to be untargeted (not addressing threat based issues) and so possible attitude change becomes less likely. Future research could develop educational or knowledge-based interventions around threats being associated with ageing and later life.

Future research should examine this issue in more detail. If, as would seem to be the case, attitudes are related to the level of information or knowledge adults have about ageing and later life, it is important to examine in more detail what kinds of information carry the effect on later negative attitudes. This research is especially urgent given the evidence (see Chapter 1) that the attitudes adults have about their own ageing and future old age does influence significantly on health, development and general quality of life.

9.4.3.2 Information on Current Lifestyle Behaviours

Although the direction of causality remains unclear, health behaviours were significantly related to the ways adults evaluate the experience of their own ageing and future old age. Although the addition of lifestyle choices to the attachment model did not explain any additional variance, results from the current study indicated that there was a significant relationship between health behaviours and age-associated attitudes. Adults who engaged in a range of exercise behaviours including purposeful walking, active leisure activities (e.g. cycling, dancing or aerobes) and making use of a gym or fitness centre had significantly more positive attitudes by comparison with their less physically active counterparts. Respondents in a study by Stuart-Hamilton (1998) also indicated that attitudes are important factors in looking and feeling young in later life. To facilitate greater health and well-being in latter years much more research needs to take place, examining in more detail age-associated attitudes, and their impact on later diet, smoking and exercise behaviours including use of leisure facilities.

The findings that smoking behaviours and attitudes to ageing are significantly related are consistent with the view that participants are aware of the negative health consequences of smoking, and that this awareness does result in more negative evaluations about one's own ageing and future old age. As noted in Chapter 6 (see also Fries, 1988), negative health consequences of smoking behaviours include wheeziness, shortness of breath, and even premature death through a heart attack or cancer. Evidence from the literature that adults are typically aware of the deleterious consequences of smoking comes from Bandyopadhyay, O'Mahony & Pathy (in press). In this study with age concern volunteers aged 65 years and older (n = 375) Bandyopadhyay, O'Mahony & Pathy found that significantly more non-smokers (90%, including ex-smokers) than current smokers (70%) believed that smoking causes health problems. Although the direction of causality is not clear and although the effect sizes were small, results from the current study are also consistent with the view that smoking

behaviours cause adults to evaluate their own ageing more negatively. Future research should examine this issue further with community-based adults, including other high ageing conscious groups. Insights from such research could have much value in understanding the ways adults evaluate the experience of their own ageing, including the motivations adults have for engaging in more healthy behaviours.

Although the effect sizes were small, adults who consumed a greater quantity of fresh vegetables and fruit were also significantly more likely to have positive attitudes about ageing than their counterparts who engage in less healthy diets. These more positive attitudes about ageing may have a basis in reality given that a more healthy diet can have positive consequences in later years for rates of morbidity and mortality (Hubert, Block, Oehlert, & Fries, in press; Key, Thorogood, Appleby et al., 1996; Morgan & Clarke, 1997). Given the need to be increasingly detailed about issues under investigation, future research should examine this issue in more detail including possible mediating or moderating effects on this relationship between attitudes and dietary behaviours; these variables could include gender, or adults of different socio-economic status and ages; the latter is especially important age differences have been found in the quality of adults' diet with younger adults consuming less healthy foods by comparison with their older counterparts (Thompson, Margetts, Speller & McVey, 1998). Further research could also examine the components of dietary behaviours that relate to attitudes and health, e.g. although the current research examined attitudes in the context of vegetable and fruit consumption, additional aspects of more healthy diets can include vitamin intake, and intake of both calories and fat. Such research could also have significant theoretical and applied implications for health.

For the future, many more questions have arisen necessitating additional research. For instance not only do the results above need to be replicated, but future studies should also attempt to identify the mechanisms by which age-associated attitudes can influence later health behaviours. The nature of this research is especially urgent given evidence that lifestyle behaviours do have a significant effect on later morbidity and mortality (e.g. see Hubert et al, in press).

9.4.3.3 Genetic Inheritance

Given the importance of genetic factors on later health and well-being (e.g. see McGue, Vaupel, Holm & Harvald, 1993; Vaillant, 1991) it was unfortunate that the

relationship between genetic inheritance and age-associated attitudes could not be examined in the current study. In the initial pilot study many participants commented on the health of their parents and grandparents when describing their own attitudes to ageing and future old age. However, when asked objective questions about the health and longevity of their grandparents, a substantial number of parents in the current study wrote 'don't know' on their questionnaires by this question. Although it was disappointing not to have this information for all participants, this may not necessarily be a useful question for individuals given the age we live, when younger generations move to different countries, or adult children divorce; many people will not know about the health of their parents and grandparents. Nevertheless, given evidence from the initial pilot study, for many people genes are still likely to have a significant on age-associated attitudes and these are assumed to be significant factors in explaining the variance in age-associated attitudes.

9.5 Strengths and Limitations of this Research

There are many strengths to this research including the use of generous incentives for participants. The questionnaire items were largely empirically derived giving them greater content validity. In addition, the study uses a comprehensive set of attitudinal measures including cognitive, affective and behavioural components of age-associated attitudes. Furthermore, participants were recruited to this study with the offer of generous incentives; as such the research is likely to be less biased towards adults more altruistic or generative. Feedback about the use of these vouchers indicated these were successful, i.e. discussions with the managers indicated they were very happy with this initiative and that they would be pleased to continue this collaboration in other studies at other times. A number of participants in this research also telephoned their thanks for the vouchers that had been enjoyed. From a research perspective, the use of these vouchers were important in encouraging more participants to take part in the research than would otherwise have done so. Although taking a lot of time to organise, it is not unreasonable for participants to be offered something tangible in recognition for their valuable time and involvement. Incentives were not used to invite people to take part in the research, but to encourage participation and the return of the questionnaires.

Future research should recruit specific groups of adults experiencing problems, e.g. adults seeking counselling psychological problems in order to assess the current scales in a wider range of contexts. Given time constraints, it was not possible to recruit clinical

populations through the course of the current doctoral research. Future research should examine the validity of the data being collected. Perhaps because people may not necessarily have given their own ageing much thought, there can be discrepancies between what people are actually reporting in response to questionnaires, and what they actually believe themselves. In addition, it is also possible that participants may not wish to confide their concerns and fears about their own ageing, even to themselves, which would suggest a problem of under reporting. These limitations highlight the need for additional assessments using non self-report measures. Follow-up interviews are currently in progress exploring in more detail age-associated attitudes. As these interviews are being carried out blind to participants scores on self-report measures it will be possible to make detailed comparisons; a) between interview and self-report data, and b) between participants attitudes as assessed by them, and as assessed by the interviewer (using appearance-reality techniques developed by Crittenden, 2000). Research is also needed examining the impact of attitudes longitudinally and it is expected that Study 4 will provide the basis for an ongoing longitudinal study.

9.6 General Summary and Conclusions

The main aim of Study 4 was to attempt to explain adults' attitudes to their own ageing and future old age. Results indicated that attachment related variables provided a good fit or explanation for age-associated attitudes. The chapter to follow will now consider the chapters in the thesis as a whole and their contribution to our current knowledge. The chapter to follow will also suggest areas for future research; the latter include more testing of measures, inclusion of family members in assessments and the need for longitudinal research.

Chapter 10
General Summary and Discussion

"The tragedy I think, is not that life is so short, but that we wait so long before we start living it" (Terry, age 72, O'Hanlon, in prep)

10.1 Introduction and Overview

Research within this thesis had three main aims: to explore, measure and explain adults' attitudes to their own ageing and future old age. The reason for this research was the assumption that a better understanding of age-associated attitudes can have theoretical and applied value in adding quality of life and health to increased longevity (see Chapter 1 for fuller discussion). To address gaps within this literature, research within this thesis recruited over 3000 participants in four main studies from many different cities and countries. The main aim of this final chapter was to consider the chapters of this thesis collectively, and to discuss their implications and value in contributing to our current understanding of the subjective experience of own future old age. Although many new research questions have arisen, it is argued that this exploratory research does make a valid contribution to the field of life-span developmental psychology by advancing our understanding of the nature of adults' age-associated evaluations, by developing a range of new measures which may help facilitate further research in this area, and by offering insights about why adults hold the attitudes they do.

The first aim of this thesis was to explore adults' attitudes to their own ageing and future old age. Findings indicate: 1) that negative attitudes can be understood in relation to the level of threat being associated with the latter part of the lifecourse, 2) that those age-associated threats cross physical, social and psychological domains and include concerns about poor health and the quality of relationships with others, 3) that age-associated threats can be further defined in terms of age-associated losses, constraints and challenges to positive gains, and 4) that age-associated attitudes are similar across different Western cultures. In addition to their theoretical and applied value (see Chapter 1) these results can provide a useful base for further empirical research examining in more detail adults' age-associated attitudes, their basis, particularly in earlier life experiences, and their consequences on psychosocial functioning and health.

The second main aim and contribution of this research was to develop psychometrically sound scales to measure the different ways adults evaluate and experience their own ageing and future old age. All measures were developed from exploratory empirical work (see pilot study in Chapter 3) and a review of the relevant literature; these measures were then tested with a range of sample groups in different cities and countries. As can be seen in Table 10.1, these measures examine general and specific attitudes to both general and specific age-associated threat experiences. The choice of measure to be used in future research should be influenced by the nature of the questions being posed. For instance, if researchers are simply interested in general evaluations about general aspects of own future old age, the 5-item General Attitudes to Ageing Scale may be the most appropriate measure. In contrast, for researchers posing more refined questions, a specific attitudinal scale measuring specific aspects of own future old age may be the most suitable, e.g. the PSP Ageing Scale. These measures make a valuable contribution to the current field because: 1) a number of researchers have noted the paucity or inadequacy of measures for research on the subjective experience of own ageing and future old age (e.g. Lashner & Faulkner, 1992; Norris et al, 1987; Wullschleger et al, 1996), 2) these newly developed measures are short, easy to score and simple to interpret, and 3) replicated across sample groups, these measures have good psychometric properties including high content validity as they were developed from exploratory empirical data.

Table 10.1

Main Measures Developed Measuring Different Aspects of Age-Associated Attitudes

	Attitudinal Scales*		
Age Associated Threats		General Evaluations	Specific Evaluations
	General Threat	- General Attitudes to Ageing Scale (GAAS)	- Fear about own Ageing Measure - Pessimism About Ageing Scale
	Specific Threat	- Constraints, Losses and Positives Scale (CLP-Scale) - Physical, Social and Psychological Ageing Scale (PSP Ageing Scale) - Time Future Scale	- Dependency Fearfulness Scale - Ageing Controllability Scale* - Resource Worry Scale

Note: Development and testing of these scales can be seen in Chapters 2-9, * Facts on Ageing Threats Scale is not included here, **Felt control,

The third main contribution of this thesis to the current literature was in examining the factors that may explain adults' attitudes to their own ageing and future old age. This issue may be important when considering interventions (e.g. if age-associated attitudes are very negative), or when considering the impact of attitudes in applied contexts, e.g. financial preparedness for later life or uptake in educational opportunities. The influence of three sets of variables were examined: demographic variables, attachment related variables (representations of self and others, and coping strategies) and rival variables (neuroticism, knowledge about ageing and expected financial status). Results indicated that the attachment related variables provided the best fit for age-associated attitudes; specifically, early family experiences predicted both current coping strategies and current representations of self and others, which in turn significantly predicted age-associated attitudes. These findings contribute to the current field: 1) by placing age-associated attitudes within a life-story/life-span context, 2) by highlighting the need for more sophisticated models or explanations beyond the issue of knowledge about ageing identified by other researchers, and 3) by testing the relative strengths of attachment-related variables alongside possible rival explanations. Furthermore, the vital role of relationships on later attitudes which is assumed in this thesis is a perspective which not been considered by other researchers in this field (e.g. see Mertens, 2001; Lashner & Faulkner, 1992; Palmore, 1977).

To reiterate, the aims of this final chapter are to consider the thesis as a whole, and the value of its findings in advancing theory and improving our understanding of the subjective evaluations about own future old age. In the sections to follow the three main aims and research findings will be discussed along with their contributions to the current field of psycho-gerontology. The remaining sections will then consider the theoretical, empirical and ethical implications of these research findings, along with areas for future research.

10.2 Exploring Adults' Attitudes to Future Old Age

The first main aim of the current thesis was to explore age-associated attitudes, and particularly negative attitudes to own future old age; although many positive attributes and experiences can occur into later years, the emphasis on negative attitudes was taken given space constraints and the higher probability that negative attitudes can have a stronger adverse effect on health and psychosocial well-being*. Understanding the ways adults evaluate the experience of their own future old age is also important for theoretical reasons given the

* Mechanisms are now in place for future research to examine the relationship between age-associated attitudes and psychosocial well-being; measures have been developed, and a subset of participants from Study 4 are currently being followed over time.

observation by a number of researchers that there is a paucity of research exploring and examining the subjective experience of one's own ageing and future old age (e.g. Bernard, 1998; Biggs 1993; Coleman 1999; Quirouette & Pushkar, 1999). In the section to follow, the findings of research in this thesis will be considered, with particular attention to their contribution to the current field of adult development and ageing.

Although attitudes have commonly been defined in terms of levels of favourability or unfavourability, data gathered in the initial pilot study was reflecting issues more complex than relatively simple age-associated evaluations of favourability or unfavourability. Specifically, data collected often reflected threats to an endangered physical or representational self, and the strategies actively being considered to maintain safety, predictability and control. Potential endangering or threatening issues for instance included irretrievable losses of time, control, choice and/or the future conditions or contexts under which help and support may be made available if/as needed. Additional threatening issues for many people included the severity of outcomes for the physical self, including poor health and ultimately death, while coping strategies ranged from the relatively mild (e.g. not thinking about own ageing) to the very serious (e.g. actively planning one's own death rather than going through the experience of old age).

The decision was taken to examine age-associated attitudes in the context of threat as this could account better for findings from the first exploratory study (see above) and also offer new insights into the nature of adults' age-associated attitudes. The latter was especially likely given advice from attitudinal experts who have argued that current attitudinal research in social psychology is very narrowly focused and would benefit from extension and cross fertilisation with other fields of research. Specifically, Eagly & Chaiken (1992) have warned that potentially useful theoretical ideas about attitudes are being missed given that many social attitudinal researchers are only examining studies and theories directly relevant to their own fields (e.g. little communication between social and health or developmental psychologists). Eagly & Chaiken (1992) also argue that ideas relevant to the advancement of attitudinal research within social psychology may also be missed given the dominant but 'very real constraints of experimental paradigms' (p693). These constraints mean that there are limitations in the amount of information developmental attitudinal researchers can take from social attitudinal research, despite the latter's long history. Questions unanswered include basic information about what it means to evaluate a given experience or entity unfavourably; this is not clear despite useful distinctions between explicit and implicit attitudes, and between the cognitive, affective and behavioural sub-components of attitudes. Additionally, because basic questions remain about the nature and basis of attitudes, it is not possible to understand how attitudes may influence

later psychosocial well-being and behaviour, although several researchers have argued these associations are not as strong as one might have expected.

It is clear however, that attitudes and threats are different concepts each based in separate fields of research. For instance, although one can evaluate a given experience or entity negatively without this evaluation reflecting threat, one cannot experience threat without also having a negative attitude. In the attitudinal literature, negative evaluations can occur for many reasons including social desirability, social expectations, and current affective state. In contrast, to examine the additional criteria for threat, the clinical literature was studied given that the social psychological attitudinal literature has very little to say about threat (Gregg*, personal communication); of particular interest were studies on arachnophobia, acrophobia, agoraphobia and claustrophobia, i.e. threats associated with spiders, heights, open and closed spaces respectively. This literature indicated that threats could be understood in the context of lost control and serious outcomes for the self which also have a reasonably high probability of occurrence. As such, if age-associated attitudes are to be explained in the context of threats, one would expect these to be significantly related to greater losses of control and to more aversive experiences which are seen as being unavoidable and inescapable. Items for the scales needed to examine these issues were developed from the first empirical as summarised next.

10.2.1 Development of Rich Data Set on Age-Associated Attitudes

The first exploratory study of this thesis produced over 1500 A4 pages (11 font) of rich descriptive data, reflecting the hopes, fears and pleasures adults associated with their own ageing and future old age. This web data was returned by email and in an ongoing process of data analysis, was coded into a range of themes, including themes about death and dying, self-representations (current and future), economic expectations and fears, health worries, social concerns (e.g. perceptions of the future self as an older adult), as well as the joys and pleasures being associated with later life; pleasures included quality of relationships with others including spouse and children/grandchildren, and a range of hobbies and pursuits including into areas where the individual may not have had the time or resources to pursue earlier in the life course. This rich data set is/will make a valuable descriptive contribution to the gerontological field in itself, and also form a basis for new research, including the development of new measures and checklists aimed at better understanding the subjective experience of own ageing and future old age. (See later section for further discussion on the use of world wide web as a method of data collection.)

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10.2.2 Negative Attitudes can be Defined in the Context of Age-Associated Threats

A significant relationship was found between general age-associated attitudes and threats of lost control, and threats of time and dependence, i.e. in Study 1 (see Chapter 3) people who evaluated their own future old age more negatively, also associated this time of life with lower levels of control, had greater anxiety about the process of ageing, and had higher levels of concern about possible dependence on others and the finite nature of time. Given possible methodological biases in recruitment towards adults more healthy and socially active, aspects of this research were re-assessed in Study 2 (see Chapter 4) using more diverse sample groups recruited via the highstreet and through mainstream churches. In Study 2 a significant relationship was found between age-associated attitudes and perceived control, dependence on others, and the finite nature of time future. Although there are limitations to this research (see later section), these results indicate that age-associated attitudes can be understood in relation to the level of threat being associated with the latter part of the life course.

A significant relationship was also found between general age-associated attitudes and the level of threat associated with physical, social and psychological domains of experience into later years. In the cross cultural Study 3 (see Chapter 5) potential threats associated with physical, social and psychological domains of experience were each found to be significantly related to age-associated attitudes. Physical threats included ill health and the ultimate death of the self; social threats included potential losses in social status as an older person, while psychological threats included time constraints and potential losses of choice and control. Data replicated across sample groups again indicated a significant relationship between general attitudes and age-associated threats. Specifically, more negative age-associated general attitudes were significantly related to greater levels of unfavourability being associated with physical health and death, more negative evaluations about social experiences and status into later years, and more negative evaluations about the psychological self into later years. Furthermore, evidence was gathered to suggest that negative evaluations were associated with a higher perceived likelihood of problems occurring. In the final study for instance (see Chapters 6-9) participants were asked about the probability of certain events or experiences occurring (see information on the Pessimism with Ageing Scale); significant correlations were found suggesting that negative evaluations are have some basis in expected reality.

The above results make a useful contribution to the current state of knowledge in theoretical and applied ways, by shedding more light on the nature of age-associated attitudes, and by providing a base from which much more research can take place in this area. (See later section for additional future research questions.) Nevertheless, before accepting the above findings, one much consider whether the above results could be explained in other ways, including by overlap in questionnaire items or by the researcher simply tapping into a common element (e.g. general negativity). Although more research in this field is necessary, these rival explanations are unlikely given: a) repeated factor analyses which indicated that there was little cross loading between each of the measures, b) participants' age-associated attitudes were comparable when assessed by both participants themselves and external reporters (see Chapter 4), and c) the relationship between measures were different in expected ways (e.g. in Chapter 5, current financial stress was strongly related to future economic threats ($r = .42$, $p < .001$), but less so to physical, social or psychological threats $r = .03$-18, $p > .05$). Furthermore, the above relationships remained even when controlling for neuroticism (see Study 4, Chapters 6-9).

To reiterate, evidence was found to indicate that adults' attitudes can be understood in the context of threat; this re-focus has many advantages, including shedding more light on the nature of adults' age-associated attitudes. Alternative explanations for these results were considered but rejected. Much more work in this field however is needed.

10.2.3 Age-associated Threats Cross Physical, Social and Psychological Domains

Evidence in Study 3 (Chapter 5) suggested that the level of threat adults associated with their own future old age was a combination of physical, social and psychological domains of experience into later years. Specifically, although regression analyses indicated that physical aspects of own future old age were the strongest predictors of general age-associated attitudes, social and psychological domains of experience were also significant predictors of general age-associated attitudes; these effects remained even when controlling for demographic factors (education, gender and finances), and even when controlling for the other domains of experience. Stage 2 of Study 4 (Chapters 6-9) attempted a replication of these results; in this study participants who agreed to be followed-up were asked about their attitudes to physical, social and psychological domains of experience in later life. These questionnaires are still being returned, but analyses to date ($n = 61$, mean-age = 50.3, age-

range 24-80 years, 80% female) are very promising. Additional results in Study 3 (Chapter 5) indicated that economic factors were also significantly related to general age-associated; this relationship remained even when demographic, physical, social and psychological domains of experience were considered and controlled.

Establishing a relationship between general attitudes and specific domains of experience (physical, social and psychological) makes a significant contribution to the current field both theoretically and empirically. Theoretically, these results are important in addressing potential criticisms that age-associated attitudes can be better understood solely in terms of worries about death or failing health for instance; instead, the above results indicate that evaluations about the social and psychological aspects of ageing also contribute significantly to general age-associated attitudes. The above data may also have applied value when considering the ways age-associated attitudes can influence later psychosocial well-being, e.g. of the three domains of experience, concerns about physical appearance or health may be the strongest predictor/motivator in later uptake in leisure or aerobic activities.

To reiterate, evidence was found to indicate that adults' age-associated attitudes are not specific, but instead, a combination of physical, social, psychological, and economic domains of experience. Nevertheless, future research in this topic should examine these issues in more detail, and the impact of specific attitudes on later health and psychosocial well-being.

10.2.4 Threats Can Be Further Defined In Terms of Constraints, Losses and Challenges to Positive Experiences

Evidence from Studies 3 and 4 also suggested that age-associated threats could be further defined in terms of possible constraints, losses and threats to positive experiences in later years. In Study 3 (see Chapter 5), results indicated that the constraints, losses and threats to positive experiences subscales each contributed significantly to the variance in scores, even when demographic factors and the remaining two subscales were controlled. These findings were replicated in Study 4 (see Chapters 6-9) in which each of the three subscales were found to be significantly related to the GAAS, even when partialling out the effects of other possible influences such as neuroticism and education. Although it was not possible in this thesis to examine the relationship between these specific threats and health or psychosocial well-being, it is expected that this issue can be addressed in a follow-up longitudinal study (with Study 4 participants).

