The role of stereotypes in age discrimination in hiring: Evaluation and intervention

Eyal Gringart
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The Role of Stereotypes in Age Discrimination in Hiring: Evaluation and Intervention

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A thesis submitted in fulfilment of the requirements
For the award of Doctor of Philosophy (Psychology)
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USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.
Abstract

As the number of older adults grows, governments find it increasingly harder to support them through social and health care services. One solution to this problem is for older adults to remain in paid employment longer. However, older workers are discriminated against due to negative stereotyping by employers. Previous research has found that older females experienced greater discrimination than did older males. In order to address the issue of hiring discrimination against older adults a progressive two-stage research project was conducted. Using a questionnaire that was developed especially for this project, Study One explored the stereotypes held about older workers of both genders among Australian employers and undergraduates, using a national random sample of 128 companies across industries and 187 undergraduates across disciplines. Study One used a 2 x 2 factorial design with sample (employers and undergraduates) and questionnaire version (asking about older males or females) as the independent variables. There were three continuous dependent variables (DVs): 'sum of scale' - a sum of the ratings of the questionnaire's stereotype scale, 'likely to hire' - ratings of respondents' likelihood to hire older workers, and 'age relevance' - ratings of how important respondents' viewed age in making hiring decisions. The results showed systematic stereotyping among both samples with no significant differences across questionnaire version. Both samples indicated that they were less than likely to hire older workers and viewed age as relevant in hiring. Study Two was designed to test two interventions that were aimed to promote positive attitude changes toward older workers. It comprised two stages and used a randomised-controlled trial. In the first stage, respondents were sent one of three intervention materials. One involved inducing cognitive dissonance. Another involved a fact sheet that presented the misconceptions about older workers that were
identified in Study One and contrasted them with empirical data. The third was a combination of the other two. In the second, testing stage, those who responded to the intervention plus a new control group were all sent questionnaires to assess the effects of the interventions. Intervention materials were posted to a national random sample of 900 companies across industries and to 147 undergraduate research volunteers. At the testing stage 556 employers and 137 undergraduates were addressed. Ninety-seven undergraduates and 267 employers responded. The first stage of Study Two used a 2 x 2 x 2 between subjects design with cognitive dissonance (yes or no), fact sheet (yes or no), and sample (employers and undergraduates) as the independent variables. There were four dependent variables: 'age preference' - respondents' general age preference in hiring, 'sum of scale', 'age relevant', and 'likely to hire'. The last three DVs were based on those used in Study One. The results of Study Two showed no significant differences between either the fact sheet or the cognitive dissonance conditions and controls. The cognitive dissonance and fact sheet combination showed significant positive effects among employers but not among undergraduates. Employers in the combination condition had significantly higher mean 'sum of scale' and 'age preference' scores, and indicated that they were more than likely to hire older workers whilst all other conditions were less than likely to do so. These significant effects in the employers' sample make a case for using the cognitive dissonance and fact sheet combination method in combating hiring discrimination against older workers. The results suggest that the drive to reduce cognitive dissonance could be harnessed to change stereotypes. Finally, the results emphasise the potential of psychological interventions to bring about social changes and to enhance compliance with legislation.
DECLARATION

I certify that this thesis does not, to the best of my knowledge and belief:

(I) incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education;

(II) contain any material previously published or written by another person except where due reference is made in the text; or

(III) contain any defamatory material.

Signature:

Date: 4/6/2003
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TABLE OF CONTENTS

CHAPTER 1
Introduction

CHAPTER 2
Ramifications of Population Ageing and the Employability of Older Adults
- Population Ageing ...................................................... 20
- Ageism .................................................................. 23
- Ageism and Sexism ............................................. 27
- The Willingness of Older Adults to Work and the Psychological Aspects of Work in Older Adulthood ......................... 29
- Health and Performance Abilities of Older Adults ........ 32
- Older Adults in the Workforce ..................................... 39
- Age Discrimination in Hiring ........................................ 53
- Government Undertakings to Combat Age Discrimination ...... 56
- Conclusion .............................................................. 60

CHAPTER 3
Measuring Ageist Stereotypes

CHAPTER 4
Measuring Stereotypes Held About Older Workers: An Empirical Study
- Method .................................................................. 75
- Results ................................................................... 81
- Discussion ........................................................... 95
### CHAPTER 5
**Combating Stereotyping and Discrimination of Older Workers**

- Combating Hiring Discrimination ........................................... 110
- Strategies to Combat Ageism .............................................. 113
- Stereotyping and Discrimination ......................................... 121
- Promising Interventions .................................................. 135

### CHAPTER 6
**Testing Interventions to Reduce Hiring Discrimination Against Older Adults**

- Method ........................................................................ 150
- Results ................................................................. 162
- Discussion ............................................................... 186

### CHAPTER 7
**Overall Discussion**

- Relevance of the Findings of the Project ......................... 211
- Validation of Findings and Prospective Implementation .... 212
- A Model for Changing Attitudes and Stereotype-Based Behaviours ........................................... 215
- Strengths of the Current Project ....................................... 216
- Limitations of the Current Project ..................................... 219
- Avenues for Future Research ............................................. 221
- Summary ................................................................ 223

### REFERENCES
List of Appendices

Appendix A 245
Questionnaire Pilot Testing

Appendix B 248
Sampling and Randomization

Appendix C 253
Examples of Questionnaire Cover Letters and Follow-Ups that were Used in Study One

Appendix D 258
An Example of the Questionnaire that was Used in Study One

Appendix E 266
An Example of a Fact Sheet produced by the Australian Government

Appendix F 268
Examples of The Intervention Materials that were Used in Study Two

Appendix G 275
Examples of Questionnaire Cover Letters and Follow-Ups that were Used in Study Two at the Testing Stage.

Appendix H 279
Examples of the Age Preference Question and the Questionnaire that were Used in Study Two.
List of Tables

Table 1
Alpha values by group (Study One)

Table 2
Item means and standard deviations by group (Study One)

Table 3
Mean scores for Sum of scale, Age relevance, and Likely to hire (Study One)

Table 4
Undergraduates' mean scores for Sum of scale, Age relevance, and Likely to hire as a function of respondents' sex (Study One)

Table 5
Undergraduates' mean scores for Sum of scale, Age relevance, and Likely to hire as a function of age and questionnaire version (Study One)

Table 6
Employers' male version group. Attributes for which older male workers were viewed as better or lesser compared with younger workers (Study One)

Table 7
Employers' female version group. Attributes for which older female workers were viewed as better or lesser compared with younger workers (Study One)

Table 8
Undergraduates' male version group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study One)
Table 9
Undergraduates' female version group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study One)

Table 10
Alpha values by group (Study Two)

Table 11
Stereotype scale item means and standard deviations by employers groups (Study Two)

Table 12
Stereotype scale item means and standard deviations by undergraduates groups (Study Two)

Table 13
Mean scores for Age preference, Sum of scale, and Age relevant (Study Two)

Table 14
Mean employers likely to hire score as a function of group (Study Two)

Table 15
Mean employers scores for age preference, sum of scale, age relevant, and likely to hire by sex of respondent (Study Two)