Greater detail about age-associated threats can have theoretical and applied value in understanding their nature and relative impact on health and psychosocial well-being, e.g. it may be that age-associated constraints and losses each impact significantly on later anxiety and depression respectively. Furthermore, for reasons given in Chapter 1 (including the potential for greater pathology), emphasis in this thesis was on negative age-associated attitude; nevertheless, adults' attitudes towards possible positive age-associated experiences in later years are likely to have significant health effects on the ways adults experience, evaluate and manage age-associated losses and constraints, and also on their ability to find meaning and purpose in later years. For this reason, any research examining age-associated attitudes should include insights into both negative and positive attributes and experiences including strategies for managing age-associated constraints, minimising losses and creating positive gains in later years.

To reiterate, this research sought to be detailed about the nature of age-associated threats. Results indicated that constraints, losses and threats to possible positive experiences were all significantly related to general age-associated attitudes. Future research should examine the influence of specific age-associated threats on later health and well-being.

10.2.5 Role of Culture on Age-Associated Attitudes

Research within this also explored cultural variations in age-associated attitudes, between participants recruited in person in both the United States and Britain. Culture can have a strong effect on later development and health through a range of mechanisms including via socio-historical or geographical factors (e.g. see Crittenden, 2001; Hautamäki & Coleman, 2001). In the current research, differences in healthcare provision in the US and Britain were expected to influence the ways adults evaluated the experience of their own ageing and future old age. Although it is possible that the experience of ageing in dominant western cultures have more similarities than differences (Whitfield, 2001), and although a strong significant effect for culture on attitudes was not found, it may be that culture has a more subtle effect on attitudes and further analyses will examine this issue further, e.g. significant cultural effects may occur between the two countries for adults in lower socio-economic groups only. It was unfortunate that a measure of healthcare and health care preparation had not been included in the questionnaire distributed; had this measure been included one could have considered whether the participants recruited were biased towards those who had preparations in place for their own healthcare needs in their later years. Researchers interested in culture should not assume that cultural differences will occur and that such differences will be related to the issue of interest to

them; instead, researchers in this field should include a measure of the specific variable of interest (in this case provision of health care) in order to test whether participants do differ on the value variable as well as the variables were differences are expected (attitudes to ageing). It is hoped that additional studies can be carried out examining culture in more detail.

. Nevertheless, examining cultural differences in age-associated attitudes contributes to the current field because although a number of researchers discussing the importance of culture in shaping later experiences few attitudinal researchers have examined the effects of culture on attitudes. Further research in these areas should take place; this research should include a measure of the expected cultural difference as this may shed more light on the reasons and mechanisms though which culture may influence psychosocial well-being and development.

10.2.6 Summary of Contributions to Exploring Age-Associated Attitudes

The first main aim of this thesis was to explore adults' attitudes to their own future old age. This research makes a useful contribution to the current field: 1) by gathering a rich and large data set with open-ended descriptive data on adults' thoughts, hopes and fears for own ageing and future old age, 2) by defining negative age-associated attitudes more specifically and in the context of the level of threat being associated with own future old age, 3) by exploring the relationship between general and specific attitudes to own future old age; the latter included physical, social and psychological aspects of own future old age, 4) by re-examining the nature of threats, and particularly by differentiating between age-associated constraints, losses and threats to possible experiences, and 5) by considering attitudes in terms of culture and cultural values in two dominant western societies. This research also contributes to the current field because a number of researchers have noted the paucity of research on the subjective experience of own ageing and future old age (e.g. Bernard, 1998; Coleman 1999; Quirouette & Pushkar, 1999); this lack of research includes any detailed analyses or theory about the nature of age-associated attitudes, their components, strength and/or likely impact on later psychosocial well-being. (See section later section for ideas about future research in this field.)

10.3 Measuring Adults' Attitudes to their own Ageing and Future Old Age

The second main aim of this thesis was to develop a number of scales to measure adults' age-associated attitudes. As can be seen in Table 10.1 the newly developed measures were grouped into four categories. For clarity and organisation distinctions were made between general attitudes (e.g. general unfavourability) and specific attitudes (e.g. cognitive, or

affective or behavioural evaluations only). Distinctions were also made between general aspects of future old age and specific age-associated threats (e.g. physical, social or psychological aspects of ageing and old age). In the section to follow, it will be argued that these measures do make a useful contribution to the current field of psycho-gerontology because: a) these measures are short, easy to read, rate and score, b) these measures have good psychometric properties including high content validity as they were developed from earlier empirical research, and c) these measures address a problem noted by a number of researchers that there is a paucity of measures in this field (e.g. see Lashner & Faulkner, 1992; Wullschleger et al, 1996).

10.3.1 General Attitudes to Ageing Scale (GAAS)

One of the aims of the main studies in this thesis was to examine the psychometric properties of the newly developed General Attitudes to Ageing Scale. Replicated across four different studies, with over a dozen sample groups (see Table 10.2), this newly developed 5-item scale was found to have good internal reliability and good external validity in the expected direction with a range of other measures. Other researchers using this scale have also found this new measure to have good psychometric properties (e.g. O'Hanlon*, personal communication, Sellars**, personal communication, Datta***, personal communication, Newton****, personal communication, Wragg*****, personal communication).

Table 10.2

Summary Data on General Attitudes to Ageing Scale Across all Studies in this Thesis

Study	Sample	n	GAAS-5	sd	Alpha
1	Linedancers	160	13.4	3.4	.78
2	Church	192	11.8	3.2	.77
	H'street	188	12.8	3.3	.85
3	Washington	62	10.4	3.5	.85
	New York	90	11.1	3.7	.78
	Sheffield	85	12.5	3.4	.79
	Southampton	52	11.8	3.9	.85
4	Church	116	10.7	3.1	.71
	Health	106	11.2	3.2	.79
	H'Street	96	12.2	3.3	.74
	Visit Day	106	12.2	3.4	.78
	Nursing	85	11.2	2.9	.74
	Web Study 2	1, 688	11.5	3.9	.72
Total (n)		3, 026			

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Further research using this scale is urgently needed, especially research examining the relationship between general attitudes as measured by the GAAS and other forms of validity, including the scales ability to predict and discriminant between different forms of behaviour, development and health. Guiding this research is other data suggesting that general attitudes are predictive of other psychosocial variables. For instance, evidence from Coleman et al (1993) suggests that negative attitudes about ageing are predictive of later self-esteem; similarly, several researchers have found that negative attitudes about ageing are significantly related to interactions with older adults (e.g. see Gething et al, 2002; Lasher & Faulkner, 1992). Furthermore, evidence from Levy et al (2002) indicates that negative attitudes to ageing are predictive of mortality up to 25 years later. (This issue of predictive validity will be re-addressed post Ph.D. when the relationship between general attitudes and many of the above variables will be examined with a subgroup of Study 4 participants who agree to be followed-up over time.)

This newly developed General Attitudes to Ageing Scale (GAAS) has many strengths; in addition to being easy to read, rate and score, items for this measure were largely empirically derived giving the scale greater validity. Similarly, the advantage of this scale over similar measures (e.g. the 20-item Anxiety about Ageing Questionnaire, Lashner & Faulkner, 1992) is that because it takes up much less space, it has greater potential to be used in other studies/alongside other measures which in turn can facilitate more research and information on adults' attitudes to own future old age. There are potential limitations however, in that this measure may not be as detailed as some researchers may like; however, in these instances other measures have been developed which could be used instead. These other measures are summarised next.

10.3.2 Specific Evaluations (e.g. Fear) about General Age-Associated Experiences

To examine the relationship between specific attitudes (e.g. affective evaluations), and general age-associated threats two new scales were developed, the Fears about Own Ageing Measure (FOAM) and the Pessimism About Ageing Scale (PAAS). In an area with few measures (e.g. see Wullschleger et al, 1996), both scales make a valid contribution to the field of gerontology because they are short (5 and 8 items respectively), easy to rate, and simple to score. In addition, results replicated across three diverse sample groups, indicated that both measures had good internal reliability (alpha scores .82 - .87) and good external validity. The development of these measures was also useful in allowing analysis to be

carried out examining their relationship with general age-associated attitudes; given that attitudes are conceptualised as having three components (cognitive, affect and behaviour , see Eagly & Chaiken, 1993) it was important to establish that threat based feelings and beliefs are significantly related to general age-associated attitudes as was found to be the case. Further testing of the validity of these scales will need to take place.

10.3.3 General Evaluations About Specific Age-Associated Experiences

The newly developed Constraints, Losses and Positives Scale was developed to provide a measure of the general level of threat being associated with specific age-associated aversive experiences; the latter were identified from the first exploratory study of this thesis which used open and closed-ended questions distributed via the World Wide Web. Although these three subscales had just 4-5 items each, results from Study 3 (see Chapter 5) indicated that these measures had good psychometric properties including good internal reliability (.68-.81) and good external validity in the expected direction with other measures; these findings were replicated for Study 3 participants recruited in the United States and Britain. These findings were also replicated in Study 4 (see Chapters 6-9); in this research with the three main sample groups, the CLP-subscales were also found to have good internal reliability and good external validity. These measures may provide useful contribution to the gerontological field because they offer more detail than the GAAS; this greater detail may be important if later research finds that constraints and losses for instance each impact differently on later health and psychosocial well-being.

To examine specific age-associated threats in more detail, further measures were developed from the first exploratory pilot study, examining levels of favourability associated with physical, social and psychological aspects of own future old age. Understanding the contributions of these domains to general age-associated attitudes was also important theoretically, in establishing that general age-associated attitudes are not better defined or understood in relationship solely to either physical, social or psychological domains of experience (see Section 10.2.2 for results on theoretical relationship between general and specific age-associated attitudes). Items for these subscales were developed from earlier empirical data to reflect positive and negative attributes associated with physical, social and psychological domains of experience. Evidence was found in Study 3 (see Chapter 5) to suggest that these subscales have good psychometric properties; these subscales were found to have good internal reliability, and to be related to each other. This scale was also included in the second questionnaire given to State 2 participants from the final study reported in this

thesis; analysis of returned questionnaires at the time of writing (n = 61) again indicates this PSP-Ageing Scale has good psychometric properties.

The advantage of using the CLP-Scale or the PSP-Scale over the GAAS is that these measures offer more refined insights about the nature of age-associated threats and challenges; in some instances this greater refinement may be important particularly for researchers exploring the relationship between threat and later health or psychosocial well-being. As already noted it may be that losses are more associated with depression, while possible constraints for the future self may be more linked to anxiety problems. All measures have the advantage that they are short, making it easy for participants to complete and researchers to rate and score. In addition, the brevity of these measures, may mean that they can be included alongside other scales, and as such facilitate much more research, even indirectly, on the subjective experience of ageing and/or its relationship to later health. Furthermore, although the focus in the current research was on negative attitudes to ageing (for reasons given in Chapter 1), a scale measuring attitudes towards possible positive age-associated experiences may be important in influencing and understanding evaluations about possible age-associated losses or constraints.

10.3.4 Specific Evaluations about Specific Age-Associated Experiences

The final set of measures sought to examine specific evaluations (e.g. fear, worry), about specific aspects of own ageing and future old age (e.g. dependence, or perceived control into later years). The specific scales of interest included the Dependency Fearfulness Scale, the Ageing Controllability Scale and the Resource Worry Scale which measures the level of worry about expected financial status into later years. In Studies 1 and 2, these measures were found to have very good psychometric properties including good internal reliability and good external validity with other threat-based measures. Each of these measures were also found to be significantly related to general age-associated attitudes. Again, these measures make a useful contribution to the current field because there are so few measures available, and because these measures, are short, easy to rate and score, and with good psychometric properties. Future research however should test the psychometric properties of this scale further, and with other sample groups.

10.3.5 Summary of Section on Measures

To summarise, the second main aim of this research was to develop a number of measures that could be useful for future research exploring and examining the subjective

experience of own future old age. In meeting this aim, four sets of measures were developed based largely on earlier empirical data (see pilot study). Although these measures need further testing, it is argued that they do make a useful contribution to the current gerontological field because; 1) a number of researchers have noted the need for more measures in this field (e.g. see Lashner & Faulkner, 1992; Norris et al, 1987; Wullschleger et al, 1996), 2) the new measures developed are short, easy-to-read and easy-to-score, and 3) replicated with a wide range of sample groups recruited in many different cities and countries, these measures were found to have good psychometric properties including good internal reliability and good external validity in the expected direction with a range of other attitudinal measures.

10.4 Explaining Adults' Attitudes To Own Future Old Age

The third main aim and contribution of this thesis was to attempt to identify the factors that might explain adults' attitudes to own future old age. Possible explanatory factors included demographic factors (e.g. gender, chronological age, education), attachment related variables (e.g. representations of self and others, and coping strategies), and rival variables (e.g. knowledge and information ageing and old age, neuroticism, and expected financial status). Each of these sets of explanations are discussed briefly next; given space constraints however and the volume of data collected each section will only have 2-3 main points of discussion.

10.4.1 Demographic Variables

Across the four main studies more women than men were recruited, and future research should consider strategies to encourage more men to take part in research on age-associated attitudes, e.g. direct approach in men's groups/clubs, or by offering football vouchers or other incentives for involvement. Nevertheless, in the cross cultural Study 3 (see Chapter 5), a small but significant main effect for gender was found suggesting that the concerns of men and women into later life can be qualitatively different; women for instance were found to score significantly more negatively than did men on age-associated losses, and on the physical aspects of own future old age including changes in appearance into later years. These results were replicated in Study 4 (see Chapters 6-9) in which a small but significant main effect for gender was again found; an examination of the unviariate results indicated that women scored more negatively on age-associated losses than did men ($p = .053$). This small but significant effect remained even known gender differences in neuroticism and education were controlled. In explaining gender differences researchers tend to focus the social or learned role differences between the two sexes (e.g. Horton, 2002); however given

the valid erosion of gender stereotypes it will be interesting to consider gender differences in future years and associated explanations.

No consistent relationship as found across the studies between age-associated attitudes and chronological age. It might have been expected that younger adults may have more negative attitudes, simply because they have not lived long enough or experienced enough to reject dominant ageist stereotypes. Equally as argued by Lasher & Faulkender, 1991, one could expect older adults to have more negative attitudes given the greater salience of age-associated threats. However, there was no consistency in the data; in Study 1 (see Chapter 3) adults over age 65 did have more negative age-associated attitudes., but there was no effect of chronological age in Studies 2 or 3, nor was their any effect of age in Study 4 where this question was addressed with more detail and with known group differences controlled. There are limitations however in cross-sectional research where cohort differences can obscure changes over time. To address this limitation and examine age changes in age-associated attitudes, longitudinal research would need to take place. This is currently underway, when a subgroup of participants from Study 4 are being followed over time.

No significant relationship as found between financial status and the level of threat adults' associated with own future old age; however future research may need to re-examine this issue with more refined measures and with consideration for the images people have about own future old age. Additional demographic variables examined included education and finances; however, these variables, which can reflect socio-economic status, did not impact significantly on age-associated attitudes. This lack of a relationship between financial status or pension provision was surprising and it is unlikely that psycho-gerontology can proceed with out consideration for sociological and social policy issues, e.g. transport and pension provision associated with socio-economic status. Similarly, Phillipson carried out research on retired men from different backgrounds; while Birmingham architects continued to have self-confidence and the material resources to facilitate an enjoyable retirement, carworkers and Tyneside shipbuilders were 'worn out, despairingly lost and cut off from former workmates' (Thompson et al, 1993; 10).

The lack of an association above may reflect problems in the use of the single item measures; this possibility will be addressed in later research. Furthermore, time constraints meant it was not possible to code people into specific socio-economic status group; however, this issue can be addressed post PhD given that information was collected about the

employment and/or job titles of participants. In addition, many participants in Study 4 were happy to given their contact details including postcodes which means it can be possible to draw on census and ward data to compare these demographic factors from participants with those from members of the general public. However, there is no expectation of a direct association between age-associated attitudes and SES-factors once a basic level of resources has been met given evidence from Study 4 to indicate relationships provide better explanation of age-associated attitudes than demographic or socio-economic factors. Nevertheless, socio-economic status may impact indirectly on age-associated attitudes via other routes, and further analysis of this issue will be carried out based on the data already gathered including with less advantages samples.

To reiterate, the relationship between age-associated attitudes and a range of demographic variables were examined in an attempt to explain adults' attitudes to own future old age. Results indicated there was a significant effect of gender and education on age-associated attitudes; however effect sizes were small. None of the remaining demographic variables provided a good explanation or fit for age-associated attitudes.

10.4.2 Attachment Related Variables

Using structural equation modelling, the final study of this thesis showed that attachment related variables provided a good fit or explanation for age-associated attitudes. Within the context of close relationships people learn about themselves and about the willingness and availability of others to provide help or assistance when this might be needed. It is within this context also that people develop strategies for adapting and managing their environments so as to protect the self and establish a sense of safety, control and predictability (e.g. see Crittenden 1999; 2000; 2002). As such, adults with positive representations of themselves and others, would be expected to view their own future old age with less threat than would their counterparts with more negative representations. Similarly, adults who have experience of others as being supportive and kindly would be expected to be less concerned about the availability and willingness of others to provide help and assistance when this might be needed in future years. Within a lifespan developmental context, data was largely consistent with these expectations, i.e. that experiences in childhood predicted current coping strategies and current representations of self and others, which in turn predicted age-associated attitudes.

Many additional questions are being addressed in follow-up research. For instance, although past experiences did not predict current coping strategies, these were only measured using single item scales and it may be that these measures were not sufficiently sophisticated as one might like. The relationship between past experiences in relationships (e.g. with parents and grandparents) is being examined in Stage 2 of Study 4. This question will also be addressed in the follow-up interviews for Study 4 participants, where funding has been secured to interview 100 participants on two occasions; the first interview will be the Adult Attachment Interview which asks about the life-story from the early past to the present, while the Attitudes to Ageing Interview will continue the life story and experiences in the present, as well as adults' hopes, fears and expectations for own future old age. Additional questions for research include uncertainty about the nature of self-representations, about their link to experiences in relationships and about the potential and conditions for change to occur.

To reiterate, evidence as found to indicate that attachment related variables are significantly related to age-associated attitudes; using structural equation modelling a good fit for the data was found.

10.4.3 Possible Rival Explanatory Variables

Although attachment-related variables provided a good fit when attempting to explain age-associated attitudes, further analysis was carried out to examine the influence of possible rival explanations; possible rival explanations included expected financial status, neuroticism, and information or knowledge about ageing. Although knowledge variables were significantly correlated with age-associated attitudes; these variables did not add to the amount of variance explained above that of the attachment-related variables. Additional discussion and areas for future research were given in Chapter 9.

Given that neuroticism is being defined in the context of predispositions towards anxiety, worry and stress (Bennet-Martinex & John, 1998; Harris & Dollinger, in press), a positive association with age-associated attitudes would be expected. This association is especially likely given that age-associated attitudes are being defined in the context of threat and danger, i.e. adults who are prone to anxiety and stress would be expected to evaluate the latter part of their lives in more negative and threatening ways by comparison with adults scoring less highly on this personality trait. Results indicated that neuroticism did play a significant role in

explaining the variance in age-associated attitudes, however the inclusion of this variable to the model did not explain any additional variance. Neuroticism is a variable that should be considered and controlled in research examining attitudes and perceptions of ageing and one's own future old age.

To summarise, in this chapter, the aim was to explain general attitudes to own future old age. Demographic, attachment and rival variables were considered. Results indicated that attachment related variables provided a good fit to the data . Rival variables however, did not significantly contribute additional variance.

10.5 Strengths and Limitations

Theoretically, the breadth of focus taken in the current thesis is both a strength and a limitation. On one hand Study 4 research offers a context from which more detailed analysis can take place in future studies, e.g. a significant relationship was found between current health behaviours and attitudes to own future old age, however in Study 4 it was shown that this relationship was lost, once the broader context of the attachment-related variables was controlled and considered. On the other hand however, the breadth of analyses taken means that details of mechanisms are not yet known, e.g. additional questions arise about which types of representations most impact on age-associated attitudes, or which relationships might be most important in influencing later age-associated attitudes. Further follow-up research will address these questions. In Stage 2 of Study 4 for instance, the quality of both past relationships (e.g. with parents as a child) and current relationships (e.g. with spouse, and children) is examined and their statistical relationship with age-associated attitudes will be examined. These results will be available by December 2002.

Empirically, a strength of the research within this thesis is the sophisticated and rigorous development and testing of measures, particularly with such diverse groups of participants recruited including via the highstreet, at dance events and from mainstream Christian churches. Participants were also recruited on an international level, using both the world wide web and the personal administration of pen and paper questionnaires allowing additional rigorous testing. A lot of time and attention was given to the development of incentives and vouches, to help in recruiting participants who might not otherwise be inclined to take part in research; this issue of recruitment is important to reduce the probability of recruiting highly altruistic or generative participants which in turn could limited generalisability and the value of research findings.

A limitation of these measures and an issue for future research is the need for independent ratings of participants' age-associated attitudes. Although some of the studies (e.g. Study 2) did seek to establish independent information on the scales (by recruiting the spouses of participants), the need for multiple informants is important and should be addressed in future research.

10.6 Implications

10.6.1 Relationships are Important

Experiences in close relationships should not be ignored in research attempting to understand age-associated attitudes. Within close relationships, people develop representations of themselves and others, along with strategies for adapting to both actual and potential threats (e.g. see Crittenden 1999; 20001; 2002); these variables were shown to provide a good fit for age-associated attitudes. A link with generativity was also found, i.e. adults who viewed old age as a time when they could teach, guide and care for younger generations expressed less concern about their own future old age. Much more research is needed however to understand the nature of both attachment and generative relationships, their specific components, and the mechanisms by which the impact on age-associated attitudes. Research addressing these questions is currently underway in the follow-up interviews for Study 4 participants.

It was not possible to include specific measures of attachment experiences, however this is an issue currently being addressed in Stage 2 of Study 4 where a range of self-report attachment measures were administered including current attachment relationships with spouse and/or children. Furthermore, in the Stage 3 interviews, a subsection of Study 4 participants are being interviewed twice; first with the Adult Attachment Interview (see Crittenden 2000) which asks about experiences in close relationships from the past to the present, and secondly, with the Attitudes to Ageing Interview (O'Hanlon & Coleman, in prep) which picks up on the life story in the present, and asks about the future including attitudes to own future old age. Results from this analyses will be available by December 2002.

10.6.2 Attitudes do Impact Adversely on Health And Psychosocial Well-Being

Insights into age-associated attitudes can also improve general quality of life into later years through a number of mechanisms including by motivating healthy lifestyle choices. For instance, if adults view own future old age as intrinsically a time of decline and loss,

there may be little motivation to invest in exercise routines or a more healthy diet. The welfare of other generations as well as older adults can also be influenced by age-associated attitudes. Specifically, older adults have a vital role in teaching, guiding and supporting younger generations, i.e. generativity. However, negative attitudes about ageing may mean that older adults do not recognise their strengths, and do not have the confidence to offer their skills and experience to younger generations. This would have serious repercussions for the quality of life of both older and younger adults (e.g. see Bellah et al, 1991; Gutmann, 1987). Finally, age-associated attitudes are likely to have applied consequences, including the preparations adults make for own future old age. For instance if adults see the potential for many positive experiences into later years, they may be more motivated to prepare financially to improve the quality of their own future old age. With measures now in place, future research should examine the relationship between these sets of variables.

10.6.3 Developing the Research Field

One of the reasons for their being such a paucity of research on the subjective experience of own ageing and future old age is because there have been so few scales available. As an example, Wullschleger et al (1996) defend the use of a particular scale, despite acknowledging its poor psychometric properties, because it was more recent by comparison with two other scales developed in 1953 and 1961. By developing a range of psychometrically sound scales which measure different aspects of adults' age-associated attitudes, research from this thesis has the potential to both stimulate interest and facilitate further research examining further the subjective experience of own ageing and future old age.

10.7 Ethical Issues in Research

Ethical responsibilities towards participants have been a significant issue underpinning all the studies within this thesis. Ethical responsibilities of the researcher toward participants includes protecting their identities from being disclosed to others, and informing participants about their right to withdraw from the research at any time without penalties. Furthermore, in line with the data protection act, participants need to be informed about the way the data is to be collected and the duration and conditions under which information is maintained. Personal responsibilities of the researcher include being available to participants should they have any questions or queries about any aspect of the research process.

Participants in all the studies in this thesis were well informed about the research process and their right to withdraw at any time should they wish. Participants always knew

the topic of research before taking questionnaires home; their right not to take part in the research was also made clear to them both verbally and in written format. In addition, at n o pint were participants ask for identifying information at the time of distributing questionnaires; this made it easier for participants to withdraw from the research if thy so wished. Furthermore, participants always had the contact details of this researcher, and they were encouraged to get in touch if they had any queries at any time. Additional ethical responsibilities towards participants can include giving participants updates on the research in progress, including information on the ways the findings are being used, in this case to more optimal health and well-being for more people into later years. Disseminating this information can function to facilitate ongoing support and interest for the research and to keep open lines of commination between the researcher and participants. Dissemination of research findings is not expensive particularly in future years as more people get access to electronic resources such as email and the world wide web.

10.8 Theoretical Issues for Future Research

10.8.1 Understanding Positive and Negative Age-Associated Attitudes

Although adults' attitudes to possible positive experiences into later years was considered through this thesis (e.g. generative identity measure), greater emphasis was placed on negative experiences given greater potential to impact adversely on health and well-being. However, future research should examine positive and negative age-associated attitudes in more detail as the boundary between positive and negative attitudes may be blurred. For instance, in western health context there can be a tendency to dichotomise negative and positive affect and to think of emotions such as sadness or fear as being separate or distinct from emotions such as happiness and joy, as well as being undesirable and incompatible with happiness and health. However, it may be that negative and positive affect (e.g. sadness and happiness) are more similar than distinct, if one aspect of the positive affect is an awareness of the uniqueness or specialness of a moment or person, with that affect may be some sadness with regard to the actual or potential loss of that moment or person. This issue should be examined further, including consideration of the context.

10.8.2 Examining Themes in More Detail

As already noted, much more detail is needed examining the issues discussed through this thesis. For instance, if future research was to examine separately 'threat attitudes' from 'images' of later years, associated insights could shed light on attitude-behaviour interactions

including uptake in pension preparation or engagement in more healthy behaviours. Although there is likely to be a significant relationship between age-associated attitudes and images, it is true that people can have negative images of later life (e.g. old age as decline and loss) without evaluating later years in threatening ways. In the cross cultural Study 3 participants' attitudes towards physical, social and psychological old age were examined; future research however either reword these items, or develop further items from the initial pilot study data to develop items to reflect the images people have within these three domains of functioning, e.g. "old age is a time to enjoy relationships with friends" rather than "into old age, I expect I will really value many relationships with friends".

In this thesis it was argued that greater threats associated with own future old age could have a negative effect on health and well-being; future research however should examine the converse possibility, i.e. that overconfidence about later years could also adversely effect health. For instance, by engaging in a range of strategies such as avoidance, denial or distraction, potential problems that might otherwise be associate wit own future old age can be avoided and ignored with serious consequences on psychosocial well-being; these may include a lack of financial (e.g. pension) or health preparations (e.g. adapting a more healthy diet, taking exercise). Given that further psychosocial development may arise as a consequence of addressing and managing age-associated threats, overconfidence and lack of attention to age-associated constraints and losses has the potential also to preclude further psychosocial development.

10.8.1 Death and dying

Although not considered directly in the current study, possibly one of the most threatening aspects of ageing for many people is that of death and of overcoming natural fears associated with the uncertainty, uncontrollability and unavailability of this experience. In the words of Thomas Kirkwood 'no study of ageing can take place within consideration of death' – or something to that effect (exact quote?). The evidence frame a range of studies however suggests that of many decades this experience can become less fearful. In facto, the more aversive might be the experience of dying rather than death itself. Attitudes to death were no t considered in detail in the current set of research studies given concerns that this would bias participants' response towards greater negativity given evidence from Schaie (1999) and Hamilton-Smith (1994) than the way in which questions are framed can influence later responses of participants. Nevertheless, the relationship between attitudes towards old

age and attitudes towards death are large issues which can be examined in future research studies.

10.8.3 Examining Change Over Time

Although a significant relationship was found between early experiences in childhood and current representations of self and others, these results do not mean that early adversity should always have negative consequences through life. This is because early memories and experiences are not just stored into adulthood, but instead are actively reconstructed, perhaps as McAdams (1990) has noted to make a better story, one that fits better in the light of new information. Such strategies can lead to more balanced integration in ways that lead to further personal maturity and personal wisdom (e.g. see Ardelt 2000; 2001). The central issue for future research will be to understand better the ways adults experience and manage the reality of their own ageing, and also the outcomes of those strategies in leading to either personal growth and wisdom, or despair and stagnation (Erikson 1954).

10.9 Methodological Issues for Future Research

Despite the value of the above findings, more research in this field is needed, including research which addresses some of the methodological limitations in the current set of studies.

10.9.1 Further Rigorous Testing of the New Measures Developed

The quality of quantitative research is highly dependent on the measures developed and used; measures in this thesis need to be tested further and more rigorously, including with clinical sample groups. In addition, given increasing heterogeneity into later years and the wide range of variables that need to be considered and controlled in research, sophisticated statistical analyses are critical in future psycho-gerontological research.

10.9.2 More Sophisticated Designs using Multiple Informants and Latest Technology

Data will have greater validity if the views of multiple informants converge; this is especially important in the context of age-associated worries and fears, when people can have fears about appearing or feeling foolish. The current research was cross-sectional; the use of questionnaires in this thesis also has many advantages. Questionnaires allow researchers to examine the relationship between variables in larger sample groups than could generally occur within a qualitative research project. Similarly, the use of questionnaires can permit better testing of hypothesis, e.g. in this study, of interest is the relationship between attitudes to

ageing and several other rival contenders such as knowledge about ageing, etc. By examining these factors via questionnaires, it is then possible to examine in more detail the most relevant relationships through the use of more in-depth interviews. However questionnaires are also problematic in that they can be difficult for some respondents to manage, particularly those with lower levels of education and poorer eyesight. Questionnaires can also be problematic in that they cannot advise on true change over time; to do this one needs experimental or longitudinal research.

Given the theoretical complexity and empirical multidimensionality of ageing research, a desirable methodological perspective may be to make the best of both research paradigms, i.e. to use the questionnaires to examine underlying factors, but then to follow these up with interviews. The questionnaires could also double as a screening instrument for the interview sample enabling the researcher to control for such variables as length of time since retirement, or the presence/absence of stressors/mediating variables such as social support. However, although the final interview study was not carried out of this thesis funding has been secured to carry out this research post PhD. It is expected that participants in the final study will be follow up over time using both self-report measures and in-depth interviews. When carrying out these interviews, the aim will be to explore people's perceptions and attitudes towards their own prospective old age in more detail; a further aim will be to use of discourse analysis to examine the organisational strategies participants are using to protect themselves around age-related dangers and threats (e.g. see Crittenden 2001).

10.9.3 Making More use of Technology, including the World Wide Web

The use of the world wide web is still a somewhat unusual method of gathering data; nevertheless, this method of data collection was chosen because it enabled data to be gathered from a lot of people, internationally, in a relatively short space of time. In addition, although the use of the world wide web is currently very under-utilised by social scientists, this is likely to change over coming decades as researchers become more aware of the opportunities this technology offers. Furthermore, although this methodology does have some limitations, such as potential biases in the sample, these can be addressed in a number of ways so that the merits of this research methodology can be retained. For instance, in the current research a separate pen and paper questionnaire asking the same questions were also administered to a local group of participants. Results indicated no significant differences between the two sample groups. There is other evidence to support the validity of this

research via the world wide web. For instance, the quantitative findings from this study have been replicated in later studies (e.g. ratios of adults experiencing high levels of ageing stress). In addition, questionnaire measures used in this study (e.g. Deiner et al) were also found to have high internal reliability scores i.e. alpha scores of .87. This evidence supports the use of the world wide web as a means of data collection.

10.10 General Summary and Conclusions

Although many of the negative stereotypes of later life need to be challenged, there are difficulties in later life, as throughout life, which have the potential to cause great personal anxiety, fear and worry. The tragedy however is not that these difficulties occur, but that they can have such long-term adverse consequences on current functioning and well-being. Why this is so will necessitate much more study and research. The future by definition however has not yet happened. Although we have little control over past experiences, we do have some control over the future, and particularly the meanings we attribute to our experiences. With more research in this area, health professionals should be in a better position to help adults manage and understand the latter part of their lives in ways that can facilitate health, autonomy and development.

Attitudes to Ageing Study

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Dear Web User,

Many thanks for logging on to this page. I am carrying out a study exploring the hopes, fears and concerns adults have towards their own future old age. I would be very grateful if you would take a few minutes out of your busy schedule to answer some questions on ageing. By answering these questions you will be helping me with my research project. You will also be contributing to an understanding of what it means to grow older, which in turn can help create a better old age for all of us.

The following questionnaire is divided into five short sect5ions. The questions being asked in each section are essentially exploratory and there are no 'right' or 'wrong' answers. Although some of the questions ask you to write your responses in the spaces provided, many simply ask that you highlight a word or group of words. The completed questionnaire can then be sent to me electronically by clicking the 'submit button' found below. Alternatively, completed questionnaires can be printed out and then mailed to me on hard copy (address above). **All responses will be received in absolute confidence and no attempt will ever be made to identify respondents.** Specifically, to ensure confidentiality and anonymity, the email system for these pages has been set up so that all returned responses will be recorded solely as having come from null@soton.ac.yujk. In addition, immediately questionnaires are received they will be numbered and only this reference number will be used in all subsequent discussion and reporting of the data without exception.

If you would like more information about this project, of if you have any comments you would like to make about this questionnaire please contact me at t6eh above address. To access the results of this study please contact me and/or check out this website – a summary of the results will be posted here in time. I would also be very grateful if you could distribute this questionnaire website to others so that more people might have the option of taking part in this research. Once again, your time, interest and involvement in this research are really appreciated.

With very best wishes and thanks.

Yours sincerely,

Ann O'Hanlon

Section 1

1) What gender are you? Male

2) What age are you? 19 or less

3) What is your marital status? Single

4) What is the highest level of education you have received?
School (aged 16 or under)

5) How many children do you have?
None

6) Do you consider yourself to be part of a religious grouping? If so which?
Buddhist

Other (Please specify)

7) How important is religion to you in your life?
Not at All

8) Please summarise what you believe happens to us after we die. (Please keep your responses within the width of all the boxes to follow).

9) What is/was your occupation? (If applicable please also include your discipline.)

10) What is your nationality?

10b) In what city or country are you completing this questionnaire?

11) How would you describe your current financial situation, as compared to others in your local community?
Much Worse Than Average

12) How often to you use the Internet?
1-4 hours per month

Section 2

This section of the questionnaire is concerned with identity and well-being in old age. You should try to answer the following questions according to how you currently feel and think. Please try to answer all the questions. There are no 'right' or 'wrong' answers and all responses will be received in absolute confidence. Thank-you.

1) Please describe the likely process of your own ageing to advanced old age. (Please keep your responses within the width of all the boxes to follow).

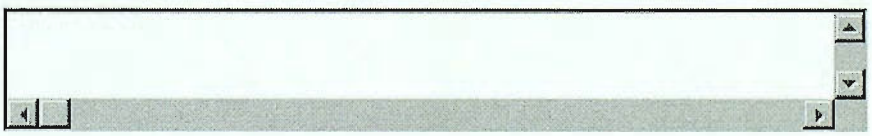
2) In terms of your own ageing, how do you feel about getting older?

3) How would you summarise your feelings about your own ageing? Very Positive

4) In terms of your own ageing, how aspects of ageing and old age particularly worry or concern you? Please also explain your answer or give an example if appropriate.

5) What aspects of ageing and old age do you find positive and/or reassuring? Please also explain your answer or give an example if appropriate.

6) In an ideal through realistic situation, what would you hope would be your experience of old age?



7) Please select the answer most applicable to you in the following questions:

a) Life loses its meaning when you become old Strongly Agree

b) I find it nice to grow old Strongly Agree

c) Do you expect your old age to be a difficult experience? Yes very difficult

9) Can you describe your parents' attitudes and feelings towards their ageing?

10) Generally, how can people best deal with the process of ageing?

Section 3

Below are five statements with which you may agree or disagree. Using the 7-, please indicate your agreement with each item by clicking the answer most applicable to you.

1) In most ways, my life is close to my ideal. Strongly Agree

2) The conditions of my life are excellent. Strongly Agree

3) I am satisfied with my life. Strongly Agree

4) So far I have gotten the important things I want in life. Strongly Agree

5) If I could live my life over, I would change almost nothing. Strongly Agree

---

Section 4

This is the very last section and it gives you space to talk about yourself and your experiences. Again, taking the time to complete these questions is really appreciated; your involvement is what makes this study possible. Thanks again.

1) Is there anything else that you would like to add about your attitudes towards own old age, your experiences in relationships generally, and/or about filling in this questionnaire?

Thank-you for completing the above questionnaire and for giving the time to talk about your thoughts and feelings on a range of personal issues. Your time, interest and involvement are really appreciated. When ready to submit your questionnaire anonymously, please press the 'Submit Completed Questionnaire Now' button found just below. Thanks again.

* For the above information to be submitted electronically, a fictitious name needs to be included in this box. To maintain anonymity, this should not be your real name.

t Completed Questionnaire Now

Attitudes to Ageing Study

aoh@soton.ac.uk

(023) 8059 2633

Dear Participant,

I am a postgraduate psychology student at the University of Southampton and I am trying to understand some of the thoughts, attitudes and even fears that people can have about getting older. I would be very grateful if you could take a few minutes out of your busy schedule to answer some questions on ageing. By answering these questions, you will be helping me with my research project. You will also be contributing to an understanding of what it means to grow older, which in turn can help create a better old age for all of us.

The questions being asked in this study are essentially explo9ratory and there are no 'right' or 'wrong' answers. Although some of the questions ask you to write your responses in the spaces provided, many simply ask that you highlight a word or group of words. Should you wish to expand upon any answer please use the facing pages. The completed questionnaire can then be returned to me, in confidence, at the psychology department via (internal) mail; if you need an envelop please contact me, alternatively, some people may prefer to just fold and staple the sheets before addressing them to myself at the psychology department.

If you would like more information about this project, of if you have any comments you would like to make about this questionnaire, please call me. Thanks again for your time and interest; you involvement is what makes this study possible.

With very best wishes.

Yours sincerely,

Ann O'Hanlon

SECTION 1

1) What gender are you?

Male Female

2) What age are you?

3) What is your marital status?

Single Married Living With Partner
Divorced/Seperated Widowed

4) What is the highest level of education you have received?

School (aged 16 or under) | Certificate/Diploma (or equivalent) | Degree (or equivalent) | Advanced Degree

5) If applicable, what is your discipline?

6) How many children do you have?

7) Do you consider yourself to be part of a religious grouping? If so, which, e.g. Jewish? Christian?

8) How important is religion to you in your life?

Not At All A Little Reasonably Important
Very Important Crucial

9) Does religion mean more to you now, compared to when you were younger?

More Now Than When Younger | The Same Now As When Younger | Less Now Then When Younger | It Has Never Meant Much To Me

10) Do you believe there is life after death?

Yes No

11) Please describe what you believe happens to us after we die. (Please continue on the facing page if necessary)

12) How would you describe your financial situation, as compared to others in your local community?

a) Much worse than average b) Worse than average
c) Average d) Better than average e) Much better than average

Section 2

This section of the questionnaire is concerned with your attitudes to ageing. There are no 'right' or 'wrong' answers and you should answer the questionnaire as you currently feel. Should you wish to explain upon any question please use the facing page. Thanks again.

1) Please describe the likely process of your own ageing into advanced old age.

2) In terms of your own ageing how do you feel about getting older?

3) How would you summarise your feelings about ageing?

Very Positive Positive Neutral Negative Very Negative

4) In terms of your own ageing, what aspects of ageing and old age particularly worry or concern you? Please explain your answer or given an example if possible.

5) What aspects of ageing do find positive and reassuring? Again, please explain your answer or given an example if possible

6) In an ideal through realistic situation, what would you hope would be your experience of old age?

7) Generally, how can people best deal with the process of ageing?

8) What preparations, if any, have you made (or will you make) for your own ageing? Please feel free to give examples or reasons.

9) Can you describe your parents' attitudes and feelings towards ageing? (Please differentiate between your mother and your fathers' attitudes.)

Section 3

This section is concerned with attitudes to death and dying. Again, taking the time to answer these questions is really appreciated.

1) Do you think about death much? How much and in what way does the awareness of eventual death influence your daily/weekly behaviour?

2) Are there any aspects of death or dying that make you feel particularly anxious?

Section 4

Below are five statements with which you may agree or disagree. Using the 7-scale below, please indicate your agreement with each item by highlighting the answer most applicable to you.

1 = Strongly Disagree **2** = Disagree
3 = Slightly Disagree, **4** = Neither Agree Nor Disagree,
5 = Slightly Agree **6** = Agree **7** = Strongly Agree.

1. In most ways, my life is close to my ideal.
   1 2 3 4 5 6 7

2. The conditions of my life are excellent.
   1 2 3 4 5 6 7

3. I am satisfied with my life
   1 2 3 4 5 6 7

4. So far I have gotten the important things I want in life.
   1 2 3 4 5 6 7

5. If I could live my life over, I would change almost nothing.
   1 2 3 4 5 6 7

Final Section

1) Is there anything else that you would like to add which could shed light on your thoughts and feelings about ageing?

Thanks again for completing the above questionnaire. Your time and involvement are really appreciated.

University of Southampton

Department of Psychology

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England, United Kingdom

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Web www.soton.ac.uk/~aoh

Dear Participant,

I am a postgraduate psychology student at the above university and I am trying to understand some of the thoughts, attitudes and even fears that people sometimes express about getting older. Your participation in answering some questions on ageing would be really appreciated. You are under no obligation to take part in this research and you can withdraw from this study at any time without penalty. On the other hand, if you do decide to take part, your involvement will help me complete my doctoral degree. Your involvement will also contribute to our understanding of what it means to grow older which in turn can help create a better old age for all of us.

The following questionnaire is divided into a number of short sections. The questions being asked in each section are essentially exploratory and there are no 'right' or 'wrong' answers. Although some of the questions ask you to write your responses in the spaces provided, most simply ask that you highlight a word or group of words. You are not asked to identify yourself in the questionnaire and all your responses will be kept totally confidential. The completed questionnaire can be returned to me in person, or sent directly by post (as soon as possible) to the psychology department. An envelope is provided and stamps are not needed.

If you have any questions about this project, or if you would like to receive a summary of the findings of this research when available, please contact me at the above address.

Thank you very much for taking the time to complete this questionnaire. Your time, interest and involvement are very much appreciated.

Very best wishes.

Yours sincerely,

Ann O'Hanlon.

Attitudes to Ageing Study

This questionnaire seeks to explore people's thoughts, fears and hopes about ageing. While some of the questions ask you to write your answers in the spaces provided, most simply ask you to circle a word or group of words (see example). Should you wish to expand upon an answer, the facing pages can be used. Thank-you again for taking part in this research.

Example

There are not enough nature programmes on television.

Strongly Agree Agree Disagree Strongly Disagree

SECTION 1

1) What age are you? <20 21-29 30-34
35-39 40-44 45-49 50-54 55-59
60-64 65-69 70-74 75-79 80+

2) What gender are you?
Male Female

3) What is your marital status?
Single Married Living With Partner
Divorced/Seperated Widowed

4) What is the highest level of education you have received?
School (aged 16 or under) Certificate/Diploma (or equivalent) Degree (or equivalent) Advanced Degree

5) How many children (& grandchildren) do you have?

6) What is/was your longest held occupation?

7) Do you consider yourself to be part of a religious grouping? If so, which, e.g. Jewish, Christian etc.?

7b) How important is religion to you in your life?
Not At All A Little Reasonably Important
Very Important Crucial

7c) Does religion mean more to you now, compared to when you were younger?
More Now Than When Younger | The Same Now As When Younger | Less Now Then When Younger | It Has Never Meant Much To Me

8) How would you describe your financial situation, as compared to others in your local community?
a) Much worse than average b) Worse than average
c) Average d) Better than average e) Much better than average

9) How would your rate your current health?
Poor Fair Good Very Good Excellent

10) How would your rate your current energy levels?
Very Low Low Moderate High Very High

11) Many of the following questions ask about your own old age. About what age would this be for you?

12) How would you describe the process of ageing? (Please continue overleaf if necessary).

13) In terms of your own ageing, how do you feel about getting older?