Table 16
Mean employers scores for age preference, sum of scale, age relevant, and likely to hire by respondents age (Study Two)

Table 17
Mean undergraduates scores for age preference, sum of scale, age relevant, and likely to hire by respondents age (Study Two)
Table 18

Employers' cognitive dissonance group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study Two)

Table 19

Employers' fact sheet group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study Two)

Table 20

Employers' cognitive dissonance and fact sheet group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study Two)

Table 21

Employers' control group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study Two)

Table 22

Undergraduates' cognitive dissonance group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study Two)

Table 23

Undergraduates' fact sheet group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study Two)

Table 24

Undergraduates' cognitive dissonance and fact sheet group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study One)

Table 25

Undergraduates' control group. Attributes for which older workers were viewed as better or lesser compared with younger workers (Study Two)
List of Figures

Figure 1 88
Mean undergraduates likely to hire scores as a function of sex and questionnaire version (Study One)

Figure 2 170
Mean employer sum of scale scores as a function of cognitive dissonance and fact sheet (Study Two)

Figure 3 171
Mean employer likely to hire score as a function of cognitive dissonance and fact sheet (Study Two)
CHAPTER 1

Introduction

Issues related to population ageing are becoming increasingly prominent in Australia. The combination of medical advances and improved public health that contribute to longevity, together with the advancing age of the baby boom generation, and the lower fertility rates of subsequent generations has led to a significant growth of the population of older adults. As the number of older adults grows, governments will find it increasingly hard to support them through social and health care services.

One solution to this problem is for older adults to remain in paid employment longer (Bishop, 1999; House of Representatives Standing Committee on Employment, 2000). Nevertheless, older adult job seekers are discriminated against compared to younger job seekers. This discrimination is counter-productive on four counts. First, it provides younger people with a grim outlook on their future prospects as older adults. Second, it could mean the best person for the job is overlooked in cases where it would be an older job seeker. Third, it makes older adult job seekers increasingly frustrated, leading to increased levels of mental health problems in this age group. Fourth, if such hiring discrimination against older adults continues as the baby boom generation advances in age it will compound social difficulties due to the large number of people in this cohort. Research indicates that employers view older workers as stereotypically inferior compared with younger workers, even though this is not in accord with empirical evidence of older adults’ actual work performance.

This thesis presents a two-stage research project in the area of age discrimination against older adults in hiring in Australia. Study One examined a
number of stereotypes that were found in the literature about older adult workers. A questionnaire was developed that assessed the validity of these stereotypes in random samples of both the undergraduate and employer populations. This study also explored issues related to the hiring of older adults that were not addressed in the literature. Information that was gathered in Study One was used to inform the design of Study Two. This study involved three interventions that were aimed at promoting positive attitude changes toward older workers and reducing age discrimination in hiring against older adults. These interventions were evaluated in a national random sample of employers across industries and in a sample of undergraduate students from Edith Cowan University who expressed interest in research participation.

As research in the area of age discrimination in hiring is closely linked to business, several sources of business, human resources (HR), and social work literature were consulted to provide comprehensive knowledge of relevant issues. Reviews of these sources, however, were not intended to be comprehensive within each area, but were meant to complement the other sources.

The thesis comprises seven chapters. This chapter introduces the topics, scope, and focus of the thesis, and provides an overview of the structure of the argument that forms the basis of the thesis. This is followed by a literature review of several areas, which make evident the need for knowledge of the stereotypes that are held about older adult workers and the need for developing ways to combat age discrimination in hiring against older adults.

Next, a review of literature related to the stereotypes of older people, and the measurement of these, is presented, followed by an explanation of the development and rationale of the questionnaire and a description of Study One.
Stereotype change and interventions that have been tried in order to combat stereotype-based discrimination against older adults are then reviewed leading to the view that a cognitive dissonance based manipulation holds most promise for both reducing actual discrimination and changing stereotypes. The development and rationale of the interventions and a description of Study Two are then presented. The thesis ends with an overall discussion.

Initiation and development of the current project required that several issues be addressed. Accurate and comprehensive data about the ageing of the Australian population, its social and economic ramifications, and a more general view of these phenomena in the rest of the world were needed in order to understand and appreciate the growing importance of finding ways to reduce age discrimination in hiring. This information made evident the growing need of older adults in the workforce from both the older adults' perspective and that of society as a whole. This issue is addressed in the first part of Chapter Two.

An understanding of ageism in general and its manifestation in Australian society are important to the understanding of issues that underlie age discrimination in hiring. Placing ageism in the context of employment and viewing the role of stereotypes in its formation and maintenance among both employers and undergraduate students is important to the current thesis. As literature and previous research suggested that older females experienced age discrimination in hiring to a greater degree than did older males, the possible relationship between ageism and sexism is addressed. These data show the paramount role stereotypes play in the formation and maintenance of ageism. These issues form the second area covered in Chapter Two.
It is important to determine whether older adults are interested in working and what is the influence work has on their quality and experience of life. If older adults are not at all interested in working, and if work has debilitating effects on their lives, than this research project would not be valid theoretically and its findings would be impractical. If, on the other hand, older adults are interested in remaining in paid employment, and if work is beneficial to their lives, then the current research and its findings will be both viable and practical. A review of the research literature on this issue suggested that, in general, older adults are willing to work and that work has great benefits to their lives. This is the third area addressed in Chapter Two.

Data about the health and performance abilities of older adults were needed in order to assess whether they can remain and contribute to the workforce. This is important because if older adults could not do so then proposing that they should remain in active employment is not valid. This is the fourth issue addressed in Chapter Two. Data showed that older adults overall remain healthy and able well into their 70s.

Reviewing the actual performance of older adults in the workforce forms the fifth area covered in Chapter Two. This issue is important because it demonstrates that overall those who engage older adults in work find them to be good workers and the experience of working with them to be positive.

Data on age discrimination in employment is the sixth area covered in Chapter Two. Data from the Australian Bureau of Statistics (ABS), as well as other sources, and empirical research on age discrimination in hiring all provide clear and well supported evidence of this social malfunction. Older adults are the first to be let go when downsizing and are the last to be rehired. Further, older adult job seekers are significantly less successful compared to younger job seekers. This area demonstrates
the pervasiveness of age discrimination against older adults in employment and makes evident the need for both theoretical understanding and practical solutions to this problem.

The Equal Opportunities Act as well as other undertakings by government in order to combat age discrimination in employment are the seventh and last area addressed in Chapter Two. This is important to the current project because it places the issue of age discrimination against older adults in its legal context and describes relevant initiatives that are already in place.

Chapter Two ends with the conclusion that the growing need for older adults in the workforce is evident and that they are, generally, willing and able to work. Nevertheless, stereotype-based age discrimination places them at a disadvantage even in the face of legislation, such as the Equal Opportunity Act, and in spite of other government enterprises such as skills training for older adults. Thus, knowledge of the actual stereotypes that are held about older adults and the extent to which these are held is vital for the development of informed interventions that are much needed to combat this discrimination.

Chapter Three reviews literature relevant to stereotype measurement in ageism. This review indicates the need for specific tools in order to learn of the stereotypes that underlie particular behaviours such as hiring discrimination. Stereotypes of older workers that were found in the literature are presented, which provided the material for the items of the questionnaire constructed for this study. Thus, by the end of Chapter Three the need for a specific tool for measuring stereotypes of older adults is established. General knowledge of these stereotypes is provided.
Chapter Four details the development, piloting, and refinement of the questionnaire. It presents and describes Study One and provides findings of the actual stereotypes that are held about older adults and the extent to which they are held in both employer and undergraduate populations. The information about the stereotypes is used in the development of informed interventions to combat age discrimination in hiring against older adults, a process described in subsequent chapters.

Chapter Five reviews literature about stereotype change. Strategies that were tried to reduce stereotype-based discrimination against older adults are reviewed and critically evaluated with respect to the cognitive substrates of stereotypes. One intervention style that shows promise in this area is that based on the induction of cognitive dissonance. The nature of cognitive dissonance and relevant interventions are reviewed. Drawing on a number of studies, several factors are identified that, if combined, could make for an effective novel manipulation to reduce hiring discrimination on a large scale. Thus, Chapter Five provides the rationale for the use of a cognitive dissonance-based intervention in a way that has not been attempted previously.

Chapter Six provides a detailed account of the development of the interventions. The hypotheses under test in Study Two are presented and the results of Study Two are reported and discussed.

Chapter Seven is a discussion of the overall thesis. It ties the two studies together and places the project in the context of the current situation and the future. It explains the merits and applicability of the findings and points to the uniqueness and novelty of the current thesis. It explores strengths and weaknesses of the project in terms of scope and methodology. Finally, future research directions are discussed.
CHAPTER 2
Ramifications of Population Ageing and the Employability of Older Adults

Population Ageing

In Australia, the period of greatest growth in the population of people over 65 is predicted to occur between 2011 and 2031, as the baby boom generation, those born between the mid 1940s to early 1960s, will reach this age bracket (Australian Bureau of Statistics (ABS), 2001; Bishop, 1999). Dependency ratios, defined by economics as the number of persons aged 65 and over per 100 persons aged 15-65, are increasing rapidly (ABS, 2002; Clare & Tulpule', 1994; Kendig & McCallum, 1986). The dependency ratio is predicted to increase from 18 in 1993 to 21 by 2011, and to 36 by 2041 (ABS, 2001). The percentage of persons over 65 in the Australian population was 11.2% in 1991, 12% in 1999, and is predicted to increase to 22% by 2031 (ABS, 2000, 2002; Clare & Tulpule’, 1994).

Population projections assume that the levels of births, deaths, and net overseas migration will hold for the next 50-100 years (ABS, 2002). Several scenarios are therefore taken into account so that possible fluctuations in these factors are considered. Whilst these different projections show large differences in population size, the predictions about the ageing of the population are robust across all scenarios (ABS, 2002).

It is predicted that, over the next 25 years, across OECD (Organisation for Economic Cooperation and Development) countries the number of persons of pensionable age will increase by 70 million whilst the number of persons of working age will increase by five million only (OECD, 1999). Moore (1997) proposed that by 2030 about 20 percent of the gross domestic product (GDP) in OECD countries would need to be paid in pensions, which
would be unsustainable. Thus, the significant increase in the number of older adults in the population will inevitably influence both social structures and the economy.

The significant growth in the population of older adults is expected to place an increasing burden on existing health care, social services, and income maintenance systems (Bishop, 1999; Choi & Dinse, 1998). The increasing dependency ratios imply that declining numbers of younger taxpayers would have to carry the financial burden of supporting increasing numbers of older adults. This may lead to increased feelings of uselessness among older adults, as well as feelings of frustration and resentment toward older adults by the younger taxpayers.

One solution is to keep older adults in paid employment longer (Holzman, 2002). Including older adults in the workforce longer would increase the tax base (Bishop, 1999), as well as alleviate the burden placed on younger taxpayers. This is especially relevant to Australia for three reasons. First, the majority of older Australians rely on government pensions for most of their income (ABS, 1999; Bittman, 2001). Second, the decline in workforce participation rates for older workers in Australia is amongst the most rapid in the developed world (McCallum, 1986). Third, Australia does not have a contributory retirement income scheme, leaving age pension to be paid out of general revenue (ABS, 1999; Bittman, 2001). Thus, the predictions of population ageing and its implications make evident the increasing importance of, and the need for, older adults in the workforce.

The ageing of the population is a global phenomenon (Remenyi, 1994). Other developed countries, such as Canada and the USA, show a similar magnitude of the predicted percentage of older adults to Australia. European countries, such as Switzerland, show even more rapid growth, with a predicted 20% of their population being over 65 by 2010 (Clare & Tulpule’, 1994). Italy currently has the greatest percentage of its population accounted for by older adults, with 18.1% aged over 65 (Kinsella & Velkoff, 2001).
Overall, the populations of all developed countries are ageing due to falling birth rates and increased life expectancy, and most of these countries will have more than 20% of their populations aged 65 and over by the middle of the century.

Less developed countries, such as Sri Lanka, currently have about 6.5% of their populations over 65 (Kinsella & Velkoff, 2001). This number, however, is expected to grow more than double to 15.2% by 2030, (Kinsella & Velkoff, 2001). Planning for the future is of great importance in this area and the success of industrialised countries in meeting this challenge can be followed by under developed countries whose limited resources will, undoubtedly, be taxed by their ageing population.

The goal of keeping older adults in the workforce faces immediate obstacles from current trends in society. ABS data show that compared to younger persons, people over 45 are much less successful in finding work (ABS, 1992; 1994; 1996). Between the years 1986 and 1996 the average proportion of successful jobseekers that were 44 years or younger was 22.35% whereas only 5.2% were older than 45. Of the unsuccessful jobseekers in the same period, 10.62% were older than 45 and 18.76% were 44 and younger. Thus, for those jobseekers who were 45 and over failure was more likely than success, whereas for younger jobseekers it was the opposite.

In summary, a significant ageing of the population in all OECD countries is inevitable and, without appropriate planning, this could severely strain existing health care, social services, and income maintenance systems. One solution to these problems is to keep older adults in paid employment longer. This solution could later be followed by less developed countries where population ageing is predicted to create difficulties in the more distant future.

Any solution to the problems posed by an ageing population will need to face several current issues, of which the lower success rate of older adult job seekers that is mentioned
above is only one. Another significant factor is ageism, the pervasive negative stereotypes about older people in modern society.

Ageism

Robert Butler, introduced the term ageism in 1969 and recently defined it as a process of systematic stereotyping and discrimination against older adults simply because of their age (cited in Palmore, 1999). Whilst it has been recognised that the young as well as the old may experience ageism, this thesis focuses on ageism targeted at older adults in hiring.