14) Please summarise your feelings about your own ageing?
Very Positive Positive Neutral Negative Very Negative

15) Do you expect your ageing to be a difficult experience?
Yes very difficult, Somewhat difficult, Not at all difficult

16) Are there any specific aspects of ageing that particularly bother or worry you? Please continue overleaf if necessary.

SECTION 2

This section is concerned with people's general views on the passing of time. Please read each statement and indicate your level of agreement. Thank-you.

1) I feel proud about what I have achieved so far in my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I have made many good friends in the past
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I have really missed out on a lot of things when I was a child
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I think warmly of my mother
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) I feel really sad to have missed out on opportunities which are available to the young of today.
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) I am really bothered that I cannot re-live my life again
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I just know my life could have been so much better
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I really regret wasting so much of my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) During my life, I have not achieved all that I could
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I have really enjoyed life a lot in the past

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I feel very content about the way my life has gone

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) I have met lots of really nice people over the years

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) My relationship with my spouse or partner has been good.

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I have very few regrets about the way I have lived my life

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I have no regrets in my choice of partner

Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I feel happy with my choice of occupation.

Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I feel happy with the way my life has gone

Strongly Agree Agree Neutral Disagree Strongly Disagree

18) Career-wise, I feel a lot of regret that I did not do more with my life

Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I am still bothered by many of the things I experienced in my past

Strongly Agree Agree Neutral Disagree Strongly Disagree

20) Educationally, it bothers me that I did not achieve more.

Strongly Agree Agree Neutral Disagree Strongly Disagree

21) One of the nicest things into old age will be in having more time to do the activities that I want to do

Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I am looking forward to having more time to spend with others into my old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

23) As I get older, it really bothers me that time is running out.

Strongly Agree Agree Neutral Disagree Strongly Disagree

24) I believe later life will offer me many positive experiences for learning and growing

Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I feel really anxious about the receding opportunities to fulfil my remaining ambitions.

Strongly Agree Agree Neutral Disagree Strongly Disagree

26) I get really worried when I think how little time I have left

Strongly Agree Agree Neutral Disagree Strongly Disagree

27) Into old age, I expect I will have very few regrets about the way in which my life will have gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

28) Into my old age, I expect I will feel incredibly sad that I cannot live life over again.

Strongly Agree Agree Neutral Disagree Strongly Disagree

29) There are lots of things I am looking forward to doing into my old age when I will have more time.

Strongly Agree Agree Neutral Disagree Strongly Disagree

30) I really worry about fitting everything in before I reach old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

31) Not having the main responsibility for young children into old age will be a great release

Strongly Agree Agree Neutral Disagree Strongly Disagree

32) I think I will be remembered for a long time after I die

Strongly Agree Agree Neutral Disagree Strongly Disagree

33) Many of the things I have done will live on behind me

Strongly Agree Agree Neutral Disagree Strongly Disagree

34) I have done nothing in my life that has been really important

Strongly Agree Agree Neutral Disagree Strongly Disagree

35) Even when I am old, I feel that other people will still really need me

Strongly Agree Agree Neutral Disagree Strongly Disagree

36) I expect to be making a positive contribution to the welfare of my family and friends, even into old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 3

The following questions seek to explore your thoughts and attitudes towards receiving help from others into later life, should this become necessary. As before, please read each statement, and indicate your level of agreement.

1) The vast majority of older people maintain their independence into old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) Becoming dependent on others is an experience which should be avoided at all costs.

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) Dependency on others does not always mean being helpless

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) Dependency is often a natural consequence of growing older.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) Dependency is an experience which occurs throughout the lifespan, not only in old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Reliance on other people is a necessary part of life.
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) The numbers of older people living in nursing or rest homes is very small.
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) It is reasonable to ask for help on occasions
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) It is really important to me that I be in control of my own life
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I have always carried my own weight and could not exist unless I could continue doing so
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I value my independence enormously
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) In old age, I would willingly accept help and care from others should I need it.
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) Into my old age it would be a great relief to have other people get my groceries in, if needed.
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I would rather die, than have someone help me bathe or dress
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I worry about my choices being limited if I became ill
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I would be glad to have other people to drive me where I wanted to go, if I were not able to get around myself.
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) Into my old age, it would bother me hugely if I could not live in my own home
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I would absolutely hate to rely on other people for help, even for regular grocery shopping
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I get really concerned that I will not be able to do what I want to do into my old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) There are worse things than having to depend on others into old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I would really hate to get an illness or disease that made me dependent on others
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I would bother me enormously to have someone else organise my day
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) People are never there when you need them.
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) Becoming dependent on others into old age is always a really big worry.
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I am not confident other people would help if I needed them
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) The only safe option really is to depend on yourself
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) I am positive others (my children) would take care of me into old age if I became ill.
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) Other people let you down
Strongly Agree Agree Neutral Disagree Strongly Disagree

29) If you are in need of help other people just don't want to know you.
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) I know that others will be there when I need them
Strongly Agree Agree Neutral Disagree Strongly Disagree

31) I have faith that others will look after me when I am old
Strongly Agree Agree Neutral Disagree Strongly Disagree

32) People will only offer help if there is something in it for them
Strongly Agree Agree Neutral Disagree Strongly Disagree

33) I would find it very hard to allow others to help me, even if I needed help
Strongly Agree Agree Neutral Disagree Strongly Disagree

34) I have no intention of relying on anyone but myself into my old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

35) I worry about not having anyone to look after me when I am old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 4

The following questions seek to explore your thoughts and feelings about ageing. Again, please read each statement and indicate your level of agreement.

1) I enjoy being around very old people
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I enjoy talking with very old people.
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I feel very comfortable when I am around a very old person.
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) It doesn't bother me at all to imagine myself as being very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) The older I become, the more I worry about my health.
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) I have never dreaded the day I would look in the mirror and see gray hairs.

Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I worry people will ignore me when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I am afraid that there will be no meaning in life when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

9) I will have plenty to occupy my time when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I expect to feel good about life when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I used to like visiting my very old relatives

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) I fear it will be very hard for me to find contentment in my very old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) I have never lied about my age in order to appear younger.

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I expect to feel good about myself when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) When I look in the mirror it bothers me to see how my looks have changed with age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I fear that when I am very old all my friends will be gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I enjoy doing things for very old people.

Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I get nervous when I think about someone else making decisions for me when I am very old

Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I have never dreaded looking very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I believe that I will still be able to do most things for myself when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I have always dreaded the day I would look in the mirror and find a grey hair

Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I fear that when I'm older all my friends will be gone

Strongly Agree Agree Neutral Disagree Strongly Disagree

23) The thought of outliving my spouse frightens me

Strongly Agree Agree Neutral Disagree Strongly Disagree

24) The older I become the more anxious I am about the future

Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I cannot help feeling depressed at the thought of getting old

Strongly Agree Agree Neutral Disagree Strongly Disagree

26) It is rather sad to be still alive after all your friends are gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

27) The future is so uncertain that there is little point in thinking or planning ahead

Strongly Agree Agree Neutral Disagree Strongly Disagree

28) It must be quite a shock to looking the mirror and find that you are showing signs of ageing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 5

The following questions seek to examine the level of knowledge you have about ageing. You should do your best to answer as many questions correctly as you can.

1) The vast majority of older adults are senile (i.e. defective memory, disorientated, or demented).

True False Don't Know

2) All five senses tend to decline in later life

True False Don't Know

3) Most older people have no interest in, or capacity for sexual relations

True False Don't Know

4) Lung capacity tends to decline in later life

True False Don't Know

5) The majority of older people feel miserable most of the time

True False Don't Know

6) Physical strength tends to decline in later life

True False Don't Know

7) At least one tenth of older adults are living in long-stay institutions (i.e. nursing homes, mental hospitals, homes for the aged etc).

True False Don't Know

8) Older drivers have fewer accidents per driver than drivers under age 65

True False Don't Know

9) Most older workers cannot work as effectively as younger workers

True False Don't Know

10) About 80% of older adults are healthy enough to carry out their normal activities.

True False Don't Know

11) Most older adults are set in their wars and unable to change

True False Don't Know

12) Older people usually take longer to learn something new

True False Don't Know

13) It is almost impossible for most older people to learn something new

True False Don't Know

14) The reaction time of most older people tends to be slower than the reaction time of younger people.

True False Don't Know

15) In general, most older people are pretty much alike

True False Don't Know

16) The majority of older people report that they are seldom bored

True False Don't Know

17) The majority of older people report that they are socially isolated and lonely

True False Don't Know

18) Older workers have few accidents than younger workers

True False Don't Know

19) Over 15% of the US population are now aged 65 or over.

True False Don't Know

20) Most medical practitioners tend to give low priority to older adults

True False Don't Know

21) The majority of older people have incomes below the poverty level

True False Don't Know

22) The majority of older people are working or would like to have some kind of work to do (including housework and volunteer work)

True False Don't Know

23) Older adults tend to become more religious as they age

True False Don't Know

24) The majority of older adults report that they are seldom irritated or angry

True False Don't Know

SECTION 6

The following questionnaire again seeks to understand your attitudes to ageing generally. Please indicate your level of agreement with each statement. Thank-you.

1) I think society does treat older people kindly

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) If I look after myself, it is highly likely I will remain healthy into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I think things will work out just fine for me into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I can expect to have difficulty in making ends meet into my old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) With age, it is almost certain I will become ill

Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Into my old age, I can expect to be very lonely

Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I expect I will just gently slow down physically with age

Strongly Agree Agree Neutral Disagree Strongly Disagree

8) Old age is a time when choice is taken away.

Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Life looses its meaning when you become old

Strongly Agree Agree Neutral Disagree Strongly Disagree

10) The vast majority of people into old age get dementia

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) It is likely I will become narrow-minded with age

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) There is nothing positive about old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) With advancing years, I expect I will want to distance myself from others

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) Into late life, I expect to enjoy the company of others

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I expect to continue learning into my old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I expect to become more self-assured as I move into later life

Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I see my old age mainly as a time of loss

Strongly Agree Agree Neutral Disagree Strongly Disagree

18) With advancing years, I can expect to worry less about the opinions of other people

Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I can expect to become highly dependent on others into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I worry I will have nothing to offer anyone when I am old

Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I feel content about my own ageing

Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I have no anxiety about getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

23) Old age is not a worry for me

Strongly Agree Agree Neutral Disagree Strongly Disagree

24) I worry that I will become stuck in my ways when I become old

Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I see my old age as being a very stressful time

Strongly Agree Agree Neutral Disagree Strongly Disagree

26) I hate the thought of getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

27) Old age can be a very happy time of life

Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 7

Listed below are a number of statement concerning personal attitudes and traits. Please read each item very carefully and decide whether the item is true or false for you.

1) It is sometimes hard for me to go on with my work if I am not encouraged

True False

2) I sometimes feel resentful when I don't get my way

True False

3) On a few occasions, I have given up doing something because I thought too little of my ability

True False

4) There have been times when I felt like rebelling against people in authority even though I knew they were right

True False

5) No matter who I'm talking to, I'm always a good listener.

True False

6) There have been occasions when I took advantage of someone

True False

7) I'm always willing to admit it when I make a mistake

True False

8) I sometimes try to get even rather than forgive and forget

True False

9) I am always courteous, even to people who are disagreeable

True False

10) I have never been irked when people expressed ideas very different from my own

True False

11) There have been times when I was quite jealous of the good fortune of others

True False

12) I am sometimes irritated by people without cause

True False

13) I have never deliberately said something that hurt someone's feelings.

True False

SECTION 8

Listed below are a range of experiences into old age. How much control would you say you had within each of these experiences to either make or to prevent them from happening where 1 = not that much control and 5 = a lot of control.

1) Maintaining self-esteem into later life

1 2 3 4 5

2) Needing help from others to bathe and get dressed

1 2 3 4 5

3) Feeling anxious about general ageing

1 2 3 4 5

4) Depression

1 2 3 4 5

5) Being attacked by youths

1 2 3 4 5

6) Worry of paying bills

1 2 3 4 5

7) Being in moderate pain

1 2 3 4 5

8) Enjoying freedom from earlier responsibilities

1 2 3 4 5

9) Having less fear about making mistakes

1 2 3 4 5

10) Having cardiovascular disease

1 2 3 4 5

11) Having a stroke

1 2 3 4 5

12) Becoming frail so that cannot walk on the street

1 2 3 4 5

13) Needing help from others in getting in weekly groceries

1 2 3 4 5

14) Gaining confidence into later life

1 2 3 4 5

15) Enjoyment of life

1 2 3 4 5

16) Anxiety of time running out

1 2 3 4 5

17) Becoming ill so can't leave bed

1 2 3 4 5

18) Living alone, with only one weekly regular visitor

1 2 3 4 5

19) Greater self-acceptance

1 2 3 4 5

20) Children/grandchildren as a source of enjoyment

1 2 3 4 5

23) Deterioration in physical appearance

1 2 3 4 5

24) Mental deterioration so that cannot read a paper.

1 2 3 4 5

25) Maintaining own independence into old age

1 2 3 4 5

26) Being accepted more by others

1 2 3 4 5

27) Having respect of other people.
1 2 3 4 5

28) Having warm, loving relationships with others
1 2 3 4 5

29) Avoiding serious illness, e.g. cancer
1 2 3 4 5

30) Having a comfortable standard of living
1 2 3 4 5

31) Ability to take a wider perspective on life
1 2 3 4 5

32) Gaining wisdom into old age
1 2 3 4 5

33) Having time to follow own interests.
1 2 3 4 5

34) Living in own home through whole of old age.
1 2 3 4 5

8b) In the space just *before* each of the statements above (i.e. to the left of each statement), please indicate the likelihood of this experience occurring into your own old age - where 1 = *not very likely*, and 5 = *highly likely.*

8c) In the space *following* statements 15 - 30 only above, please indicate how important these would be for you into your old age - where 1 = *not terribly important*, and 5 = *extremely important.*

* The importance of an item refers to the value or significance this holds for you.

SECTION 9

Please indicate how serious things would need to be before you would make use of any of the following, where 1 = not very serious, to 7 = *extremely serious.*

1) Thermal bed socks
1 2 3 4 5 6 7

2) Hearing aids
1 2 3 4 5 6 7

3) Glasses - due to failing eyesight
1 2 3 4 5 6 7

4) Motorised buggies (e.g. to go shopping)
1 2 3 4 5 6 7

5) Installation of handrails in bathroom/hall
1 2 3 4 5 6 7

6) Special cutlery at home in company of visitors, e.g. knives with thicker handles for better grip
1 2 3 4 5 6 7

7) Using two handled cups for better grip, with friends
1 2 3 4 5 6 7

8) Telephone with big buttons and large visual display
1 2 3 4 5 6 7

9) A walking stick/cane
1 2 3 4 5 6 7

10) Walking frame
1 2 3 4 5 6 7

11) Home helps
1 2 3 4 5 6 7

12) A wheelchair
1 2 3 4 5 6 7

13) Living in an old people's home
1 2 3 4 5 6 7

14) Day-care centre for over 65s
1 2 3 4 5 6 7

15) Meals on Wheels
1 2 3 4 5 6 7

16) Disability/pension benefits
1 2 3 4 5 6 7

SECTION 10

Below are five statements with which you may agree or disagree. Using the 7-scale below, please indicate your agreement with each item by highlighting the answer most applicable to you.

1 = Strongly Disagree **2** = Disagree
3 = Slightly Disagree, **4** = Neither Agree Nor Disagree,
5 = Slightly Agree **6** = Agree **7** = Strongly Agree.

1. In most ways, my life is close to my ideal.
1 2 3 4 5 6 7

2. The conditions of my life are excellent.
1 2 3 4 5 6 7

3. I am satisfied with my life
1 2 3 4 5 6 7

4. So far I have gotten the important things I want in life.
1 2 3 4 5 6 7

5. If I could live my life over, I would change almost nothing.
1 2 3 4 5 6 7

Final Section

1) Is there anything else that you would like to add which could shed light on your attitudes to ageing? (Please continue on facing page if necessary)

2) How did you feel about filling in this questionnaire?

Thank-you again for taking part in this research.

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Dear Participant,

I am a postgraduate psychology student at the above university and I am trying to understand some of the thoughts, attitudes and even fears that people sometimes have about their own prospective old age. I would be really grateful if you could take some time out to fill in the following questionnaire. You are not obliged to take part in this research, but your involvement would be really appreciated. By filling in this questionnaire you will be helping me with my studies. You will also be contributing to our understanding of ageing and what it means to grow older. These insights in turn may help create a better old age for all of us.

The questionnaire to follow is divided into a number of short sections. The questions being asked in each section are essentially exploratory and there are no 'right' or 'wrong' answers. Although some of the questions ask you to write your responses in the spaces provided, most simply ask that you highlight a word or group of words. Without exception, all responses will be received in total confidence. The completed questionnaire can be returned to me by post (as soon as possible) to the psychology department. An envelope is provided and stamps are not needed.

Thank you very much for taking the time to complete this questionnaire; your thoughts are important and do count. If you have any questions about this project or if you would be willing to take part in further psychological research, please get in touch with me. Once again, your time, interest and involvement in this study are very much appreciated.

With very best wishes.

Yours sincerely,

Ann O'Hanlon.

Raffle

In recognition of the time spent in completing this questionnaire, all participants to this research are invited to take part in a raffle for prizes worth over £50. To take part in this raffle please fill in your contact details below and forward these to the researcher at the above address. To maintain anonymity, the contact details below should be sent separately from the completed questionnaire. Also, please indicate if you would like to receive a summary of the findings when available. Thank-you.

Name*:

Address or Phone Number:

Please send me a summary of the findings when available Yes No

* To maintain anonymity, first name only can be used.

Attitudes to Ageing Study

While some of the questions below ask you to write your answers in the spaces provided, most simply ask you to circle a word or group of words (see example). Should you wish to expand upon an answer, the facing pages can be used. Thank-you again for taking part in this research.

Example

There are not enough nature programmes on television.

Strongly Agree Agree Disagree Strongly Disagree

SECTION 1

1) What age are you? <20 21-29 30-34
35-39 40-44 45-49 50-54 55-59
60-64 65-69 70-74 75-79 80+

1b) If different, what age do you currently feel?

2) What gender are you?
Male Female

3) What is your marital status?
Single Married Living With Partner
Divorced/Separated Widowed

3b) If applicable, how would you summarise your relationship with your spouse or partner?
Very Good Fairly Good OK Problematic Very Problematic

4) What is the highest level of education you have received?
School Degree(aged 16 or under) Certificate/Diploma (or equivalent) Degree (or equivalent) Advanced

5) How many children do you have?

6) What is/was your main occupation?

7) Do you consider yourself to be part of a religious group? If so which? For example, Jewish, Christian etc.

8) How important is religion to you in your life?
Not At All A Little Reasonably Important
Very Important Crucial

9) How would you describe your financial situation, as compared to others in your local community?
a) Much worse than average b) Worse than average
c) Average d) Better than average e) Much better than average

10) Are you experiencing any health problems?

10b) How would your rate your current physical health?
Poor Fair Good Very Good Excellent

11) How would you rate your fitness level?
Poor Fair Good Very Good Excellent

12) How would your rate your current energy levels?
Very Low Low Moderate High Very High

13) With how many relatives do you feel close?

14) How many relatives have you seen this month?

15) With how many friends do you feel close to?

16) How many friends have you seen this last month?

17) How would you briefly summarise the process of ageing? (Please continue overleaf if necessary).

18) How do you feel about the prospect of your own old age?

19) Do you expect your old age to be a difficult experience?
Yes very difficult, Somewhat difficult, Not at all difficult

20) Are there any specific aspects of your old age that particularly bother or worry you? Please continue overleaf if necessary.

SECTION 2

This section is concerned with people's general views on the passing of time. Please read each statement and indicate your level of agreement. Thank-you.

1) I have made many good friends in the past
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I feel really sad to have missed out on opportunities which are available to the young of today.
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I have really missed out on a lot of things when I was a child.
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I have really enjoyed life a lot in the past
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) I really regret wasting so much of my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) I am really bothered that I cannot re-live my life again
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I just know my life could have been so much better
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I have no regrets in my choice of partner
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) I feel happy with the way my life has gone
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) During my life, I have not achieved all that I could have done
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) Career-wise, I feel a lot of regret that I did not do more with my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) I have met lots of really nice people over the years
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) My relationship with my spouse or partner has been good.
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I have very few regrets about the way I have lived my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I feel happy with my choice of occupation.
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) Educationally, it bothers me that I did not achieve more.
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) One of the nicest things into old age will be in having more time to do the activities that I want to do
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) Even when I am old, I feel that other people will still really need me
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) As I get older, it really bothers me that time is running out.
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I believe later life will offer me many positive experiences for learning and growing
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I feel really anxious about the receding opportunities to fulfil my remaining ambitions.
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I get really worried when I think how little time I have left
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) Many of the things I've done will live on after me
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) I will be remembered for a long time after I die
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) Into my old age, I expect I will feel incredibly sad that I cannot live life over again.
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) There are lots of things I am looking forward to doing into my old age when I will have more time.
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) I really worry about fitting everything in before I reach old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) I expect to be making a positive contribution to the welfare of my family and friends, even into old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

29) Into old age, I expect I will have very few regrets about the way in which my life will have gone.
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) I have done nothing in my life that has been really important
Strongly Agree Agree Neutral Disagree Strongly Disagree

31) I am looking forward to having more time to spend with others into my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 3

The following questions seek to explore your thoughts and attitudes towards receiving help from others into later life. Please indicate your level of agreement with each statement.

1) Becoming dependent on others is an experience which should be avoided at all costs.
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) Dependence on others does not mean always mean being helpless
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) Becoming dependent on others into old age is always a really big worry.
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I have always carried my own weight and could not exist unless I could continue doing so
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) Reliance on other people is a necessary part of life.
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) The numbers of older people living in nursing or rest homes is very small.
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) It is really important to me that I be in control of my own life
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I value my independence enormously
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) In old age, I would willingly accept help and care from others should I need it.
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I would rather die, than have someone help me bathe or dress
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I would absolutely hate to rely on other people for help, even for regular grocery shopping
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) I worry about my choices being limited if I became ill
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) Into my old age, it would bother me hugely if I could not live in my own home
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I get really concerned that I will not be able to do what I want to do into my old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I would really hate to get an illness or disease that made me dependent on others
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I would bother me enormously to have someone else organise my day
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) The only safe option in life is to depend on yourself
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I am positive others (e.g. my children) would take care of me into old age if I became ill.
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) If you are in need of help other people just don't want to know you.
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I know that others will be there when I need them
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I have faith that others will look after me when I am old
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I worry about not having anyone to look after me when I am old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) I have no intention of relying on anyone but myself into my old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) People will only offer help if there is something in it for them
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 4

The following questions seek to explore your thoughts and feelings about ageing. Again, please read each statement and indicate your level of agreement.