Palmore (1999) identified nine common stereotypes underlying negative prejudice towards older people: the beliefs that most aged are sick, ugly, impotent, senile, mentally ill, isolated, useless, poor, and depressed. These stereotypes stand in contradiction to many facts about ageing. In terms of physical functioning, psychological performance, and living conditions, older adults are a highly diverse segment of the population. There is no evidence to suggest that an automatic decline in physical or social functioning leads to the conditions implied by Butler's stereotypes. Indeed, work-related motivation and ability due to ageing show little change with increasing age (Kelchner, 1999; Seedsman, 1996). An older adult who is exercising and active can be stronger, and more mentally adept than a sedentary and inactive younger person (Whitbourne, 2001). Thus, many negative stereotypes about old age are not upheld by available evidence (Steinberg, Walley, Tyman, & Donald, 1998).

Ageism is evident in the community, the media, professionals, and older people themselves (Radford, 1987). In democracies, the attitudes of the majority of members of society dictate the policies that govern it. Hence, discriminatory attitudes based on stereotypes can interfere with policy formulation and lead to institutionalised attitudes. This has been the case for racism, sexism and ageism (Butler, 1980). Attitudes and beliefs,
discriminatory behaviours, and institutionalised norms and policies reinforce each other and contribute to institutionalised ageism (Butler, 1980).

Hiring, promotion, and retirement practices all involve examples of institutionalised ageism (Butler, 1980). A 1994 Survey by the Australian Bureau of Statistics (Encel, 1998) found that 44 per cent of respondents aged over 45 identified their age as the single most important barrier to employment and this figure increased to 64 per cent in the 55 and over age group.

The widely held age of 65 as the cut off point for exiting the work force finds its roots in Austria at the 19th century under the rule of chancellor Otto Von Bismark. Bismark proposed that every worker would be cared for by the state once they reached the age of 65 (Ranford, 1987). Whilst this may seem generous, few people lived to the age of 65 in the 19th century and those who did mostly suffered from ill health (Ranford, 1987). Life expectancy at birth in Australia in the 21st century is about 80 years and 85% of males and 79% of females over 65 years are not dependent on long term care systems (Kinsella & Velkoff, 2001). It is, therefore, important to recognise that the contemporary convention of age 65 as the age of retirement is not related to loss of abilities or performance but is primarily a tradition inherited from days past.

The notion of a cut off point for exiting the workforce promotes stereotypes and facilitates ageism. In developing and pre-industrialised societies, one is considered old once out of the labour market, either due to diminished work capacity or age discrimination (Walker, 1997a). In contemporary societies, retirement and pension policies have institutionalised the exit of older workers from the workforce and consequently the onset of old age is deemed to begin around 60 to 65 years of age (Ranford, 1987; Walker, 1997a, 1997b). Retirement policies may be based on negative stereotypes of older workers and may enhance ageism. Whilst one way to keep older adults in employment longer is not to
lay them off or involuntary retire them the focus of the current project is discrimination
against older adults in hiring. Hence issues that are related to retirement policies are outside
the scope of this project.

With the exception of the Northern Territory (NT), mandatory retirement has been
waived in Australia and it is prohibited to specify age in job advertisements. Further, job
applicants do not have to state their age in their applications. Age can, however, usually be
inferred from other information, such as employment and educational history. In the NT
employers can decide on age of commencement and retirement providing that they apply
those equally to all workers. South Australia was the first to outlaw compulsory retirement
in 1993, followed by New South Wales, the Australian Capital Territory, and Queensland
who all did so in 1994. Western Australia followed in 1995, Victoria in 1996, and Tasmania
in 2001. There are some exceptions, such as high court judges and airline pilots for whom
mandatory retirement is still in place. For the vast majority of jobs, however, compulsory
retirement is now illegal. Despite the waiving of mandatory retirement, the prohibition of
specifying age in job advertisements, and the fact that job applicants do not have to state
their age, the stereotype of 'old' as embodied in the concept of retirement at the age of 65
will probably linger in people’s minds for some time yet.

Davison (1995) suggested that ageism in Australia has its roots in the colonial era
when most migrants were younger than 30 years of age. Hence, there were hardly any older
adults among the original settlers. During the gold rush, people over 50 were considered old
as they were run down due to long periods of heavy physical work in the mines (Davison,
1995). Further, Australia enjoyed the image of the young country as contrasted with the old
country of Britain (Davison, 1995). Another precursor of ageism is the image of older
adults depicted by Australian literature as physically impaired and feeble minded (Davison,
Thus, ageism is embedded in Australian culture and ageist attitudes are formed through both socialisation and education.

Butler (1980) suggested that ageism mostly results from an unconscious process that is deeply rooted in western societies. Perdue and Gurtman (1990) conducted two studies that investigated the automaticity of ageism. In the first, participants were asked to rate positive and negative adjectives as more typical of a 'young' or an 'old' hypothetical person. The results showed more negative descriptors were attributed to 'old' than to 'young' (Perdue & Gurtman, 1990). In the second study, participants were requested to categorise adjectives as positive or negative. Before the presentation of each adjective either the word 'old' or 'young' was flashed quickly so as to be below conscious awareness. The results showed that response times for negative descriptors were faster when primed by the word 'old' and positive adjectives yielded faster reaction times when primed by the word 'young' (Perdue & Gurtman, 1990). Whilst cultural biases may limit generalisability of such findings, they nevertheless demonstrate the unconscious (automatic) negative connotations associated with older persons. Specifically, 'old' was shown to be associated with negative perceptions. This issue is important in the investigation of ageism in hiring practices for it suggests that, regardless of any job related merits, older applicants may be automatically disadvantaged.

In summary, ageism results from negative stereotyping of older adults. This is embedded in Australian society at various levels. Negative age stereotyping is related to the time one retires from the workforce and failure of older adult jobseekers may, therefore, exacerbate ageism. Further, negative stereotyping of older adult job seekers is likely to occur automatically regardless of one's intentions.

Do males and females experience ageism in employment in the same way? Is there an interaction between ageism and sexism? Answering these questions could result in
deeper understanding of hiring discrimination against older adults and more accurate ways to address this issue. This is the focus of the next section.

**Ageism and Sexism**

As far as employability is concerned, it has been suggested that women age sooner than men (Rife, 1992; Rodeheaver, 1992). That is, a middle aged woman is perceived as significantly less attractive than a younger woman and is thus less likely to be hired, whereas a middle aged man’s appearance is not affected to such a degree (Rodeheaver, 1992). In addition, the perception of some jobs as ‘masculine’ and others as ‘feminine’ promotes employment segregation of men and women due to the perceived nature of jobs (Lambert & Petridis, 1994; Rodeheaver, 1992; Sargent, 1994).

Labour force participation rates for women show less dramatic trends than for men due to factors such as the increased availability of part-time work (Remenyi, 1994). Women’s labour force participation has different economic outcomes and is affected by different factors than for men (Remenyi, 1994). Women frequently withdraw from the workforce in order to care for children or elderly parents. When they attempt to re-enter the workforce, they may find themselves subject to both ageism and sexism simultaneously (Encel, 1998). This is referred to as the double jeopardy effect (Onix, 1998; Palmore, 1999; Walker, 1997a). Reasons such as 'lack of experience' or 'being overqualified' may frequently be used to disguise discrimination based on age and/or gender (Encel, 1998). However, the double jeopardy effect has been found to hold true only with certain combinations of variables and further research is needed in order understand this effect more fully (Palmore, 1999).

Poststructuralist theory suggests that although most companies and organisations try to maintain sex neutral attitudes and policies, this is not the case in practice (Zajdow, 1995).
Poststructuralist theory proposes that the workforce is a male dominated area and that heterosexual preferences influence hiring practices and on-the-job relations (Sargent, 1994; Zajdow, 1995). Thus, an interaction between age and gender leading to older women being least favoured by potential employers is quite likely.

In a study conducted by Benokraitis (1987) regarding work prospects of older women, 52 per cent of older women respondents reported experiences of age discrimination in job interviews. Having their job applications rejected affected older women to a greater degree than it did men of similar age (Rife, 1992). Whilst men attributed rejections to market place circumstances, older females blamed themselves and believed they lacked the skills necessary to get the job. This reaction on the part of the older females reduced their job search self-efficacy and thus increased the likelihood that they would abandon their job seeking. Older women were also more prone to depression than were men, and suffered from lower self-esteem and self-worth as a result of rejection of their job applications (Rife, 1992). Thus, not only were older women discriminated against, but they also suffered increased consequences as a result.

As the baby boom generation reaches older adulthood there will be a significant increase in the number of older adults needing employment (Bishop, 1999; Clare & Tulpule'; 1994; Kendig & McCallum, 1986). Further, an increasing proportion of women is joining the workforce, a trend that is predicted to continue (Clare & Tulpule', 1994). Thus, as the number of older women seeking employment is predicted to increase, it is important to investigate issues relevant to their employment.
The Willingness of Older Adults to Work and the Psychological Aspects of Work in Older Adulthood

Little research has been conducted regarding the importance of work for older adults (Mor-Barak, 1995). This may be because it has been the norm for older adults to retire (Mor-Barak, 1995). From the argument posed thus far, however, it is clear that there is a growing need for older adults to remain in the workforce and the question of their willingness to work, as well as the meaning of work to them, are both important and relevant questions. The literature reviewed below suggests that older adults are generally willing to work and that paid employment is paramount to their physical and psychological well being.

Becoming unemployed after working for decades constitutes a major life event, which can have devastating consequences upon some workers. There are often severe financial consequences of becoming unemployed at an older age, especially in a culture in which mature-age job seekers often have mortgages and families to support (Bittman, 2001). Older unemployed people are found to have substantially higher rates of illness and death. The negative effects of long-term unemployment also impact on the health and well being of the individual’s family, and the wider community. Many older job seekers become discouraged job seekers, withdrawing from the labour force due to perceptions of poor job prospects. (House of Representatives Standing Committee on Employment, 2000; McFee, 1993).

In western societies, being employed is related to success whilst being unemployed may be seen as failure (Winefield et al., 2002). Although this holds for both the young and old, older adults seem to be affected to a greater degree (Winefield et al., 2002). Work is a source of much psychological strength; it provides meaning to one's life and enhances one's sense of identity and well being (Schulz & Ewen, 1993). As the nature of work changes away from holding one job for life toward having a number of jobs over one's working life...
the likelihood of employment seeking at later life increases and hence the likelihood of experiencing age discrimination in hiring. Being aware of their decreasing chance of finding employment, older adults may experience greater anxiety, fear of poverty and injured self-esteem than do younger job seekers.

In a sample of Australian retirees, it was found that of those respondents who were in good health 25% would have preferred to retire later than they did. Considering the total number of respondents, the proportion rose to 40% (McCallum, 1986). Ranford (1987) found that many retired Australians claimed that they would rather work than be retired and other studies have found that at least one third of people aged over 60 are willing to continue to work (Seedsman, 1996). Thus, the willingness of older adults to work is evident.

Mor-Barak (1995) investigated the meaning of work in a sample of 146 older adults (50 years and over) and found four factors of importance. One was a social contact factor that related to issues such as status and socialisation. The second factor was a personal one relating to areas such as self-esteem and personal satisfaction. The third was a financial factor and the fourth was a generativity factor, which related to teaching and passing knowledge and skills to younger generations. No significant gender differences were observed in the assignment of importance of these factors to the meaning of work (Mor-Barak, 1995). The desire of older adults to pass on their knowledge to younger generations is of particular interest because it can facilitate communication and provide intergenerational benefits in the workforce.

Another issue related to the desire of older adults to teach and pass on their knowledge is that of mentoring. Mentors are typically more experienced persons who shepherd new employees in the first years of their careers (Winefield, 1998). Mentors provide advice, facilitate socialisation, and teach the less experienced worker (the protégé) 'the ropes'. Mentors were shown to make a significant contribution to the success of new
employees and most new recruits prefer older mentors (Winefield, 1998). Thus, both organisations and new employees benefit if older adults remain active in the workforce.

Rife (1992) reported that paid employment enhanced older women’s feelings of self-worth, empowerment, self-control, and life satisfaction. Lack of employment, on the other hand, was a major factor in depression, loss of self-esteem, and increased family strain (Rife, 1992). Older adults who remain active in the workforce show higher levels of life satisfaction and morale compared with retired persons of the same cohort (Aquino, Russell, Cutrona, & Altmaier, 1996).

Aquino et al. (1996) studied a sample of 292 older adults (aged 65-97) and found paid work contributed directly to life satisfaction, whilst on the other hand, the contribution of volunteer work to life satisfaction was mediated by social support. This finding was consistent even after controlling for financial gain (Aquino et al., 1996). Thus, remaining active in paid jobs made a unique contribution to life satisfaction for older adults.

Gallo, Bradley, Siegel, and Kasl (2000) used data from the US longitudinal (1992, 1994) Health and Retirement national survey to compare the health of 209 older adults who were made redundant to that of 2907 employed older adults on physical and mental dimensions. The results showed that involuntary unemployment was significantly correlated with deteriorations in both physical and mental health even after controlling for baseline health status and social-demographic factors and that re-employment was positively associated with physical and mental health (Gallo et al., 2000). These findings indicate that unemployment in older adulthood can hinder physical and psychological health whereas employment could not only alleviate financial difficulties but would also facilitate better health among older adults.

Taken together, the studies described above suggest that many older adults want to work, that paid employment makes a significant contribution to their physical and
psychological well being, and that they want to pass on their knowledge to younger generations. A relevant question, however, is whether or not older adults are able to work and contribute. The next section provides the answer to this question.

Health and Performance Abilities of Older Adults

Various biological and physical changes occur with age. However, these changes do not usually lead to any significant disability for older adults in terms of activity and productivity until well into old age (Ranford, 1987; Schaie, 1996). Physical changes with advancing age that may impair one's functioning are more likely to be related to individual differences rather than to age itself (Seedsman, 1996; Sterns & Milkos, 1995). Schaie (1996) argued that organic reasons for intellectual dysfunction occur in individuals and are not an inevitable consequence of ageing.