1) I enjoy being around very old people
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I enjoy talking with very old people.
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I feel very comfortable when I am around a very old person.
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) It doesn't bother me at all to imagine myself as being very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) The older I become, the more I worry about health.
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) I have never dreaded the day I would look in the mirror and see grey hairs.
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I worry that people will ignore me when I am very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I am afraid there will be no meaning in life when I am m very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) I will have plenty to occupy my time when I am old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I expect to feel good about life when I am very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I used to like visiting my very old relatives
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) I fear it will be very hard for me to find contentment in my very old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) I have never lied about my age to appear younger.
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I expect to feel good about myself when I am very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) When I look in the mirror it bothers me to see how my looks have changed with age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I fear that when I am very old all my friends will be gone.
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I enjoy doing things for very old people.
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I get nervous when I think about someone else making decisions for me when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I have never dreaded looking very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I believe that I will still be able to do most things for myself when I am very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 5

This section seeks to ask about the knowledge you have about ageing. You should do your very best to answer all the questions accurately.

1) The vast majority of older adults are senile (i.e. defective memory, disorientated, or demented).

True False Don't Know

2) All five senses tend to decline in later life

True False Don't Know

3) Most older people have no interest in, or capacity for sexual relations

True False Don't Know

4) Lung capacity tends to decline in later life

True False Don't Know

5) The majority of older people feel miserable most of the time

True False Don't Know

6) Physical strength tends to decline in later life

True False Don't Know

7) At least on tenth of older adults are living in long-stay institutions (i.e. nursing homes, mental hospitals, homes for the aged etc).

True False Don't Know

8) Older drivers have fewer accidents per driver than drivers under age 65

True False Don't Know

9) Most older workers cannot work as effectively as younger workers

True False Don't Know

10) About 80% of older adults are healthy enough to carry out their normal activities.

True False Don't Know

11) Most older adults are set in their wars and unable to change

True False Don't Know

12) Older people usually take longer to learn something new

True False Don't Know

13) It is almost impossible for most older people to learn something new

True False Don't Know

14) The reaction time of most older people tends to be slower than the reaction time of younger people.

True False Don't Know

15) In general, most older people are pretty much alike

True False Don't Know

16) The majority of older people report that they are seldom bored

True False Don't Know

17) The majority of older people report that they are socially isolated and lonely

True False Don't Know

18) Older workers have few accidents than younger workers

True False Don't Know

19) Over 15% of the US population are now aged 65 or over.

True False Don't Know

20) Most medical practitioners tend to give low priority to older adults

True False Don't Know

21) The majority of older people have incomes below the poverty level

True False Don't Know

22) The majority of older people are working or would like to have some kind of work to do (including housework and volunteer work)

True False Don't Know

23) Older adults tend to be more religious as they age

True False Don't Know

24) The majority of older adults report that they are seldom irritated or angry

True False Don't Know

SECTION 6

The following questionnaire again seeks to understand your attitudes to ageing generally. Please indicate your level of agreement with each statement. Thank-you.

1) If I look after myself, it is highly likely I will remain healthy into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) Into late life, I expect to enjoy the company of other people

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I think things will work out just fine for me into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I can expect to have difficulty in making ends meet into my old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) There is nothing positive about old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6) With age, it is almost certain I will become ill

Strongly Agree Agree Neutral Disagree Strongly Disagree

7) Into my old age, I can expect to be very lonely

Strongly Agree Agree Neutral Disagree Strongly Disagree

8) Life loses its meaning when you become old

Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Old age is not a worry for me

Strongly Agree Agree Neutral Disagree Strongly Disagree

10) Ageing for me has always been a wonderful thing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) The vast majority of people into old age get dementia

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) It is likely I will become narrow-minded with age

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) With advancing years, I expect I will want to distance myself from others

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I see my old age mainly as a time of loss

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I feel content about my own ageing

Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I can expect to become highly dependent on others into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I worry because I will have nothing to offer anyone when I am old

Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I have no anxiety about getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I worry that I will become stuck in my ways when I become old

Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I hate the thought of getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

21) Old age can be a very happy time of life

Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I have never been bothered by my own ageing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

23) I see my old age as being a very stressful time

Strongly Agree Agree Neutral Disagree Strongly Disagree

24) Old age is a time when choice is taken away

Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I cannot help feeling depressed at the thought of getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

26) It is/will be rather sad to be still alive after all your 6friends are gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

27) The future is so uncertain that there is little point in thinking or planning ahead

Strongly Agree Agree Neutral Disagree Strongly Disagree

28) It must be quite a shock to look in the mirror and find that you are showing signs of ageing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 7

Listed below are a range of positive and negative experiences into old age. Please indicate how much control you feel you have within each of these experiences to either make or prevent them from happening – where **1 = not that much control and 5 = a lot of control.**

1) Having high self-esteem into later life

1 2 3 4 5

2) Needing help from others to bathe and get dressed

1 2 3 4 5

3) Feeling anxious about general ageing

1 2 3 4 5

4) Being depressed

1 2 3 4 5

5) Being in moderate pain

1 2 3 4 5

6) Enjoying freedom from earlier responsibilities

1 2 3 4 5

7) Having less fear about making mistakes

1 2 3 4 5

8) Having cardiovascular disease

1 2 3 4 5

9) Having a stroke

1 2 3 4 5

10) Having the respect of other people.

1 2 3 4 5

11) Having warm, loving relationships with others

1 2 3 4 5

12) Having a comfortable standard of living

1 2 3 4 5

13) Being able to take a wider perspective on life

1 2 3 4 5

14) Gaining wisdom into old age

1 2 3 4 5

15) Living in own home through whole of old age.

1 2 3 4 5

16) Needing help from others in getting in weekly groceries

1 2 3 4 5

17) Gaining confidence into later life

1 2 3 4 5

18) Enjoying life as it is

1 2 3 4 5

19) Being anxious about time running out

1 2 3 4 5

20) Being more accepting of self into later life

1 2 3 4 5

21) Being unable to read a book through mental deterioration

1 2 3 4 5

22) Maintaining own independence into old age

1 2 3 4 5

SECTION 8

Please indicate your agreement with the following statements on ageing.

1) Ageing means to me being less energetic and fit

Completely True | Mostly True | Mostly Not True | Completely Not True

2) Ageing means to me that I remain able to put many ideas into action

Completely True | Mostly True | Mostly Not True | Completely Not True

3) Ageing means to me that I get bored more frequently

Completely True | Mostly True | Mostly Not True | Completely Not True

4) Ageing means to me that I have less physical endurance

Completely True | Mostly True | Mostly Not True | Completely Not True

5) Ageing means to me that I feel lonely more often

Completely True | Mostly True | Mostly Not True | Completely Not True

6) Ageing means to me that I am less able to handle physical declines

Completely True | Mostly True | Mostly Not True | Completely Not True

7) Ageing means to me becoming more and more competent

Completely True | Mostly True | Mostly Not True | Completely Not True

8) Ageing means to me that I am less respected by others

Completely True | Mostly True | Mostly Not True | Completely Not True

9) Ageing means to me that I retain the ability to learn new things

Completely True | Mostly True | Mostly Not True | Completely Not True

10) Ageing means to me that other don't need me so much anymore

Completely True | Mostly True | Mostly Not True | Completely Not True

11) Ageing means to me my health declining

Completely True | Mostly True | Mostly Not True | Completely Not True

12) Ageing means to me that I continue to make plans

Completely True | Mostly True | Mostly Not True | Completely Not True

SECTION 9

Below are five statements with which you may agree or disagree. Using the 7-scale below, please indicate your agreement with each item by highlighting the answer most applicable to you.

1 = Strongly Disagree **2** = Disagree
3 = Slightly Disagree, **4** = Neither Agree Nor Disagree,
5 = Slightly Agree **6** = Agree **7** = Strongly Agree.

1. In most ways, my life is close to my ideal.
   1 2 3 4 5 6 7
2. The conditions of my life are excellent.
   1 2 3 4 5 6 7
3. I am satisfied with my life
   1 2 3 4 5 6 7
4. So far I have gotten the important things I want in life.
   1 2 3 4 5 6 7
5. If I could live my life over, I would change almost nothing.
   1 2 3 4 5 6 7

Final Section

1) Are you currently experiencing any large stressors?

2) How would you summarise your current stress levels?

Not very Stressed Slightly Stressed Fairly Stressed Very Stressed

3) How confident do you feel generally in dealing with any problems or challenges that might arise with age?

Very Confident Fairly confident, Slightly Confident,
Not Confident, Not at all confident

4) Do you have much contact with adults over age 65?

At least daily At least once a week,
At least once a month At least once a year Almost never

5) Please summarise your attitude towards your own old age?

Very Positive Positive Neutral Negative Very Negative

6) How strongly held is this attitude to old age?

Very Strong Fairly Strong Not Very Strong Not At All Strong

7) How long have you held this attitude to old age?

a) I have always felt this way
b) My attitude has become more positive with age
c) My attitude has become more negative with age

7b) You have been asked about your attitudes to your own old age. About what age would this be for you?

8) Is there anything else that you would like to add about ageing or old age? (Please continue on facing page if necessary).

Thank-you again for taking part in this research.

Attitudes to Ageing and Later Life: Partner's Questionnaire

Ann O'Hanlon,
Dept of Psychology,
University of Southampton.
(023) 8059 3091

We are carrying out a research project which aims to test the validity of a questionnaire measuring people's attitudes towards their own old age. You have been nominated to partner a person on this study. You are under no obligation to do so however, and can withdraw your consent at any time. In taking part in this short study we would like you to briefly describe the relationship you have with the person you are partnering, and then tell us the way in which you think this person views his/her old age. **Your responses will be kept totally confidential at all times.** If you have any questions do not hesitate to ask the researcher. Thank you for your time.

Partner Relationship

1. What is the nature of the relationship between you and the person you are partnering in this study?

Spouse Friend Work Colleague Neighbor Other (Please Specify)

2. How long have you known this person?

1-12 months 1 –3 years 4 – 7 years 8 years +

3. How well do you know this person?

Very Well Fairly Well Somewhat Not at all

4. How accurate would you say you are likely to be in summarising this person's attitude towards his/her old age?

Very Accurate | Fairly Accurate | Somewhat Accurate | Not Very Accurate

Partner's Attitudes to Old Age

1. Can you give some key words to describe the way in which the person you are partnering views his/her old age?

2. How would you summarise the attitudes the person you are partnering has towards old age?

Very Positive | Somewhat Positive | Neutral | Somewhat Negative | Very Negative

3. Do you think the person you are partnering expects his/her old age to be difficult?

Yes very difficult, Somewhat difficult, Not at all difficult

Following are statements made by others above ageing. Please indicate the way in which the person you are partnering might rate each statement.

1. Old age is a worry for me

Strongly Agree Agree Neutral Disagree Strongly Disagree

2. I cannot help feeling depressed at the thought of getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

3. It is/will be rather sad to be still alive after all your friends are gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4. The future is so uncertain that there is little point in thinking or planning ahead

Strongly Agree Agree Neutral Disagree Strongly Disagree

5. It must be quite a shock to look in the mirror and find that you are showing signs of ageing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Final Section

1) Do you expect your own old age to be difficult?

Yes very difficult, Somewhat difficult, Not at all difficult

2) Is there anything else you would like to add which could shed light on yours or your partner's attitudes to old age?

Thank you very much for your time, interest and involvement in this research.

Attitudes to Ageing and Later Life: Short Questionnaire

Ann O'Hanlon,
Dept of Psychology,
University of Southampton.
(01703) 593091

We are carrying out a research project which aims to test the validity of a questionnaire measuring people's attitudes towards their own ageing. You have selected someone to be your partner in this study. We would now like you to describe the relationship you have with your chosen partner, and then to summarise your attitudes towards your own ageing by rating your level of agreement with each of the statements below. You are under no obligation to take part in this research and can withdraw your consent at any time. If you have any questions do not hesitate to ask the researcher. **Your responses will be kept totally confidential at all times.** To receive a summary of the findings from this project please contact the researcher. Thank-you.

Partner Relationship

1. What is the nature of the relationship between you and the person you are partnering in this study?

Spouse Friend Work Colleague Neighbor Other (Please Specify)

2. How long have you known this person?

1-12 months, 1 –3 years, 4 – 7 years, 8 years +

3. How well does this person know you?

Very Well, Fairly Well, Somewhat, Not at all

4. How accurate would you say this person is likely to be in summarising your attitudes to your old age?

Very Accurate | Fairly Accurate | Somewhat Accurate | Not Very Accurate

Attitudes to Ageing

1. Can you briefly summarise your attitudes towards your own old age?

2. How would you summarise your attitudes towards your own old age?

Very Positive | Somewhat Positive | Neutral | Somewhat Negative | Very Negative

2. Do you expect your own old age to be a difficult experience?

Yes very difficult, Somewhat difficult, Not at all difficult

The following are statements that other people have made. Please indicate your level of agreement with each statement. Thank-you.

1) Old age is a worry for me

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I cannot help feeling depressed at the thought of getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) It is/will be rather sad to be still alive after all your friends are gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) The future is so uncertain that there is little point in thinking or planning ahead

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) It must be quite a shock to look in the mirror and find that you are showing signs of ageing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Final Section

Is there anything else you would like to add about your attitudes towards your own old age?

Thank you very much for your time, interest and involvement in this research.

University of Southampton

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Dear Participant,

I am a postgraduate psychology student at the above university and I am carrying out a study asking adults aged about 18-100, about their thoughts, hopes and fears for their own future old age. I would be really grateful if you could take some time out to fill in the following questionnaire. You are not obliged to take part in this research, but your involvement would be really appreciated. By filling in this questionnaire you will be helping me with my studies. You will also be contributing to our understanding of ageing and what it means to grow older. These insights in turn may help create a better old age for all of us.

The questionnaire to follow is divided into a number of short sections. There are no 'right' or 'wrong' answers, but your thoughts are important and do count. Although some of the questions ask you to write your responses in the spaces provided, most simply ask that you highlight a word or group of words. Without exception, all responses will be received in total confidence. The completed questionnaire can be returned to me by post (as soon as possible) to the psychology department. An envelope is provided and stamps are not needed.

If you have any questions about this project or if you would like to receive a summary of this study please get in touch. A summary of this study and its findings will also be available from the above URL in time. Thanks once again; your time, interest and involvement in this study are very much appreciated.

With very best wishes.

Yours sincerely,

Ann O'Hanlon.

Adult Development and Ageing Study

This questionnaire seeks to explore people's thoughts, fears and hopes about ageing in different parts of the UK and the US. While some of the questions ask you to write your answers in the spaces provided, most simply ask you to circle a word or group of words (see example). Should you wish to expand upon an answer, the facing pages can be used. Thank-you.

Example

There are not enough nature programmes on television.

Strongly Agree Agree Disagree Strongly Disagree

SECTION 1

1) What age are you? <20 21-29 30-34
35-39 40-44 45-49 50-54 55-59
60-64 65-69 70-74 75-79 80+

1b) If different, what age do you currently feel?

2) What gender are you?

Male Female

3) What is your marital status?

Single Married Living With Partner
Divorced/Separated Widowed

3b) If applicable, how would you summarise your relationship with your spouse or partner?

Very Good Fairly Good OK Problematic Very Problematic

4) What is the highest level of education you have received?

School (aged 16 or under) Certificate/Diploma (or equivalent) Degree (or equivalent) Advanced Degree

5) How many children do you have?

6) What is/was your main occupation?

6b) What is/was your job title?

7) Are you part of a religious group? If so, which? For example, Jewish, Christian etc.

8) How important is religion to you in your life?

Not At All A Little Reasonably Important
Very Important Crucial

9) How would you describe your financial situation, as compared to others in your local community?

a) Much worse than average b) Worse than average
c) Average d) Better than average e) Much better than average

10) In what city did you receive this questionnaire?

10b) What is your nationality?

11) How would your rate your current physical health?

Poor Fair Good Very Good Excellent

12) How would you rate your energy levels?

Poor Fair Good Very Good Excellent

13) With how many relatives do you feel close?

14) About how many relatives have you seen this month?

15) With how many friends do you feel close to?

16) How many friends have you seen this last month?

17) How do you feel about the prospect of your own old age?

19) Do you expect your old age to be a difficult experience?

Yes very difficult, Somewhat difficult, Not at all difficult

20) Into old age, how do you expect to rate your health?

Poor Fair Good Very Good Excellent

20b) Are there any specific aspects of your old age that particularly bother or worry you? Please continue overleaf if necessary.

SECTION 2

The following questionnaire again seeks to understand your attitudes to ageing generally. Please indicate your level of agreement with each statement. Thank-you.

1) If I look after myself, it is highly likely I will remain healthy into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) With age, it is almost certain I will become ill

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I think things will work out just fine for me into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I can expect to have difficulty in making ends meet into my old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) There is nothing positive about old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Into late life, I expect to enjoy the company of other people

Strongly Agree Agree Neutral Disagree Strongly Disagree

7) Into my old age, I can expect to be very lonely

Strongly Agree Agree Neutral Disagree Strongly Disagree

8) Life loses its meaning when you become old

Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Old age is not a worry for me

Strongly Agree Agree Neutral Disagree Strongly Disagree

10) Ageing has always been a wonderful thing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) The vast majority of people into old age get dementia

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) It is likely I will become narrow-minded with age

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) With advancing years, I expect I will want to distance myself from others

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I see my old age mainly as a time of loss

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I feel content about my own ageing

Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I can expect to become highly dependent on others into old age

Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I worry I will have nothing to offer anyone when I am old

Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I have no anxiety about getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I worry that I will become stuck in my ways when I become old

Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I hate the thought of getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

21) Old age can be a very happy time of life

Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I have never been bothered by my own ageing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

23) I see my old age as being a very stressful time

Strongly Agree Agree Neutral Disagree Strongly Disagree

24) Old age is a time when choice is taken away

Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I cannot help feeling depressed at the thought of getting older

Strongly Agree Agree Neutral Disagree Strongly Disagree

26) It is/will be rather sad to be still alive after all your friends are gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

27) The future is so uncertain that there is little point in thinking or planning ahead

Strongly Agree Agree Neutral Disagree Strongly Disagree

28) It must be quite a shock to look in the mirror and find that you are showing signs of ageing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 3

The following questions seek to explore your attitudes to ageing. Please read each statement and indicate your level of agreement.

1) I enjoy being around very old people

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I enjoy talking with very old people.

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I feel comfortable when I am around a very old person.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) It doesn't bother me to imagine myself being old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) The older I become, the more I worry about my health.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6) I have never dreaded the day I would look in the mirror and see grey hairs.

Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I worry that people will ignore me when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I am afraid there will be no meaning in life when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

9) I will have plenty to occupy my time when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I expect to feel good when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I used to like visiting my very old relatives

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) I fear it will be very hard for me to find contentment in my very old age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) I have never lied about my age to appear younger.

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I expect to feel good about myself when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) When I look in the mirror it bothers me to see how my looks have changed with age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I fear that when I am very old all my friends will be gone.

Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I enjoy doing things for very old people.

Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I get nervous when I think about someone else making decisions for me when I am very old

Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I have never dreaded looking very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I believe that I will still be able to do most things for myself when I am very old.

Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 4

The self is composed of many dimensions. The section to follow enquires about your expectations psychologically into later life. Please simply tick the response most applicable to you. Thanks.

1) When I reach old age, I expect I will have developed a lot of expertise in solving problems.
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) Possible memory losses into my own old age are hard to think about
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I expect I will be really impatient with myself into old age if I am unable to do the things I have done normally
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) Into my old age, I will be glad to have gained more experience of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) Slowing down mentally with age is a big worry
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Into my own future old age, I expect it will bother me that I did not do more with my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) Into later life, I do not expect to be in such a hurry
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) Loss of a job into later life will be a problem for me
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Into old age I expect to feel so angry at having wasted so much of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I expect I will be more patient with myself in old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) Loss of my own independence into old age would be very difficult to accept
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) Into old age, I expect I will be anxious about fitting everything in
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) With more free time into later life, I expect I will really enjoy the little things in nature, e.g. flowers.
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) Into my own old age I expect I will feel sad about the educational opportunities available to the young of today but which I will not know
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I have always carried my own weight, and could not exist unless I could continue doing so, even into advanced old age.
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) Into later life I expect I will be much more accepting of myself
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) Into my own future old age I expect I will have many regrets about wasting so much of my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) It is really important to me that I be in control over everything in my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) When I reach old age I expect I will feel more at peace
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) Into my own future old age I expect I will have many regrets about not achieving all that I could have done
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) Into my own old age I expect I will be really bothered that I cannot re-live my life again
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) As I get older I expect to know myself really well
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) Into my own old age, I expect I will feel incredibly sad about the choices I made in my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) Into my own old age I expect to be worried about relationships not going as well as I would have liked
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) Into old age I look forward to having more time to do the things that I want to do
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) I worry about my choices becoming limited if I became ill into later life
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) Into my own future old age, I expect to feel content about the way my life has gone
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) Even into later life, I am sure that life will offer me many opportunities for development and growth
Strongly Agree Agree Neutral Disagree Strongly Disagree

29) I worry that there will be no meaning to my life when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) I expect I shall still feel good about life, even when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

31) Slowing down mentally with age I expect will be problematic for me
Strongly Agree Agree Neutral Disagree Strongly Disagree

32) Loss of my home in later life would be a big blow
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 5

The section to follow inquires about your expectations socially into later life. Again, please simply tick the response most applicable to you.

1) Into old age, I expect I will really value many relationships with friends
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) Into old age, I expect I will be concerned about losing the respect of other people
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I worry I will be criticised by others just for being old
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) Into old age, I expect to gain a lot of enjoyment in following the activities of younger people
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) I fear that when I am very old, all my friends will be gone
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Into my own old age, I worry that people will think of me as being unimportant
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) Into old age I look forward to having a greater understanding of people
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) Into my old age, I know that others would provide help when/if this became necessary
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) If I were to become dependent on others into old age, this would be a really big blow to me
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) Into my own future old age I will be glad not to have to worry so much about the views of other people
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) Becoming even slightly dependent on others into old age is an experience which would bother me enormously
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) Into my own old age I expect my children will be critical of my style of parenting
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) Into my own future old age I will be glad not to have to worry so much about being fashionable
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) Into old age I would willingly accept help and care form others should this be necessary
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I really worry that people will ignore me when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) Into later life I expect I will have a fulfilling relationship with a romantic partner
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) Into old age I really worry about being treated as a body rather than as a whole person
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I am concerned that others will become impatient with me into old age, e.g. if I am driving a bit slower than other people
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I am looking forward to having more time to spend with others into my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) Into old age I expect to have little focus or direction in my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) In my old age, I expect I will get very nervous, when I think about people making decisions for me
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I expect I will enjoy talking to older adults, even when I myself am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) I dread losing friendships with others into later life through death and bereavement
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) I am afraid that it will be hard for me to find contentment with others when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) Into old age I look forward to just pleasing myself
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) I dread the loss of vibrancy into my own old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) Into my own old age I expect past work colleagues will be critical of me
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) Into later life I expect to chat to lots of really nice people
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 6

The section to follow inquires about your expectations physically into later life. Again, please tick the response most applicable to you. Your thoughts are really important.

1) I expect to remain physically resilient in old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) Into old age, it will bother me to see how my looks have changed with the years
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I am really worried about the possibility of even relatively minor health problems into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) Into my own old age, it will be a definite bonus not to have to worry about having children
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) I would be happy to use a hearing aid into old age, if it helped me to hear better
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Into old age I worry about getting stomach upsets
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) Given the need for less sleep with age, I look forward to doing many more activities into my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) Loss of energy into later life will bother me a lot
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Into old age I worry about having heart problems
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) Into my old age I worry about being in moderate pain
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) Slowing down physically with age will be a big worry
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) Loss of health into later life is a huge worry
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) Many of the things I have done will live on after me
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) Even into old age, I expect to do most things for myself
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) Into later life, changes in physical appearance are less important than continuing to have fun
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) Into my own old age, I will expect to be fit and to stay in shape
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) Into old age, I worry about losing interest in sexual relations
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) It bothers me to imagine myself as being very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I expect I will be remembered for a long time after I die
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) As I get older I find myself becoming really worried about my health
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) Even into my old age, I expect to be busy and energetic
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) Even into my own old age, I still expect I will look well physically
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) Into old age, I worry about losing the capacity for sexual relations
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) Loss of life itself into old age bothers me enormously
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) Even into old age, I am sure others will look to me for advice
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) Even when I am much older, I still expect to have a lot of things I can pass on to others
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) I expect to support my family, emotionally, even when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) Even when very old, I expect others will still need me
Strongly Agree Agree Neutral Disagree Strongly Disagree
f

29) I expect to be making a positive contribution to the welfare of others, even into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) I am confident that the government will provide help for me into old age if this is needed
Strongly Agree Agree Neutral Disagree Strongly Disagree

31) In my old age, society will see to it that I have sufficient fuel to keep warm
Strongly Agree Agree Neutral Disagree Strongly Disagree

32) I am confident that others will see to it that I have enough food to eat in my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

33) I believe people are generally helpful towards older adults
Strongly Agree Agree Neutral Disagree Strongly Disagree

34) I am sure things will work out fine for me in old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 7

The questions to follow ask how satisfied with life you expect to be into your own old age. Using the 7-scale, please indicate your agreement with each item by highlighting the answer most applicable to you.

1 = Strongly Disagree **2** = Disagree
3 = Slightly Disagree, **4** = Neither Agree Nor Disagree,
5 = Slightly Agree **6** = Agree **7** = Strongly Agree.

1. In old age, I expect my life will be close to ideal.
   1 2 3 4 5 6 7
2. Into my old age, I expect the conditions of my life will be excellent
   1 2 3 4 5 6 7
3. Into old age, I expect to be satisfied with my life
   1 2 3 4 5 6 7
4. Into my old age, I will have gained the important things I want in life.
   1 2 3 4 5 6 7
5. Into my own old age, I expect I would change almost nothing if I had the opportunity to live life over again
   1 2 3 4 5 6 7
6. I feel satisfied with my life just now
   1 2 3 4 5 6 7

Final Section

1) How would you summarise your current stress levels?
Not very Stressed Slightly Stressed Fairly Stressed Very Stressed

2) How confident do you feel in dealing with any problems or challenges that might arise with age?
Very Confident Fairly confident, Slightly Confident, Not Confident, Not at all confident

3) Please summarise your attitude towards your own old age?
Very Positive Positive Neutral Negative Very Negative

4) This questionnaire asked you about your attitudes to your own old age. About what age would this be for you?

5) Is there anything else that you would like to add? (Please continue on facing page if necessary).

Thank-you again for taking part in this research.

University of Southampton

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Dear Participant,

I am a postgraduate psychology student at the above university and I am trying to understand some of the thoughts, hopes and fears adults can have about their own ageing and future old age. Your involvement and help with this research would be really appreciated. Specifically, adults aged 18-100 are being asked to complete a questionnaire at home, to be returned by post as soon as possible; an envelope is provided and stamps are not needed. You are under no obligation to take part in this research and you can withdraw at any time. However, it is hoped that most people taking part in this study will agree to additional involvement even for just three months; this would involve completing one other main questionnaire (and/or just two short questionnaires) and allowing me to hear your life-story in two sittings of about an hour each. All participants who complete the interviews will be offered a wide range of free gifts and £20 cash in recognition and appreciation for your invaluable time. Your involvement would also help me with my doctoral degree, and you would be helping with educational research which may be used by health professionals and others to help bring quality of life and health to more people, for longer into later years.

This questionnaire is mainly interested in your attitudes towards ageing. Other questions about your health, your general coping strategies, and your experiences within close family relationships are also asked so that we can understand better the context and nature of people's attitudes towards own future old age. The questions being asked are essentially exploratory and there are never any 'right' or 'wrong' answers. Completing this questionnaire may take about 30-60 minutes. In recognition of your valuable time however, links have been made with other organisations around Southampton to provide every participant to this research (or one member of your family) with a number of small health-related gifts, including vouchers for free workouts, free swims, free dance classes and free beauty therapy. These vouchers with the cash will usually be given to you at the end of your second interview. Please note however, although we welcome feedback and comments on the use of these vouchers, do be aware that this university neither endorses nor accepts responsibility for any services at these sites.

All returned questionnaires will be received in total confidence. Completed questionnaires can be returned anonymously. If identifying information is included with the returned questionnaire, this will be removed and replaced by a number. Only this number will be used in all later analysis and reporting of the data without exception. If you give contact information, this will only be maintained for a minimum length to fulfil any of the three requests as below. In addition, these contact details will be stored securely and separately from your questionnaire responses; no details will be passed to any third party

Thank you for taking the time to get involved in this research; your thoughts are very important and do count. If you have any queries about anything, do get in touch. In addition, I am happy to send you a summary of this research and our findings; please tick the box below if you would like this information. Thanks again; your time is very much appreciated.

Yours sincerely,

Ann O'Hanlon.

Name*:
Address and Phone Number*:

1) Please send me a summary of the findings from this study and information on the ways this research is being used to help others	**Yes**	**No**
2) Please send me my gift vouchers as I have returned my completed questionnaire	**Yes**	**No**
3) Yes, I am willing to consider taking part in further research in psychology	**Yes**	**No**

* Phone number must be included, to arrange times for the interviews to take place.

Adult Development and Ageing Study IV

While some questions to follow ask you to write your answers in the spaces provided, most simply ask you to circle a word or group of words (see example). Should you wish to expand upon any answer, the facing pages can be used but please also include the question number.

Example

There are not enough nature programmes on television.
a) Strongly Agree b) Agree c) Disagree d) Strongly Disagree

SECTION 1

1) What gender are you? Male Female

2) What age are you?

3) Which of the following describes your romantic status?
a) Single b) Single and searching c) single with long term partner
d) Single with short-term partner e) Married
f) Living with partner g) Divorced/Separated h)Widowed

3b) How satisfying is the relationship you have with your partner (or partners generally if now single)?
Very Satisfying Fairly Satisfying OK Not Satisfying

3c) Have you had any difficulties in forming or maintaining long-term romantic relationships?
A lot of difficulty Some difficulty Slight difficulty No difficulty

4) What is your highest level of education?
School Certificate/Diploma Degree Advanced Degree

5) What is/was your main occupation **and** your job title?

5a) What is/was your partner's main occupation **and** title?

6) Do you consider yourself to be part of a religious group? If so, which? For example, Jewish, Christian etc.

7) How often do you attend a religious or church meeting?
a) Daily b) 1-4 times weekly c) 1-3 times monthly d) Rarely

8) How important is religion or spirituality to you on a scale from **1** (not very important) to **5** (very important)

Religion:	1	2	3	4	5
Spirituality:	1	2	3	4	5

8b) What do you believe happens to us after we die?

9) How would you summarise your financial situation?
a) Much worse than average, b) Worse than average, c) Average
d) Better than average e) Much better than average

9b) How knowledgeable are you about financial matters?
Very Fairly Somewhat Not knowledgeable

10) Please indicate the number of people generally living in your household **and** their relationship to you. (For any question, please continue on facing page if necessary).

11) Who, if anyone, primarily depends on you for their care, e.g. a child with disabilities, or other relatives?

12) How many children do you have?

12b) How satisfying is your relationship with your children?
Very Satisfying Fairly Satisfying OK Not Satisfying

12c) Realistically, how many of your children could you ask for help, if this was needed into your old age?

13) In terms of your health, are you currently experiencing;
a) High blood pressure? *No, Yes but controlled, Yes & problematic*
b) High cholesterol? *No, Yes but controlled, Yes & problematic*
c) Breathing problems? *No, Yes but controlled, Yes & problematic*
d) Diabetes? *No, Yes but controlled, Yes & problematic*
e) Depression? *No, Yes but controlled, Yes & problematic*
f) Other (please describe on facing page with above responses)

14) How would your rate your health and energy levels?
Health: Poor Fair Good Very Good Excellent
Energy: Very Low Low Moderate High Very High

15) How often do you have a good nights sleep?
Most nights About every second night Once a week Rarely

16) How often do you meet with others at work or socially (for at least 15 minutes), for some form of group activity?
Work: N/A Daily 1-3 times weekly 1-3 times monthly Rarely
Leisure: Daily 1-3 times weekly 1-3 times monthly Rarely

17) How would you describe the people where you live?
Very warm & friendly, Fairly warm, Unfriendly, Don't know others

18) How many hours if any, do you spend each month doing voluntary work?

19) We are interested in part in your attitudes towards your own old age. Here/on facing page please indicate what old age means to you.

20) Here or on the facing page, please tell us when did/will you first think seriously about your own ageing.

SECTION 2

Please indicate your level of agreement with each of the general statements on ageing to follow.

1) Old age can be a very happy time of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I will have plenty to occupy my time when I am old
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I feel content about my own ageing
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I see my own old age mainly as a time of loss
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) I expect to feel good about myself when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) I worry I will have nothing to offer anyone when I am old
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I expect to continue learning into my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I hate the thought of getting older
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Old age is a time when choice is taken away
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) Old age can bring with it many positive experiences
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) Old age can be a time of new opportunities
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) Many of the things I have done will live on after me
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) Old age is not a worry for me
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I think things will work out just fine for me into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) There is nothing positive about old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I have no anxiety about getting older
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I have never been bothered by my own ageing
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) Ageing for me has always been a wonderful thing
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I feel very positive about my own future old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) Life loses its meaning when you become old
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I expect to feel good about life when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I feel really worried when I think how short life is.
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) Into old age I will be glad to have gained more experience of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) Even into old age I expect to retain an interest in activities that will expand my horizons
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) Even into old age I think it is important to have new experiences that challenge the way one thinks
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) Into later life, I expect to enjoy the company of others
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) I expect to become more self-assured as I move into later life
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) With age, it is almost certain I will become ill
Strongly Agree Agree Neutral Disagree Strongly Disagree

29) I can expect to have difficulty in making ends meet into my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) Into your old age, how would you expect to rate your health and energy levels?
Health: Poor Fair Good Very Good Excellent
Energy: Very Low Low Moderate High Very High

SECTION 3

Here we are enquiring about the levels of knowledge people have about later life. Please rate your agreement.

1) Most adults can remain physically active into advanced old age if they look after themselves.
Agree Disagree Don't Know

2) Most older people are in chronic pain.
Agree Disagree Don't Know

3) From about age 70 onwards, high levels of dependence on others is guaranteed
Agree Disagree Don't Know

4) The vast majority of older adults can expect to have serious problems remembering things
Agree Disagree Don't Know

5) Most older adults have regular contact with others.
Agree Disagree Don't Know

6) Personal development continues into advanced old age
Agree Disagree Don't Know

7) Most older adults have difficulty making ends meet.
Agree Disagree Don't Know

8) Older adults have an important role to play in teaching and guiding younger generations
Agree Disagree Don't Know

9) Most adults into old age become disinterested in life and in other people
Agree Disagree Don't Know

10) Older adults are a drain on national health budgets
Agree Disagree Don't Know

11) Generally older people are relatively helpless when faced with problems or challenges.
Agree Disagree Don't Know

12) Into old age most adults gain a lot of life experience
Agree Disagree Don't Know

13) At some point most older adults live in residential care
Agree Disagree Don't Know

14) Older people are often enjoyable to be around
Agree Disagree Don't Know

SECTION 4

This section asks in more detail about the ways you think and feel about specific aspects of your own future old age.

1) When I reach old age, I expect I will have developed a lot of expertise in solving problems.
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I expect to remain physically resilient into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) Into my own future old age, I expect it will bother me that I did not do more with my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) Even into old age, I am sure others will seek my advice
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) I would be happy to use a hearing aid into old age, if it helped me to hear better
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Into old age I expect to feel so angry at having wasted so much of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) As I get older I expect to know myself really well
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I am afraid that it will be hard for me to find contentment with others when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Into my own future old age I expect I will have many regrets about not achieving all that I could have done
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) Into old age I expect I will feel more at peace
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) Into my old age, I know that others would provide help when/if this became necessary
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) Into old age, I worry about losing the capacity for sexual relationships
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) Into old age I look forward to having more time to do the things that I want to do
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) Many of the things I have done will live on after me
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) Loss of life itself into old age bothers me enormously
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) Into my own future old age I will be glad not to have to worry so much about the views of other people
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) Into my own old age I expect I will be really bothered that I cannot re-live my life again
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) Into old age I really worry about being treated as a body rather than as a whole person
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I expect I will be remembered for a long time after I die
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) Into old age I expect to have little focus/direction in life
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I worry about losing interest in sexual relationships
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) With more free time into old age, I expect I will really enjoy the little things in life such as the sea and nature
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) Into old age I would willingly accept help and care from others should this be necessary
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) Into later life I expect to be more accepting of myself
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I worry about getting stomach upsets into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) Into my own old age I expect I will have many regrets about wasting so much of my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) Slowing down mentally with age will be problematic
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) Into my old age, I will be glad to have gained more experience of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

29) Into my own future old age I will be glad not to have to worry so much about being fashionable
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) Loss of health into later life is a huge worry
Strongly Agree Agree Neutral Disagree Strongly Disagree

31) I dread the loss of vibrancy into my own old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

32) Into later life I expect I will have a fulfilling relationship with a romantic partner
Strongly Agree Agree Neutral Disagree Strongly Disagree

33) Loss of my own independence into old age would be very difficult to accept
Strongly Agree Agree Neutral Disagree Strongly Disagree

34) Loss of my own home in later life would be a big blow
Strongly Agree Agree Neutral Disagree Strongly Disagree

35) Listed below are fears other people have mentioned about their old age. Please circle the number which best represents how much you have/expect to have those same fears now, and into your own future old age. Please make your rating between **0** (no fears) and **5** (many fears).

a) Having problematic relationships with immediate family
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

b) Being alone, though with family visiting at week-ends
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

c) Having sufficient financial resources for basic needs
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

d) Physical problems so cannot go to shops without help
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

e) Being devalued by others solely because of age
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

f) Reduced mental functioning so can't read a paper
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

g) Having reasonable quality accommodation or housing
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

h) Being a burden on others
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

i) Being in moderate pain
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

j) Death of self or close other
Now: **0 1 2 3 4 5**
In old age: **0 1 2 3 4 5** (_____)

k) Other (please describe on facing page with rating)

35.1) In the brackets above, please indicate how likely you think it is that the above experiences will happen to you in your own old age from **0** (not very likely) to **5** (very likely).

SECTION 5

Please read the coping strategies below, and let us know to what extent you have been doing each strategy in the past 6-12 months rather than on whether or not the strategy seems to be working. Try to rate each item separately in your mind from the others. Many thanks.

1) When things don't go according to my plans, my motto is 'Where there's a will, there's a way'
Not at all Somewhat Quite a bit A lot

2) I find I usually learn something meaningful from a difficult situation
Not at all Somewhat Quite a bit A lot

3) When my expectations are not being met, I lower my expectations
Not at all Somewhat Quite a bit A lot

4) When faced with a bad situation, I do what I can to change it for the better
Not at all Somewhat Quite a bit A lot

5) When I am faced with a bad situation, it helps to find a different way of looking at things
Not at all Somewhat Quite a bit A lot

6) To avoid disappointments, I don't set my goals too high
Not at all Somewhat Quite a bit A lot

7) Even when I feel I have too much to do, I find a way to get it all done
Not at all Somewhat Quite a bit A lot

8) Even when everything seems to be going wrong, I can usually find a bright side to the situation
Not at all Somewhat Quite a bit A lot

9) I feel relieved to let go of some of my responsibilities
Not at all Somewhat Quite a bit A lot

10) When I encounter problems, I don't give up until I solve them
Not at all Somewhat Quite a bit A lot

11) I find something positive, even in the worst situations
Not at all Somewhat Quite a bit A lot

12) I often remind myself that I can't do everything
Not at all Somewhat Quite a bit A lot

13) I rarely give up on something I am doing, even when things get tough
Not at all Somewhat Quite a bit A lot

14) When I can't get what I want, I assume my goals must be unrealistic
Not at all Somewhat Quite a bit A lot

15) I concentrate my efforts on doing something about the situation I am in
Not at all A little Sometimes A lot

16) I say to myself "this is not real"
Not at all A little Sometimes A lot

17) I use alcohol or drugs to make myself feel better
Not at all A little Sometimes A lot

18) I try to see it in a different light, to make it more positive
Not at all A little Sometimes A lot

19) I get emotional support from others
Not at all A little Sometimes A lot

20) I give up trying to deal with it
Not at all A little Sometimes A lot

21) I refuse to believe that is has happened
Not at all A little Sometimes A lot

22) I say things to let my unpleasant feelings escape
Not at all A little Sometimes A lot

23) I get help and advice from other people
Not at all A little Sometimes A lot

24) I use alcohol or other drugs to help me get through
Not at all A little Sometimes A lot

25) I criticise myself
Not at all A little Sometimes A lot

26) I try to come up with a strategy about what to do
Not at all A little Sometimes A lot

27) I get comfort and understanding from someone
Not at all A little Sometimes A lot

28) I give up the attempt to cope
Not at all A little Sometimes A lot

29) I look for something good in what is happening
Not at all A little Sometimes A lot

30) I do something to think about it less, such as watching TV, reading, sleeping or shopping
Not at all A little Sometimes A lot

31) I pray or meditate
Not at all A little Sometimes A lot

32) I take action to try to make the situation better
Not at all A little Sometimes A lot

33) I express my negative feelings to others
Not at all A little Sometimes A lot

34) I try to find comfort in my religion or spiritual beliefs
Not at all A little Sometimes A lot

35) I accept that this has happened and can't be changed
Not at all A little Sometimes A lot

35) I try to get advice or help from other people
Not at all A little Sometimes A lot

36) I turn to work/other activities to take my mind off things
Not at all A little Sometimes A lot

37) I think hard about what steps to take
Not at all A little Sometimes A lot

38) I blame myself for things that happened
Not at all A little Sometimes A lot

SECTION 6

In this section we are interested in the way you perceive problems generally. Please indicate which of the 2 items (A or B) best describes you.

A: I concentrate all my energy on a few things, or
B: I divide my energy among many things
A or B?

A: When I think about what I want in life, I commit myself to one or two important goals
B: Even when I really consider what I want in life, I wait and see what happens, instead of committing myself to just one or two particular goals
A or B?

A: I am always working on several goals at once, or
B: I always focus on the one most important goal at a given time **A or B?**

A: When things don't go as well as before, I still try to keep all my goals
B: When things don't do as well as before, I chose one or two important goals
A or B?

A: When I can't do something important the way I did before, I look for a new goal
B: When I can't do something important the way I did before, I distribute my time among many things
A or B?

A: When I can't do something as well as I used to, I wait and see what comes
B: When I can't so something as well as I used to, I think about what exactly is important to me **A or B?**

A: I keep working on what I have planned until I succeed
B: When I do not succeed right away at what I want to do, I don't try any other possibilities for long
A or B?

A: I prefer to wait for a while and see if things will work out by themselves
B: I make every effort to achieve a given goal
A or B?

A: When something matters to me I devote myself fully and completely to it
B: Even when something matters to me, I still have a hard time devoting myself fully and completely to it
A or B?

A: When things don't go as well as they used, I accept it
B: When things don't go as well as they used to, I keep trying other ways of working until the result is achieved
A or B?

A: When something in my life isn't working as well as it should, I ask others for advice or help
B: When something in my life isn't working as well as it used to, I decide what to do about it myself, without involving other people **A or B?**

A: When it becomes harder for me to get the same results as I used to, it is time to let go of that expectation
B: When it becomes harder for me to get the same results, I keep trying until I can do it as well as before
A or B?

Please rate your agreement below.