As people age they become more diverse with marked differences in abilities, motivations, attributes, and commitments. When measured along almost any dimension, older cohorts are more heterogeneous than any other age group (Pasupathi, Carstensen, & Tsai, 1995). Thus, whilst research highlights the heterogeneous nature of the aged population, society tends to view the aged as a homogeneous group who contribute little and cost the community a lot (Seedsman, 1996). Thus, although lay persons tend to think that systematic decline in functioning inevitably occurs as people age and that dementia is the province of the aged, this is not the case (Ranford, 1987).

Older people themselves frequently hold misconceptions about ageing and negative stereotypes about old age, which are reflected in an older person's attitude to themselves and their roles (Wheeler & Petty, 2001). Consequently, they may behave in ways that conform to culturally held stereotypes, for example, by avoiding productive work or social engagement. This inactivity can become part of a vicious cycle in which inactivity leads to
atrophy of abilities, leading to enhanced negativity and even less activity. Hence, older people who accept negative stereotypes of old age may apply the expected restrictions of age to themselves and thereby create self-fulfilling prophecies of a miserable or unproductive old age.

An example of effects of negative self stereotyping of older adults is provided by Levy, Housdorff, Hencke, and Wei (2000) who conducted a study that examined the effects of negative and positive self-stereotyping on performance in a sample of 54 men and women ranging in age from 62 to 82 years. Participants were subliminally exposed to either positive or negative ageing stereotypes and were then given verbal and mathematical tasks after which measures of blood pressure, heart rate, skin conductance, and self-efficacy were obtained.

Participants who were primed by negative ageing stereotypes showed statistically significant elevations on all measures but heart rate compared with those primed by positive stereotypes (Levy et al., 2000). Further, the actual performance of those primed by positive stereotypes was significantly better than that of participants who were primed by negative stereotypes. Thus, negative self-stereotyping induced a stress response, hindered performance, and lowered self-efficacy in older adults facing verbal and mathematical tasks. The Levy et al. findings suggest that older workers' performance and feelings of self-efficacy could be hindered by negative self-stereotyping and enhanced by positive self-stereotyping.

It could be argued that those participants in Levy et al. (2000) who were primed by negative ageing stereotypes showed impaired performance and evidence of a stress response simply because these primes led to a negative emotional state. However, in another study Levy (1996) used young adults as well as older adult participants and measured the effects of positive and negative stereotyping on memory performance and found that only the
performance of older participants was affected. Positive stereotypic primes resulted in enhanced memory performance and negative primes led to hindered performance. Thus, whilst the question of the endurance of the effects remain, Levy's (1996) results suggest that an important determinant in the observed effects is the relevance of primes to participants and not simply the fact that they are negative.

Menec, Chipperfield, and Perry (1999) investigated the connection between self-perception of health and actual health measures. They reported that negative self-perceptions of health among older adults were significant predictors of both morbidity and mortality and that positive self-perception of health was related to active-coping style, better health, and a greater sense of control. Thus, older adults who view themselves as stereotypically unhealthy are at greater risk of deterioration in health than those who do not view themselves that way.

For older adult job seekers succeeding or failing to find employment is directly linked to sense of identity, well-being, and self-perception (Schulz & Ewen, 1993; Winefield et al., 2002). Thus, age discrimination in hiring could lead to negative self-stereotyping and negative self-perception of health that could lead to poor health and hindered performance whereas reducing this kind of discrimination could facilitate better health and enhanced performance among older adults.

Consistent age differences are found in speed of encoding, divided attention, and complex reaction time with older adults being slower than younger people (Kail & Salthouse, 1994; Sterns & Milkos, 1995). However, two points about these changes should be borne in mind. The first is that older adults may lack interest in test stimuli and thus demonstrate lower performance on tests than their younger counterparts. Indeed, Flynn (1998) suggested that differences between older and younger test takers were not necessarily consistent in real world situations. The second issue is that of experience. Older adults'
performance is compensated for by their experience and job related practice (Salthouse, 1984; Sterns & Milkos, 1995). For example, Salthouse (1984) found that although reaction time increased for older typists, overall typing speed was maintained because the typist compensated with greater hand-eye span. Hence, with the exception of occupations, such as car racing or jet fighter flying, where reaction time plays a vital role, the above cognitive declines found in older adults have little impact on actual work performance (Sterns & Milkos, 1995).

Memory performance shows differences across age with older adults showing smaller working memory capacity (Schaie & Willis, 1991). Still, the extent of these differences is doubtful and appears not to be universal (Schaie, 1996). Age differences are also found for recall but not for recognition (Schaie, 1996). Older adults do not use memory strategies spontaneously as do younger adults. These age differences are reduced, however, when older adults use such strategies (Schaie & Willis, 1991). Thus, whilst age related differences are found in memory performance it is not clear to what extent they have any significant interference with job performance.

Primary mental abilities of number, word fluency, verbal meaning, inductive reasoning, and spatial orientation usually show improvement until people reach their late 30s or early 40s. These abilities, for most people, remain stable until their late 60s after which normative declines are seen with advancing age (Schaie, 1996). This decline in intellectual performance, however, is not significant until people reach their mid 70s and even then individual differences are great (Schaie, 1996). That is, very few people in their mid 70s show significant decline in more than one primary mental ability and even by age 88 only a very small minority show significant decline in all five (Schaie, 1996). Fluid intelligence shows a decline with age, whilst crystallized intelligence does not (Schaie & Willis, 1991). Two important points need to be mentioned. First, fluid intelligence performance can
improve with training (Schaie & Willis, 1991). Second, fluid intelligence performance in real world situations does not show consistent lower performance for older adults compared with younger persons (Flynn, 1998; Schaie & Willis, 1991). One possible explanation of why age difference is found on test performance only is that older adults may have expected to perform worse than younger people on tests, and thus may have created a self-fulfilling prophecy (Stem & Milkos, 1995).

Research conducted in the 1960s found that older adults' performance on numeric ability was impaired compared to that of younger adults. However, Schaie (1996) reported that the age differences in numeric ability that were found in research in the 1960s have virtually disappeared. Further, whilst research in the 1960s found that people in their 50s showed declining verbal abilities these have now been found to peak in the early 50s. The magnitude of age differences at least until the early to mid 70s has decreased significantly (Schaie, 1996). Thus, as far as intellectual functioning in specific domains is concerned, differences between older and younger workers do not appear to be as dramatic as implied in some of the stereotypic views of older adults as declines in these cognitive abilities have progressed to later stages in the life span.

Christiansen (1994) compared older (>70 years) academics and retired blue-collar workers with younger academics and younger blue-collar workers on measures of crystallized and fluid intelligence. Older participants were found to perform significantly lower on fluid intelligence and the older academics outperformed all other groups on measures of crystallized intelligence. Christiansen, Henderson, Griffiths, and Levings (1997) continued the above research as a longitudinal study and found that over a five year period, both the older academics and the retired blue collar workers showed cognitive declines in all non-verbal tasks. These findings suggest that cognitive decline in later life occurs similarly for people of higher and lower abilities. It is important to bear in mind that
the older academics in both studies by Christiansen and her colleagues were actively employed and that the older blue-collar workers were not retired due to impaired abilities. Thus, the reported cognitive declines did not impact upon employability.