1b) When I get stuck on something, it's hard for me to find a new approach
Strongly Agree Agree Neutral Disagree Strongly Disagree

2b) The harder a goal is to achieve, the more appeal it has to me
Strongly Agree Agree Neutral Disagree Strongly Disagree

3b) I can be very obstinate in pursuing my goals
Strongly Agree Agree Neutral Disagree Strongly Disagree

4b) I find it easy to see the positive even in serious mishap
Strongly Agree Agree Neutral Disagree Strongly Disagree

5b) When faced with obstacles, I usually double my efforts
Strongly Agree Agree Neutral Disagree Strongly Disagree

6b) To avoid disappointment, I don't set my goals too high
Strongly Agree Agree Neutral Disagree Strongly Disagree

7b) Even when things seem hopeless, I keep on fighting to reach my goals
Strongly Agree Agree Neutral Disagree Strongly Disagree

8b) When everything seems to be going wrong, I can usually find a bright side to a situation
Strongly Agree Agree Neutral Disagree Strongly Disagree

9b) I tend to lose interest in things where I can't keep up with others
Strongly Agree Agree Neutral Disagree Strongly Disagree

10b) I find it easy to give up a wish if it seems to difficult
Strongly Agree Agree Neutral Disagree Strongly Disagree

11b) When I run up against insurmountable obstacles, I prefer to look for a new goal
Strongly Agree Agree Neutral Disagree Strongly Disagree

12b) Life is much more pleasurable when I do not expect too much from it
Strongly Agree Agree Neutral Disagree Strongly Disagree

13b) I create many problems for myself due to my high demands
Strongly Agree Agree Neutral Disagree Strongly Disagree

14b) When I have tried hard but cannot solve a problem I find it easy just to leave it unsolved
Strongly Agree Agree Neutral Disagree Strongly Disagree

15b) In general, I am not upset very long about an opportunity passed up
Strongly Agree Agree Neutral Disagree Strongly Disagree

16b) I usually have no difficulties in recognising my limits
Strongly Agree Agree Neutral Disagree Strongly Disagree

17b) I usually find something positive even about giving up something I cherish
Strongly Agree Agree Neutral Disagree Strongly Disagree

18b) I adapt quite easily to changes in plans or circumstances
Strongly Agree Agree Neutral Disagree Strongly Disagree

19b) If I find I can not reach a goal, I'd prefer to change my goals than to keep struggling
Strongly Agree Agree Neutral Disagree Strongly Disagree

20b) After a serious drawback, I soon turn to new tasks
Strongly Agree Agree Neutral Disagree Strongly Disagree

21b) If I don't get something I want, I take it with patience
Strongly Agree Agree Neutral Disagree Strongly Disagree

22b) Faced with a serious problem, I sometimes simply pay no attention to it
Strongly Agree Agree Neutral Disagree Strongly Disagree

23b) Faced with a disappointment, I usually remind myself that other things in life are just as important
Strongly Agree Agree Neutral Disagree Strongly Disagree

24b) I find that even life's troubles have their bright side
Strongly Agree Agree Neutral Disagree Strongly Disagree

25b) I avoid grappling with problems for which I have no solution
Strongly Agree Agree Neutral Disagree Strongly Disagree

26b) It is very difficult for me to accept a setback or defeat
Strongly Agree Agree Neutral Disagree Strongly Disagree

27b) Even when a situation seems hopeless, I still try to master it
Strongly Agree Agree Neutral Disagree Strongly Disagree

28b) I stick to my goals and projects even in face difficulties
Strongly Agree Agree Neutral Disagree Strongly Disagree

29b) When I get into serious trouble, I immediately look how to make the best out of the situation
Strongly Agree Agree Neutral Disagree Strongly Disagree

30b) I'm never really satisfied unless things come up to my wishes exactly
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 7

This section enquires about your experiences early in childhood in order that we can explore people's attitudes to ageing within a life-span context. Should you wish to expand upon any question the facing pages can be used.

1) Please give five words each to describe the relationship you had with your mother and father (or other carers) as a child?

Mother:

Father:

2) How would you summarise the relationship you had with your mother and father as a child?

Father: N/A Excellent Fairly good So-so Poor Very poor
Mother: N/A Excellent Fairly good So-so Poor Very poor

3) What were your family's finances like as a child?
Very problematic Problematic OK Good Very good

4) On the facing page, please describe any serious, stressful and/or life-threatening experiences you had as a child. Please include how old you were at the time, and what you and others did about it.

5) When you were a child, did you experience the loss of either parent? Please include your age at the time.

No Yes mother (your age _____) Yes father (your age _____)

6) Please summarise your stress levels under age 10.

Very stressed Fairly stressed Not stressed Not at all stressed

7) Please indicate your stress levels between 11 and 16.

Very stressed Fairly stressed Not stressed Not at all stressed

8) When you were a child, did either of your parents use sufficient alcohol or drugs to disrupt family life or their jobs?

Alcohol: Yes regularly Occasionally Rarely Never
Drugs: Yes regularly Occasionally Rarely Never

9) Please circle the number of your grandparents with:

a) High blood pressure 0, 1, 2, 3, 4,
b) Heart disease 0, 1, 2, 3, 4, c) Diabetes 0, 1, 2, 3, 4,
d) Stroke 0, 1, 2, 3, 4, e) Cancer 0, 1, 2, 3, 4,
f) Other (please describe on facing page)

10) If applicable, to what age did your grandparents live?

Grandfather 1: Still Alive Lived until age _____
Grandmother 1: Still Alive Lived until age _____
Grandfather 2: Still Alive Lived until age _____
Grandmother 2: Still Alive Lived until age _____

11) How was your grandparents' health in old age?

G'father 1: N/A Excellent Fairly good So-so Poor Very poor
G'mother 1: N/A Excellent Fairly good So-so Poor Very poor
G'father 2: N/A Excellent Fairly good So-so Poor Very poor
G'mother 2: N/A Excellent Fairly good So-so Poor Very poor

12) Please summarise the relationship you had with your grandparents as a child

G'father 1: N/A Very warm Fairly warm So-so Not at all warm
G'mother 1: N/A Very warm Fairly warm So-so Not at all warm
G'father 2: N/A Very warm Fairly warm So-so Not at all warm
G'mother 2: N/A Very warm Fairly warm So-so Not at all warm

13) How often did you visit/see your paternal grandparents?

Daily Weekly 2-3 times monthly 2-5 times annually Rarely

13b) How often did you visit/see your maternal grandparents?

Daily Weekly 2-3 times monthly 2-5 times annually Rarely

14) How often do you use the Internet? 0-4 hours monthly
1-4 hours per week 5-10 hours per week, 10hours+ per week

15) Please use the facing page if there is anything else you would like to add about your childhood experiences including your early relationships with others. Thanks.

SECTION 8

This section asks you about the ways you think about yourself. Please indicate your level of agreement on a scale from **1** (strongly agree) to **6** (strongly disagree).

1) I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people
1 2 3 4 5 6

2) I am quite good at managing the many responsibilities of my daily life
1 2 3 4 5 6

3) In many ways, I feel disappointed with my achievements
1 2 3 4 5 6

4) People rarely talk me into doing things I don't want to do
1 2 3 4 5 6

5) I have confidence in my own options, even if they are contrary to the general censuses
1 2 3 4 5 6

6) I am good at juggling my time to fit everything in that needs to get done
1 2 3 4 5 6

7) I am not the kind of person who give in to social pressures to think or act in certain ways
1 2 3 4 5 6

8) I judge myself by what I think is important, not by the values of what others think is important
1 2 3 4 5 6

9) My decisions are not usually influenced by what everyone else is doing
1 2 3 4 5 6

10) Being happy with myself is more important to me than having others approve of me
1 2 3 4 5 6

11) I am concerned about how other people evaluate the choices I have made in my life
1 2 3 4 5 6

12) Sometimes I change the way I act or think to be more like those around me
1 2 3 4 5 6

13) I tend to worry about what other people think of me
1 2 3 4 5 6

14) I feel as if I've done all there is to do in life
1 2 3 4 5 6

15) I have difficulty arranging my life in a way that is satisfying to me
1 2 3 4 5 6

16) I often feel overwhelmed by my responsibilities
1 2 3 4 5 6

17) I generally do a good job of taking care of my personal finances and affairs
1 2 3 4 5 6

18) The demands of everyday life often get me down
1 2 3 4 5 6

19) I have been able to build a home and a lifestyle for myself that is much to my liking
1 2 3 4 5 6

20) I like most aspects of my personality
1 2 3 4 5 6

21) I tend to be influenced by people with strong opinions
1 2 3 4 5 6

22) It is more important to me to 'fit in' with others than to stand alone on my principles
1 2 3 4 5 6

23) It's difficult for me to voice my own options on controversial matters
1 2 3 4 5 6

24) I do not fit very well with the people around me
1 2 3 4 5 6

25) I live one day at a time and don't think about the future
1 2 3 4 5 6

26) Generally, I feel in charge of the situation in which I live
1 2 3 4 5 6

27) Some people wander aimlessly through life, but I am not one of them
1 2 3 4 5 6

28) In general, I feel I am in charge of my life
1 2 3 4 5 6

29) I often change my mind about decisions if my friends or family disagree
1 2 3 4 5 6

30) When I look at the story of my life, I am pleased with how things have turned out
1 2 3 4 5 6

1. Would you see yourself as someone who:
   a) is depressed, or blue
   Strongly Agree Agree Neutral Disagree Strongly Disagree
   b) is relaxed, handles stress well
   Strongly Agree Agree Neutral Disagree Strongly Disagree
   c) can be tense
   Strongly Agree Agree Neutral Disagree Strongly Disagree
   d) worries a lot
   Strongly Agree Agree Neutral Disagree Strongly Disagree
   e) is emotionally stable, not easily upset
   Strongly Agree Agree Neutral Disagree Strongly Disagree
   f) can be moody
   Strongly Agree Agree Neutral Disagree Strongly Disagree
   g) remains calm in tense situations
   Strongly Agree Agree Neutral Disagree Strongly Disagree
   h) gets nervous easily
   Strongly Agree Agree Neutral Disagree Strongly Disagree
2. I have friends I can turn to for information.
   Strongly Agree Agree Neutral Disagree Strongly Disagree
3. I can depend on my friends for help.
   Strongly Agree Agree Neutral Disagree Strongly Disagree
4. I have friends to talk about the pressures in my life
   Strongly Agree Agree Neutral Disagree Strongly Disagree
5. I believe society will look after me when I am very old
   Strongly Agree Agree Neutral Disagree Strongly Disagree
6. I am positive that others will look after me if I became ill
   Strongly Agree Agree Neutral Disagree Strongly Disagree
7. I know that others will be there for me if I need them
   Strongly Agree Agree Neutral Disagree Strongly Disagree

Final Section

Here we are mainly interested in your general health.

1) Are you a smoker? No, Not any more, Yes light, Yes heavy

2) How would you summarise your stress levels just now?
   Intensely stressed Fairly stressed Some stress No stress

3) Do you experience many problems/hassles each day?
   Intense hassles A lot of hassles Some hassles No hassles

4) Do you feel you have much control in your life just now?
   Little control Some control Lot of control Total control

5) Please rate your agreement with each item below from **1** (strongly agree) to **7** (strongly disagree). Many thanks.

a. I can deal with problems that might arise with age
   1 2 3 4 5 6 7
b. I expect my future old age to be a difficult time of life
   1 2 3 4 5 6 7
c. I expect to be satisfied with my life into old age,.
   1 2 3 4 5 6 7
d. I expect my old age to have many enjoyable experiences
   1 2 3 4 5 6 7

6) Here or on the facing page, please list the things you expect to find positive or enjoyable into your own old age?

6b) How positive or enjoyable are these things for you?
Very positive Fairly positive Somewhat positive Not positive

7) Have you any particular concerns about later life?

7b) How negative or worrying are these concerns for you?
Very negative Fairly negative Somewhat negative Not negative

8) How accepting are you of the ageing process on a scale from **1** (very accepting) to **5** (very unaccepting)?
1 2 3 4 5

9) Have you/do you expect to have many regrets about your life?

10) In the past six weeks, how many times have you exercised in the settings below (for at least 15 minutes)?
a) Outdoors, e.g. gardening, house or car maintenance
   3+ times a week Once a week Once/twice a month Never
b) indoor productive activities, e.g. housework, decorating etc.
   3+ times a week Once a week Once/twice a month Never
c) purposeful walking indoors or outdoors
   3+ times a week Once a week Once/twice a month Never
d) shopping (e.g. continuous walking to/around shops)
   3+ times a week Once a week Once/twice a month Never
e) active leisure activities, e.g. cycling, dancing, aerobics
   3+ times a week Once a week Once/twice a month Never

11) How often do you use a gym or fitness centre?
Never Rarely Once/twice a month Once a week 2+times a week

11b) Into your own old age, how often do you expect/hope to use a gym or fitness centre?
Never Rarely Once/twice a month Once a week 2+times a week

12) Using the scale to follow, please indicate how often would eat the food below through the summer and winter.
1 = Never **2** = Less than once a week **3** = Once a week
4 = Most days **5** = Once a day **6** = More than once a day

a) How often do you generally eat fresh fruit?
   Summer: 1 2 3 4 5 6
   Winter: 1 2 3 4 5 6
b) How often do you generally eat green vegetables?
   Summer: 1 2 3 4 5 6
   Winter: 1 2 3 4 5 6
c) How often do you generally eat salads/raw vegetables?
   Summer: 1 2 3 4 5 6
   Winter: 1 2 3 4 5 6

13) In your old age, how would you expect to rate your diet?
Very unhealthy Fairly unhealthy So-so Fairly healthy Very healthy

14) Listed next are preparations people can make for old age. Please circle the item which best describes your preparations.

Top-up pension? No, Yes, Maybe, Intend to, Unable to
Care if needed? No, Yes, Maybe, Intend to, Unable to
A will? No, Yes, Maybe, Intend to, Unable to
Life insurance? No, Yes, Maybe, Intend to, Unable to
Other savings? No, Yes, Maybe, Intend to, Unable to
Other? (Please describe on facing page).

14b) In future, how much pension do you think people will get for their contributions? a) More than now,
b) Same as now, c) Less than now, d) Much less than now

15) Please summarise one last time your attitude towards your own old age. Many thanks.
Very Negative Negative Neutral Positive Very Positive

16) At about what age would 'old age' be for you? _____

Thank-you for taking part in this research. If there is anything else you would like to add, please use the facing page. Also, please indicate if you would like to receive a summary of this study, its findings and some information on the experience of old age. Thanks again.

Attitudes to Ageing Study

Ann O'Hanlon,
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Dear Web User,

Many thanks for logging on to this page. I am carrying out a study exploring the hopes, fears and concerns adults have towards their own future old age. Your involvement and help with this research would be really appreciated. Specifically, adults aged about 18-100 are being asked to complete a questionnaire as below. You are under no obligation to take part in this study and you may withdraw your consent at any time without penalty. However, by taking part in this questionnaire study you will be helping a postgraduate student with her studies. You will also be helping with research which may be used by health professionals and others to help bring quality of life and health to increased longevity.

Completing this questionnaire may take between 10 and 20 minutes. The questionnaire is mainly interested in your attitudes towards your own future old age; some questions are also asked about your experiences in close relationships. The questions in each of the sections below are exploratory and there are no 'right' or 'wrong' answers. Please answer as many of the questions as you can. The completed questionnaire can then be sent to me electronically by clicking the 'submit button' found below. Alternatively, completed questionnaires can be printed out and then mailed to me on hard copy (address above). **All responses will be received in absolute confidence and no attempt will ever be made to identify respondents.** Specifically, to ensure confidentiality and anonymity, the email system for these pages has been set up so that all returned responses will be recorded solely as having come from null@soton.ac.uk. In addition, immediately questionnaires are received they will be numbered and only this reference number will be used in all subsequent discussion and reporting of the data without exception.

Thank you for taking the time to complete this questionnaire; your thoughts are important and do count. If you have any questions about this study please contact me at the above address. To access the results of this study please contact me and/or check out this website - a summary of the results will be posted here in time. I would also be very grateful if you could distribute this questionnaire website to others so that more people might have the option of taking part in this research. Once again, your time, interest and involvement in this research are really appreciated.

With very best wishes and thanks.

Yours sincerely,
Ann O'Hanlon

Section 1

1) What gender are you? Male

2) What age are you?
19 or less

3) Which of the following best describes your ethnicity? Black

4)Within which country are you completing this questionnaire?
---

5) What is your marital status?
---

6) If applicable, how would you summarise your relationship with your spouse or partner?
---

7) What is the highest level of education you have received?

7b) If relevant, what is your discipline? ---

8) How many children do you have?
None

9) How likely is it that your children will provide you with some help if necessary into your own future old age?
---

10) Do you consider yourself to be part of a religious grouping? If so which?

Other (Please specify)

11) How important is religion/spirituality to you in your life?
Not at All

12) How would you describe your current financial situation, as compared to others in your local community?
---

13) How would you summarise your current health?
---

14) How would you summarise your current energy levels?
---

15) When you think about yur own old age, what kinds of things come to mind?

(Please keep your responses within the width of all the boxes to follow).

16) How do you feel about the prospect of your own future old age?

17) This question asks how much you think about the ageing process. Three short statements follow which are taken from interviews with other research participants. Please read each statement and indicate how true that statement is for you. Many thanks

17a) There is little point in thinking about own future old age, particularly when it is going to happen anyway whether one likes it or not. You just have to accept it and get on with life. I try to keep myself busy and I just don't think about getting older at all. Not true for me

17b) I do think about my own future old age. This does worry me but not too much. Old age needs a bit of studying and it needs some sort of plan however slight. After that, I will just do my best to face any problems that might come along.
Not true for me

17c) I really worry about old age and about what the future will bring. The future is so uncertain for all of us. No one knows what is around the corner or what is likely to happen. Maybe things will work out, or maybe they won't. I just don't know what to do or to think. Not true for me

18) Do you expect your old age to be a difficult experience? Yes very difficult

19) Do you expect your own future old age to have many positive or enjoyable experiences? Yes every day

20) How often to you use the Internet?
1-4 hours per month

Section 2

The following section aims to explore your general attitude towards own future old age. Please indicate your level of agreement with each statement. Thank-you.

1) Old age can be a very happy time of life. Strongly Agree

2) I will have plenty to occupy my time when I am old Strongly Agree

3) I feel content about my own ageing [Strongly Disagree]

4) I see my own old age mainly as a time of loss [Strongly Agree]

5) I expect to feel good about myself when I am very old [Strongly Agree]

6) I worry I will have nothing to offer anyone when I am old [Strongly Agree]

7) I expect to continue learning into my old age [Strongly Agree]

8) I hate the thought of getting older [Strongly Agree]

9) Old age is a time when choice is taken away [Strongly Agree]

10) Old age can bring with it many positive experiences [Strongly Agree]

11) Old age can be a time of new opportunities [Strongly Agree]

12) Many of the things I have done will live on after me [Strongly Agree]

13) Old age is not a worry for me [Strongly Agree]

14) I think things will work out just fine for me into old age [Strongly Agree]

15)There is nothing positive about old age [Strongly Agree]

16) I have no anxiety about getting older [Strongly Agree]

17) I have never been bothered by my own ageing [Strongly Agree]

18) Ageing for me has always been a wonderful thing [Strongly Agree]

19) I expect to feel good about myself when I am very old [Strongly Agree]

20) Life loses its meaning when you become old [Strongly Agree]

21) I expect to feel good about life when I am very old [Strongly Agree]

22) I feel really worried when I think how short life is. [Strongly Agree]

23) I feel very positive about my own future old age [Strongly Agree]

24) Into old age I will be glad to have gained more experience of life [Strongly Agree]

25) I feel very positive about my own future old age [Strongly Agree]

26) Even into old age I expect to retain interest in activities that will expand my horizons Strongly Agree

27) I believe that life is meant to be enjoyed, no matter what age a person is Strongly Agree

28) Even into old age I think it is important to have new experiences that challenge the way one thinks Strongly Agree

29) Even into my old age, I am sure others will look to me for advice Strongly Agree

30) Even when I am much older, I still expect to have a lot of things I can pass on to others Strongly Agree

31) I still expect to support my family, emotionally, even when I am very old Strongly Agree

32) Even when I am old, I expect there will be others who will still need me Strongly Agree

33) I expect to be making a positive contribution to the welfare of my family, even into old age Strongly Agree

---

Section 3

In this section we are interested in the levels of knowledge people have about the latter part of the lifecycle. Please indicate your level of agreement with each item. Many thanks.

1) Most adults can remain physically active into advanced old age if they look after themselves. Strongly Agree

2) Most older people are in chronic pain. Strongly Agree

3) From about age 70 onwards, high levels of dependence on others is guaranteed Strongly Agree

4) Most people into old age have regular contact with others. Strongly Agree

5) The vast majority of older adults can expect to have really serious problems remembering things Strongly Agree

6) Most older adults become disinterested in life and in other people Strongly Agree

7) Older adults have an important role to play in guiding younger generations Strongly Agree

8) Personal development continues into advanced old age [Strongly Agree]

9) Most older adults have difficulty making ends meet. [Strongly Agree]

11) Older adults are a drain on national healthcare systems. [Strongly Agree]

12) Generally, older people are relatively helpless when faced with problems or challenges [Strongly Agree]

13) At some point, most older adults live in residential care. [Strongly Agree]

Section 4

The following statements concern the ways adults feel in romantic relationships. We are not just interested in what is happening in your current relationship, but in the way you generally experience relationships, particularly if you are now single. Please indicate your level of agreement with each of the statements below. Thanks again for taking part in this research.

1) I prefer not to show a partner how I feel deep down. [---]

2) I worry about being abandoned. [---]

3) I am very comfortable being close to romantic partners. [---]

4) I worry a lot about my relationships. [---]

5) Just when my partner starts to get close to me I find myself pulling away. [---]

6) I worry that romantic partners wont care about me as much as I care about them. [---]

7) I get uncomfortable when a romantic partner wants to be very close. [---]

8) I worry a fair amount about losing my partner. [---]

9) I don't feel comfortable opening up to romantic partners. [---]

10) I often wish that my partner's feelings for me were as strong as my feelings for him/her. [---]

11) I want to get close to my partner, but I keep pulling back. [---]

12) I often want to merge completely with romantic partners, and this sometimes scares them away. ---

13) I am nervous when partners get too close to me. ---

14) I worry about being alone. ---

15) I feel comfortable sharing my private thoughts and feelings with my partner. ---

16) My desire to be very close sometimes scares people away. ---

17) I try to avoid getting too close to my partner. ---

18) I need a lot of reassurance that I am loved by my partner. ---

19) I find it relatively easy to get close to my partner. ---

20) Sometimes I feel that I force my partners to show more feeling, more commitment. ---

21) I find it difficult to allow myself to depend on romantic partners. ---

22) I do not often worry about being abandoned. ---

23) I prefer not to be too close to romantic partners. ---

24) If I can't get my partner to show interest in me, I get upset or angry. ---

25) I tell my partner just about everything. ---

26) I find that my partner(s) don't want to get as close as I would like. ---

27) I usually discuss my problems and concerns with my partner. ---

28) When I'm not involved in a relationship, I feel somewhat anxious and insecure. ---

29) I feel comfortable depending on romantic partners. ---

30) I get frustrated when my partner is not around as much as I would like. ---

31) I don't mind asking romantic partners for comfort, advice, or help.

---

32) I get frustrated if romantic partners are not available when I need them.
---

33) It helps to turn to my romantic partner in times of need. ---

34) When romantic partners disapprove of me, I feel really bad about myself.
---

35) I turn to my partner for many things, including comfort and reassurance.
---

36) I resent it when my partner spends time away from me ---

Section 5

This is the very last section. Again, taking the time to complete these questions is really appreciated.

1) Is there anything else that you would like to add about your attitudes towards own old age, your experiences in relationships generally, and/or about filling in this questionnaire?

2) Are you aware of age related macular degeneration? -

Thank-you for completing the above questionnaire and for giving the time to talk about your thoughts and feelings on a range of personal issues. Your time, interest and involvement are really appreciated. When ready to submit your questionnaire anonymously, please press the 'Submit Completed Questionnaire Now' button found just below. Thanks again.

* For the above information to be submitted electronically, a fictitious name needs to be included in this box. To maintain anonymity, this should not be your real name.

t Completed Questionnaire Now

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Dear Participant,

Attitudes to Ageing Study

A little while ago you very kindly took part in a research study which aimed to explore adults' attitudes towards their own future old age. It is important to explore this issue because people are living longer than ever before and it may be that attitudes are influential factors in adding quality of life and health to these increased years. The questionnaire data recently gathered is currently being analysed and we hope to distribute the findings soon to everyone who indicated they would like a copy.

Your help with the second part of this study would again be really appreciated. This second part is a continuation of the first study and it aims to explore what influence if any, adults' experiences in relationships might have on general attitudes to ageing. This questionnaire is enclosed and as before you are simply asked to tick the relevant boxes and return the questionnaire in the enclosed prepaid envelope.

You are under no obligation to take part in this research. However, in recognition and appreciation for your valuable time we expect to offer every participant to this research a range of free gifts and £20 cash to all participants who are willing to help with follow-up life story interviews. I am also happy to distribute to you more information about this research, the specific questions being asked, our findings and the ways this information is being used to help others and advance our understanding of adult development and ageing. As this research is also being carried out in part for a doctoral degree, your time and involvement will also help me, a postgraduate student, with my course.

All returned questionnaires will be received in total confidence, and the privacy and anonymity of participants will be respected at all times. To ensure confidentiality all identifying information will be removed from questionnaires, and stored separately and securely for a minimum length of time and for as a long as participants wish to remain in the study. The only people to have access to questionnaires with identifying information will be myself and Prof. Peter Coleman who is supervising this research. However we will not disclose identifying information to anyone. In addition, our interest is at a group level and particularly in identifying trends across hundreds of individuals at a time. Nevertheless, should you have any queries about any aspect of this research, please do not hesitate to get in touch. I am happy to answer any questions or queries you might have.

Thank you again for your time, interest and involvement in this research; your thoughts are very important and do count. Thanks to you we can do this research and hopefully improve the experience of ageing and old age for many more people.

Very best wishes.

Yours sincerely,

Ann O'Hanlon

Adult Development and Ageing Study

While some questions to follow ask you to write your answers in the spaces provided, most simply ask you to circle a word or group of words (see example). Should you wish to expand upon any answer, the facing pages can be used.

Example

There are not enough nature programmes on television.

a) Strongly Agree b) Agree c) Disagree d) Strongly Disagree

SECTION 1

1) What gender are you? Male Female

2) How often each month would you attend a religious or church meeting?

3) Which of the following, best summarises your financial situation?

a) I have more money than I need,
b) I have just enough money for my needs
c) I do not have enough money for my needs

3) Generally, which one of the following best describes the way you relate to your immediate family? Please rate between **1** (very unlike me) and **5** (very like me).

a) generally open and warm and we maintain close regular contact; when problems arise we talk things through
1 2 3 4 5

b) supportive when necessary, but generally everyone is just really busy and we all like to do our own things
1 2 3 4 5

c) we are a very emotional and loving family; I worry about my family a lot and feel uncomfortable when without them
1 2 3 4 5

d) something else (please describe on facing page)

4) How many hours if any, do you spend each month doing voluntary work?

5) How many hours if any, do you spend each month on the Internet?

SECTION 2

The following section aims to explore your attitudes to general aspects of your own future old age. Please indicate your level of agreement with each statement.

1) Life loses its meaning when you become old
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I see my own old age mainly as a time of loss
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) Old age can be a very happy time of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I worry I will have nothing to offer others when I am old
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) I feel content about my own ageing
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) Into my own future old age I expect I will have many regrets about wasting so much of my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) Into my own old age, I worry that people will think of me as being unimportant
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) Into my own old age, I will expect to be fit and to stay in shape
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) Into my old age I worry about being in moderate pain
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) Even into my own old age, I still expect I will look physically well
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I am confident that others will see to it that I have enough food to eat in my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) Into old age, I expect to gain a lot of enjoyment in following the activities of younger people
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) When I reach old age I expect I will feel more at peace with myself
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) Into my own future old age I expect I will have many regrets about not achieving all that I could have done
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I worry I will be criticised by others just for being old
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) Into old age I worry about having heart problems
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) I expect to remain physically resilient into my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I believe people are generally helpful towards older adults
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I am looking forward to having more time to spend with others into my old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) As I get older I expect to know myself really well
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) I expect I will enjoy talking to older adults, even when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) Into my own old age, I expect I will feel incredibly sad about the choices I made in my life
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) I really worry that people will ignore me when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) I am really worried about the possibility of even relatively minor health problems into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I believe that I will still be able to do most things for myself when I am very old.
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) Into later life I expect to chat to lots of really nice people
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) Into my own future old age, I expect to feel content about the way my life has gone
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) Into old age, I expect I will be concerned about losing the respect of other people
Strongly Agree Agree Neutral Disagree Strongly Disagree

29) Into my own old age I expect I will be really bothered that I cannot re-live my life again
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) As I get older I find myself becoming really worried about my health
Strongly Agree Agree Neutral Disagree Strongly Disagree

31) I am sure things will work out fine for me into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

32) Into old age I really worry about being treated as a body rather than as a whole person
Strongly Agree Agree Neutral Disagree Strongly Disagree

33) Into old age I worry about getting stomach upsets
Strongly Agree Agree Neutral Disagree Strongly Disagree

34) Even into later life, I am sure that life will offer me many opportunities for development and growth
Strongly Agree Agree Neutral Disagree Strongly Disagree

35) Into later life I expect I will be much more accepting of myself
Strongly Agree Agree Neutral Disagree Strongly Disagree

36) Into my old age, I will be glad to have gained more experience of life
Strongly Agree Agree Neutral Disagree Strongly Disagree

37) In my old age, society will see to it I have enough fuel to keep warm
Strongly Agree Agree Neutral Disagree Strongly Disagree

38) Even into my old age, I am sure others will look to me for advice
Strongly Agree Agree Neutral Disagree Strongly Disagree

39) Even when I am much older, I still expect to have a lot of things I can pass on to others
Strongly Agree Agree Neutral Disagree Strongly Disagree

40) I still expect to support my family, emotionally, even when I am very old
Strongly Agree Agree Neutral Disagree Strongly Disagree

41) Even when I am old, I expect there will be others who will still need me
Strongly Agree Agree Neutral Disagree Strongly Disagree

42) I expect to be making a positive contribution to the welfare of my family, even into old age
Strongly Agree Agree Neutral Disagree Strongly Disagree

SECTION 3

In this section we are interested in the way you perceive problems generally. Please indicate which of the 2 items (A or B) best describes you.

A: I concentrate all my energy on a few things, or
B: I divide my energy among many things
A or B?

A: When I think about what I want in life, I commit myself to one or two important goals
B: Even when I really consider what I want in life, I wait and see what happens, instead of committing myself to just one or two particular goals
A or B?

A: I am always working on several goals at once, or
B: I always focus on the one most important goal at a given time **A or B?**

A: When things don't go as well as before, I still try to keep all my goals
B: When things don't do as well as before, I chose one or two important goals
A or B?

A: When I can't do something important the way I did before, I look for a new goal
B: When I can't do something important the way I did before, I distribute my time among many things
A or B?

A: When I can't do something as well as I used to, I wait and see what comes
B: When I can't so something as well as I used to, I think about what exactly is important to me **A or B?**

A: I keep working on what I have planned until I succeed
B: When I do not succeed right away at what I want to do, I don't try any other possibilities for long
A or B?

A: I prefer to wait for a while and see if things will work out by themselves
B: I make every effort to achieve a given goal
A or B?

A: When something matters to me I devote myself fully and completely to it
B: Even when something matters to me, I still have a hard time devoting myself fully and completely to it
A or B?

A: When things don't go as well as they used, I accept it
B: When things don't go as well as they used to, I keep trying other ways of working until the result is achieved
A or B?

A: When something in my life isn't working as well as it should, I ask others for advice or help
B: When something in my life isn't working as well as it used to, I decide what to do about it myself, without involving other people **A or B?**

SECTION 4

This section enquires about your experiences early in childhood. Should you wish to expand upon any question the facing pages can be used.

1) How would you summarise the relationship you had with your mother and father as a child?
Father: Excellent Very good Good Fair Poor Very Poor
Mother: Excellent Very good Good Fair Poor Very Poor

2)Did you have many chores to do when growing up?
A lot Quite a bit Some A little Practically none

3) The following items came from statements others made about their childhood experiences. Please indicate how accurate this action was for you when you were upset as a child; please rate each item on a scale from **1** (not very like me) to **5** (very like me).

Generally, when I was upset as a child
a) I would have tantrums in front of others
1 2 3 4 5

b) I would try to ignore or forget the way I felt
1 2 3 4 5

c) I used to get really angry, even in public places, such as shops.
1 2 3 4 5

Contd.: 1 (not very like me) to **5** (very like me)

d) I would try to please others
1 2 3 4 5

e) I would cry really loudly just to get people's attention
1 2 3 4 5

f) I would take myself off somewhere away from others
1 2 3 4 5

g) I could be very coy and sweet to get what I wanted
1 2 3 4 5

h) I would cry a lot but only in private
1 2 3 4 5

i) I was always unsure about what to do
1 2 3 4 5

j) I would get relay distressed but only when I was on my own
1 2 3 4 5

k) I would look for other people to help
1 2 3 4 5

l) I would distract myself, e.g. by reading a book
1 2 3 4 5

m) I would scream and shout just to get my own way
1 2 3 4 5

n) quite quickly, I would forget who I was angry with
1 2 3 4 5

o) I would hit out at adults
1 2 3 4 5

p) I would keep myself busy
1 2 3 4 5

q) I would demand attention or assistance from others
1 2 3 4 5

r) I would just quietly get on with what had to be done
1 2 3 4 5

s) I would lay on the drama to get attention
1 2 3 4 5

t) I very rarely got upset as a child
1 2 3 4 5

u) I used to try to think through the problem from the other person's perspective
1 2 3 4 5

v) I would always feel confident that things would work out just fine
1 2 3 4 5

x) I always knew someone would be there to comfort me
1 2 3 4 5

y) I always knew I could trust others to help me
1 2 3 4 5

4) Using the scale from **1** (strongly disagree) to **5** (strongly agree) please tell us about your early family experiences.

<u>In our family, when I was a child;</u>

a) Our family tended to move from one crisis to another
1 2 3 4 5

b) Our meals were at set times most days
1 2 3 4 5

c) Our family life tended to be fairly chaotic and disorganised
1 2 3 4 5

d) I could expect to be punished if I broke the rules
1 2 3 4 5

e) Lots of people would come and go all the times
1 2 3 4 5

f) We had few rules or regulations
1 2 3 4 5

g) Parents/guardians generally knew where I was or who I was with
1 2 3 4 5

h) I was rarely disciplined
1 2 3 4 5

I) Getting ready for bed was a difficult and time consuming process
1 2 3 4 5

j) My parents had certain expectations they wanted to be met
1 2 3 4 5

k) When adults said to do something, it was usually better to do as they wanted
1 2 3 4 5

l) No one really listened to anyone else
1 2 3 4 5

m) Each day followed a similar pattern
1 2 3 4 5

5) The next set of questions enquire about the relationship you had with your mother (or other primary carer) as a child.

<u>When I was a child, my mother (or _____);</u>

a) encouraged me to make my own decisions
Strongly Disagree Disagree Neutral Agree Strongly Agree

b) helped me learn to be independent
Strongly Disagree Disagree Neutral Agree Strongly Agree

c) felt she had to fight my battles for me when I had a disagreement with a teacher or friend
Strongly Disagree Disagree Neutral Agree Strongly Agree

d) was overprotective of me
Strongly Disagree Disagree Neutral Agree Strongly Agree

e) encouraged me to do things for myself
Strongly Disagree Disagree Neutral Agree Strongly Agree

f) could always be depended upon when I really needed her help and trust
Strongly Disagree Disagree Neutral Agree Strongly Agree

g) did not let me do things that other children my age were allowed to do
Strongly Disagree Disagree Neutral Agree Strongly Agree

h) sometimes disapproved of specific things I did, but never gave me the feeling she disliked me as a person
Strongly Disagree Disagree Neutral Agree Strongly Agree

i) enjoyed being with me
Strongly Disagree Disagree Neutral Agree Strongly Agree

j) was someone I found very difficult to please
Strongly Disagree Disagree Neutral Agree Strongly Agree

k) usually supported me when I wanted to do new and exciting things
Strongly Disagree Disagree Neutral Agree Strongly Agree

l) worried too much that I would hurt myself or get sick
Strongly Disagree Disagree Neutral Agree Strongly Agree

m) was often rude to me
Strongly Disagree Disagree Neutral Agree Strongly Agree

n) rarely did things with me
Strongly Disagree Disagree Neutral Agree Strongly Agree

o) didn't like to have me around the house
Strongly Disagree Disagree Neutral Agree Strongly Agree

p) would often do things for me I could do for myself
Strongly Disagree Disagree Neutral Agree Strongly Agree

q) let me handle my own money
Strongly Disagree Disagree Neutral Agree Strongly Agree

r) encouraged me to try things my way
Strongly Disagree Disagree Neutral Agree Strongly Agree

s) did not want me to grow up
Strongly Disagree Disagree Neutral Agree Strongly Agree

t) tried to make me feel better when I was unhappy
Strongly Disagree Disagree Neutral Agree Strongly Agree

u) encouraged me to express my own opinion
Strongly Disagree Disagree Neutral Agree Strongly Agree

v) made me feel that I was a burden to her
Strongly Disagree Disagree Neutral Agree Strongly Agree

w) gave me the feeling that he/she liked me as I was; she didn't feel he/she had to make me over into someone else
Strongly Disagree Disagree Neutral Agree Strongly Agree

6) Please summarise the relationship you had with your grandparents as a child

G'father 1: N/A Very warm Fairly warm So-so Not at all warm
G'mother 1: N/A Very warm Fairly warm So-so Not at all warm
G'father 2: N/A Very warm Fairly warm So-so Not at all warm
G'mother 2: N/A Very warm Fairly warm So-so Not at all warm

7) Please use the facing page if there is anything else you would like to add about your childhood experiences including your early relationships with others. Thanks.

SECTION 5

This section explores the experiences you have (or have had) in romantic relationships. Again your time is really appreciated.

1) Which of the following best describes your experiences in romantic relationships? One response is preferred but if more than one answer is necessary please rate between **1** (very unlike me) and **5** (very like me). Thanks.

a) It is relatively easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

b) I am somewhat uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I sometimes worry that I will be hurt if I allow myself to become too close to others.

c) I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

d) I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

e) Other (please describe on facing page)

Please rate your agreement below

1) I prefer not to show a partner how I feel deep down.
Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I worry about being abandoned.
Strongly Agree Agree Neutral Disagree Strongly Disagree

3) I am very comfortable being close to romantic partners.
Strongly Agree Agree Neutral Disagree Strongly Disagree

4) I resent it when my partner spends time elsewhere
Strongly Agree Agree Neutral Disagree Strongly Disagree

5) Just when my partner starts to get close to me I find myself pulling away.
Strongly Agree Agree Neutral Disagree Strongly Disagree

6) I worry that romantic partners wont care about me as much as I care about them.
Strongly Agree Agree Neutral Disagree Strongly Disagree

7) I get uncomfortable when a romantic partner wants to be very close.
Strongly Agree Agree Neutral Disagree Strongly Disagree

8) I worry a fair amount about losing my partner.
Strongly Agree Agree Neutral Disagree Strongly Disagree

9) I don't feel comfortable opening up to romantic partners.
Strongly Agree Agree Neutral Disagree Strongly Disagree

10) I worry a lot about my relationships.
Strongly Agree Agree Neutral Disagree Strongly Disagree

11) I often wish that my partner's feelings for me were as strong as my feelings for him/her.
Strongly Agree Agree Neutral Disagree Strongly Disagree

12) I worry about being alone.
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) I want to get close to others, but I keep pulling back.
Strongly Agree Agree Neutral Disagree Strongly Disagree

14) I often want to merge completely with romantic partners, and this sometimes scares them away.
Strongly Agree Agree Neutral Disagree Strongly Disagree

15) I am nervous when partners get too close to me.
Strongly Agree Agree Neutral Disagree Strongly Disagree

16) I feel comfortable sharing my private thoughts and feelings with my partner.
Strongly Agree Agree Neutral Disagree Strongly Disagree

17) My desire to be very close can scare people away.
Strongly Agree Agree Neutral Disagree Strongly Disagree

18) I try to avoid getting too close to my partner.
Strongly Agree Agree Neutral Disagree Strongly Disagree

19) I need a lot of reassurance that I am loved by my partner
Strongly Agree Agree Neutral Disagree Strongly Disagree

20) I find it relatively easy to get close to my partner.
Strongly Agree Agree Neutral Disagree Strongly Disagree

21) Sometimes I feel that I force my partners to show more feeling, more commitment.
Strongly Agree Agree Neutral Disagree Strongly Disagree

22) I feel comfortable depending on romantic partners.
Strongly Agree Agree Neutral Disagree Strongly Disagree

23) I get frustrated when my partner is not around as much as I would like.
Strongly Agree Agree Neutral Disagree Strongly Disagree

24) I don't mind asking romantic partners for comfort, advice, or help.
Strongly Agree Agree Neutral Disagree Strongly Disagree

25) I get frustrated if romantic partners are not available when I need them.
Strongly Agree Agree Neutral Disagree Strongly Disagree

26) It helps to turn to my partner in times of need.
Strongly Agree Agree Neutral Disagree Strongly Disagree

27) When romantic partners disapprove of me, I feel really bad about myself.
Strongly Agree Agree Neutral Disagree Strongly Disagree

28) I turn to my partner for many things, including comfort and reassurance.
Strongly Agree Agree Neutral Disagree Strongly Disagree

29) I find it difficult to allow myself to depend on others
Strongly Agree Agree Neutral Disagree Strongly Disagree

30) I do not often worry about being abandoned.
Strongly Agree Agree Neutral Disagree Strongly Disagree

31) I prefer not to be too close to romantic partners.
Strongly Agree Agree Neutral Disagree Strongly Disagree

32) If I can't get my partner to show interest in me, I get upset or angry.
Strongly Agree Agree Neutral Disagree Strongly Disagree

33) I tell my partner just about everything.
Strongly Agree Agree Neutral Disagree Strongly Disagree

34) When I'm not involved in a relationship, I feel somewhat anxious and insecure.
Strongly Agree Agree Neutral Disagree Strongly Disagree

35) I usually discuss my concerns with my partner
Strongly Agree Agree Neutral Disagree Strongly Disagree

36) My partners don't want to get as close as me
Strongly Agree Agree Neutral Disagree Strongly Disagree

Final Section

1) Please summarise your general stress levels.
Intensely stressed Fairly stressed Some stress No stress

2) Do you experience many problems/hassles each day?
Intense hassles A lot of hassles Some hassles No hassles

3) Do you feel you have much control in your life?
Little control Some control Lot of control Total control

4) Please rate your agreement with each item below from **1** (strongly agree) to **7** (strongly disagree). Many thanks.

a. In most ways, my life is close to my ideal.
1 2 3 4 5 6 7

b. The conditions of my life are excellent.
1 2 3 4 5 6 7

c. I am satisfied with my life now
1 2 3 4 5 6 7

d. So far I have gotten the important things I want in life.
1 2 3 4 5 6 7

e. If I could live my life over, I would change almost nothing.
1 2 3 4 5 6 7

f. I expect my future old age to be a difficult time of life
1 2 3 4 5 6 7

g. I feel I am fulfilling (or I have fulfilled) most of my potential
1 2 3 4 5 6 7

h. I have regrets that I did not do more with my life
1 2 3 4 5 6 7

j. I expect to be satisfied with my life into old age.
1 2 3 4 5 6 7

k. Into my old age, I expect I will have achieved the important things I want in life.
1 2 3 4 5 6 7

5. In uncertain times, I usually expect the best.
Strongly Agree Agree Neutral Disagree Strongly Disagree

6. I have friends I can turn to for information.
Strongly Agree Agree Neutral Disagree Strongly Disagree

7. If something can go wrong for me, it will.
Strongly Agree Agree Neutral Disagree Strongly Disagree

8. I'm always optimistic about my future.
Strongly Agree Agree Neutral Disagree Strongly Disagree

9. Overall, I expect more good things to happen to me than bad.
Strongly Agree Agree Neutral Disagree Strongly Disagree

10. I can depend on my friends for help.
Strongly Agree Agree Neutral Disagree Strongly Disagree

11. I can do just about anything that I set my mind to do
Strongly Agree Agree Neutral Disagree Strongly Disagree

12. What happens in the future mostly depends on me
Strongly Agree Agree Neutral Disagree Strongly Disagree

13) I still enjoy the things I used to enjoy
a) Definitely as much b) Not quite so much
c) Only a little d) Hardly at all

14) I can laugh and see the funny side of things
a) As much as ever b) Not quite so much now
c) Definitely not so much now d) Not at all

15) In your old age, how would you expect to rate your diet?
Very unhealthy Fairly unhealthy So-so Fairly healthy Very healthy

16) In old age, how would you expect to rate your finances?
Very good Fairly good So-so Problematic Very problematic

17) Please think about your own future old age and then list five words that might accurately describe you then.

18) Here/on facing page, please list 3 goals that are important to you or that you are typically trying to achieve now.
a)

b)

c)

25) Please summarise your attitude to your own old age.
Very Positive Positive Neutral Negative Very Negative

25b) How strongly held is this attitude?
Very strong Fairly strong Not very strong Not at all strong

25c) How long have you had this particular attitude?
10+ years 5-10 years 1-4 years Within the past year

26) At about what age would 'old age' be for you?

Thank-you for taking part in this research. Your time, interest and involvement are really appreciated. If there is anything else you would like to add, please use the facing page. Thanks again.

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