Actual trainability in older adulthood, as opposed to tested intelligence, seems to be mediated by previous experience. Chamess, Kelly, Bosman, and Mattram (2001) investigated differences in word processing performance as a result of training in a sample of novices and a sample of experienced people ranging in age from 25 to 63 years. Chamess et al. found that older age was significantly correlated with poor performance, but only for novices. The experienced sample had no experience with the particular word processing software that was taught in the study but had worked with computers before (Charness et al., 2001). Thus, once previous experience in a related area was shared across age, no significant age effects were detected. As older job seekers are likely to seek employment in areas in which they have had previous experience, the results of Chamess et al. suggest that they should not be inferior to younger workers in their ability to update their skills.

Methods of training older adults may also differ from those of training younger people. Kok Tee (2002) suggested a number of factors that are important to the successful teaching of computer skills to older adults. First, older adult trainers are required as they have better rapport with older adult students and are more patient than younger trainers. Second, instructions need to be kept simple and computer jargon avoided. Third, after class students require free time to interact with the computers. Kok Tee (2002) reported that once older adults overcame computer anxiety, their learning accelerated significantly and their post training performance was not inferior to that of younger people.

Frequent intellectual challenges can enhance cognitive abilities in older adulthood. Schooler, Mulatu, and Oates (1999) conducted a longitudinal study of the effects of complex jobs on intellectual functioning in older adulthood in a sample of 233 persons ranging in age
from 41 to 83 years. Participants were tested on several intellectual functioning measures first in 1964, then in 1974 and again in 1994. Schooler et al. found that participants who, at the third time of measurement, held complex jobs that provided intellectual challenges achieved successively higher scores on all measures. These intellectual improvements were pronounced to a greater degree among older participants that in younger ones.

The findings of Schooler et al. (1999) are in accord with Schaie (1996) who reported that cognitive training yielded significant improvements in several areas of intellectual functioning for people well into their 80s. Further, Schaie (1996) proposed that most deterioration in cognitive functioning is due to a continuous lack of intellectual challenges. Taken together the findings of both Schooler et al. and Schaie suggest that an intellectually stimulating working environment can not only reduce cognitive deterioration in older adults but can also improve their intellectual functioning.

As for the relationship between ageing and disease, Forbes and Hirdes (1993) surmised that no disease is universally prevalent in old age. Hence, individuals age differently and are affected by various diseases throughout life. Thus, the stereotype of older adulthood as inevitably related to ill health is unfounded. In Australia, 80% of persons over the age of 70 are not using any aged care services (Bishop, 1999). Hence, the majority of older adults in Australia are in good health. Thus, the data relating to older adults' state of health and intellectual functioning show unequivocally that the majority of healthy older adults can perform adequately at work.

Trends of improvement in health and ability to work are also evident. Crimmins, Reynolds, and Saito (1999) used data collected between 1982 and 1993 from the US National Health Interview Survey to observe trends in individual self-reports of ability to work and presence of disease. Crimmins et al. found a significant improvement in self reported work ability among persons over 60 years old between 1982 to 1993 with a
decrease in inability to work of about 24 per cent. These self-reports were in accord with an objective measure that showed trends of reductions in respiratory diseases, cardiovascular ailments, arthritis and other diseases for that period. Thus both subjective and objective measures indicated that for the period 1982 - 1993 an increase occurred in the number of older adults able to work.

Evidence suggests that older adults are capable of good working performance (Bennington & Calvert, 1998). They are experts in living (Ranzijn, 2002). They have gone through and adapted to more changes than have younger people. Their experience can be invaluable to younger cohorts. Further, the vast majority of older adults is in good health, self reliant, and are active contributors to their communities (Ranzijn, 2002). It is clear that overall older adults are capable of remaining in paid employment well into their 70s.

Older Adults in the Workforce

Although research evidence shows that overall older workers' memory, intelligence, and general health are not impaired compared to those of younger workers, older job-seekers are still discriminated against by hiring decision makers (Bennington & Tharenou, 1996; Shearing, 1992). ABS data show that older adult jobseekers are less successful in finding employment than younger jobseekers, that they are more likely to drop out of the workforce, and that they are less likely to find work following training courses (ABS, 1999). Further, older adults have the highest retrenchment rate and are the least likely to regain employment (ABS, 1999).

Research in the area of age barriers in employment that was done across nine European and Scandinavian countries reported similar findings. In seven of the nine countries, namely Belgium, France, Germany, Greece, Italy, The Netherlands, and the U K,
older adults were the first to be made redundant, the least likely to be re-employed, and the most likely to experience long-term unemployment (Walker, 1997b).

A major component of the European research involved gathering examples of companies with good practice toward older workers in order to develop policy guidelines to combat age discrimination in employment. Walker (1997b) reported that 168 examples of good practice were presented in a European Portfolio of Good Practice. Statistical analysis of these data revealed that most initiatives focused on flexible working practices and job training whereas attempts to change organisational attitudes toward older workers and efforts to enhance their recruitment were both rare (Walker, 1997b). Thus, even among those who were relatively favourable to older workers little effort was directed at changing attitudes and hiring practices.

The Australian Department of Employment, Education and Training (DEET) (1990) conducted a study concerning attitudes of older adults to employment, unemployment, and early retirement. They conducted 480 personal interviews and 11 group discussions with people aged 55-64 years (Remenyi, 1994). There was almost unanimous recognition of age discrimination and most interviewees felt that it commenced at or below 45 years of age (Remenyi, 1994).

A 1998 phone-in held by the Office of the Ageing and the Anti-Discrimination Commission (Qld) found that 76% of callers reported having experienced age discrimination in relation to employment. Of these callers, 34% were told by prospective employers that they were too old, whilst a further 24% made this attribution themselves (House of Representatives Standing Committee on Employment, 2000).

Whilst employers recognise a number of positive qualities in older adults they rarely consider hiring them (Encel, 1998). Older adults are recognised as responsible, punctual, reliable, and devoted to quality (Encel, 1998). Interestingly, many employers who claimed
they were unlikely to hire older adults had a number of older adults already working for them (Encel, 1998). Thus, hiring discrimination against older adults does not seem to be mediated by lack of exposure or on-the-job experience with them.

Rosen and Jerdee (1976) investigated the nature of job-related age stereotypes in a sample of 56 employers and 50 undergraduate business students. Participants were asked to rate 'the average 60 year old' and 'the average 30 year old' on several characteristics. The results showed that the older person was seen as less capable, less creative, less interested in change, less adaptable and as having less potential for development compared to the younger person (Rosen & Jerdee, 1976). Positively, the older person was seen as more reliable, dependable, honest, trustworthy, and less likely to quit or be absent from work. Female participants viewed the older person more favourably than did males and older participants viewed the older person to have greater capacity to meet job demands than did younger participants (Rosen & Jerdee, 1976a). Thus, whilst the older person was viewed in higher moral regard, the younger person seemed to be better for both performance and investment reasons.

In a follow-up study, Rosen and Jerdee (1976b) investigated the influence of work-related age stereotypes on managerial decisions in a sample of 142 undergraduate business students. Rosen and Jerdee (1976b) hypothesised that when negative age stereotypes are relevant to work situations older workers would be discriminated against by managerial decisions.

Participants were given one of six hypothetical scenarios. Each scenario involved an issue for which a clear age stereotype was previously identified and involved either a younger or an older employee. Participants were asked to make appropriate managerial decisions. Managerial decisions to all six stereotype-related scenarios clearly and significantly discriminated against the older employee (Rosen & Jerdee, 1976b).
Fifty-four per cent of participants recommended promoting a younger employee to a position that required creativity compared with 25 per cent who recommended the older one. When financial risk taking was required younger workers were significantly favoured over older ones even though they presented with identical qualifications, which was the same when physical strength was called for. Participants were significantly less likely to allocate funds for updating skills of older workers, and when retraining was needed, older workers were seen as expendable whereas younger ones were to be retrained (Rosen & Jerdee, 1976b).

Whilst the representativeness of the results of Rosen and Jerdee (1976b) is limited to undergraduate business students, and although their study took place almost 30 years ago, the results nevertheless demonstrate the influence negative stereotypes about older workers can have on managerial decisions.

Steinberg, Donald, Najman, and Skerman (1996) surveyed 525 employees and 104 employers across industries in Queensland, and found that whilst employees considered workers aged between 56-60 years as older workers, employers viewed those aged between 51-55 years as older ones. In other words, workers aged earlier from the employers' point of view compared with that of employees. Further, although employers viewed older workers as loyal and reliable, they considered younger workers to possess more favourable qualities, such as hard working, healthy, and creative. Minimal interest was shown in hiring persons over 45 years of age and there was no interest in hiring persons over 56 years. These authors concluded that ageism was well established among Australian employers.

Meddows-Taylor (1999) surveyed over 500 senior executives and human resources managers regarding age preferences when recruiting, retrenching, and retraining executive staff. It was found that 62% preferred applicants aged 31 to 40 years and 23% preferred applicants in their 40s, however, not one respondent indicated they would select a manager
or executive over the age of 50 years. Respondents also stated that those over 50 would be first to be retrenched (Meddows-Taylor, 1999).

Taylor and Walker (1994) conducted a postal survey of 500 large (>500 employees) companies to determine their attitudes to older workers. The results showed that 43% of employers regarded age as an important consideration in recruitment decisions. Five percent of managers set a maximum age for the most commonly held job in their organisation at 35 years and 4% at 40 years of age (Taylor & Walker, 1994). Applicants aged 55 years were considered too old by 43% of employers. The most overwhelming factor identified by employers as creating a barrier to hiring older workers was their perceived lack of job skills.

Arrowsmith and McGoldrick (1996, cited in McGoldrick & Arrowsmith, 2001) conducted a survey of employers' attitudes toward older workers in a sample of 1665 managers in the UK. Seventy-two per cent of male respondents and 59 per cent of female respondents in that study viewed people over 50 years as older workers. Fifty-five per cent of respondents said that age was a major factor in their hiring decision making and 90 per cent viewed age discrimination to be a moral issue. More than 70 per cent of respondents thought that the issue of age in equal opportunity was as important as race, sex, and disability (McGoldrick & Arrowsmith, 2001). Thus, whilst thinking that age discrimination is a moral issue of importance, the respondents' stereotypical view of workers over 50 as being old fostered discriminatory practices.

Schmidt (1999) conducted a survey of attitudes toward older workers among 250 Human Resource Managers (HRM) across industries in Western Australia. This study found that age was a major factor in hiring decision making and less than one per cent of respondents said that they recruit people who are over 50 years of age. Less than five per cent of respondents thought that older workers should make way for younger ones. About 20 per cent of respondents thought that older workers were harder to train and 12 per cent
said that training younger workers was a better investment. Older respondents viewed older 
workers more favourably overall compared to younger respondents. Seventy-five per cent of 
respondents viewed people over 55 as older workers. Schmidt reported that the results 
showed little evidence of negative stereotypes of older workers in the sample and 
acknowledged that HRM would be likely to be knowledgable of factors that affect the 
discrimination of different employee groups and would be unlikely to report that they 
subscribe to them. Whilst no clear negative stereotypes of older workers were identified, 
there was negligible interest to hire people over 50 years. Thus, whilst not explicitly 
expressing negative stereotypes about older workers, Schmidt's (1999) sample of HR 
managers showed evidence of hiring discrimination against older adults.

Bittman, Flick, and Rice (2001) conducted a study on the recruitment of older 
Australians and reported that they did not find the same pattern of negative stereotypes that 
was found in previous research. As it is the most recent large-scale research on this issue in 
Australia, and because its findings seem to contradict previous studies, it will be described 
in some detail.

Bittman et al. (2001) sampled 1007 hiring decision-makers from small businesses in 
the service industry and used a distinctly different procedure than did others before them. 
Previous research typically asked respondents for their ratings of attitudes about older 
workers using Likert scales. Bittman et al. conducted a telephone survey. These researchers 
used some of the stereotypes found in previous research and edited them into dichotomous 
pairs of statements producing half that were based on older workers' stereotypes and half 
that were based on younger workers' stereotypes.

Respondents were asked to choose from the statements the characteristics of the type 
of employee who is recruited most often. Bittman et al. (2001) reasoned that if respondents 
preferred younger workers to older ones, and if that preference was stereotype-based, they
would prefer the characteristics related to the 'younger' stereotypes. What they found was that respondents combined 'young' and 'old' characteristics in their replies, suggesting that responses described the 'ideal' employee rather than reflecting an age preference. Thus, Bittman et al. concluded that their results were at odds with previous research in that they did not find the pattern of negative attitudes toward older workers that was reported previously.

In order for stereotypes to be activated, a recognisable cue of a stigmatised group is required. This could be in the form of a member of a stigmatised group or related stimuli (Devine, 1989; Feldman, 1981; Monteith, 1993; Wheeler & Petty, 2001). For example, encountering an older adult, hearing the words older worker, or seeing a job applicant's date of birth on a resume. Bittman et al. (2001) did not provide respondents with such cues at the stage they were asked about their preferred employee characteristics. Further, the fact that employers combined 'young' and 'old' qualities in the context of the Bittman et al. research does not support or disprove stereotype-based age discrimination in hiring. Employers would ideally like to have the best of both worlds and yet discriminate against older workers in practice. Having no preconception of the age of the hypothetical employee, respondents could have thought of a trustworthy and reliable young person even though these qualities are found to be amongst the stereotypes held about older workers. It is thus suggested that the Bittman et al. research did not find the pattern of stereotypes of older workers reported previously because their study was not designed for this purpose and was therefore unable to do so.

Additional information that was gathered by Bittman et al. (2001) shows clear evidence of hiring discrimination against older workers in their sample. When asked what was the age of best contribution to work, 20 per cent viewed age as irrelevant, 14 per cent of respondents said less than 30, 50.7 per cent said 30-44, and only 14.8 per cent said it was
Hiring discrimination

Bittman et al. reported that employers generally viewed older workers as lacking relevant experience and current skills. Bittman et al. found that of the last successful job seekers across their sample 89 per cent were less than 45 years old and only 11 per cent were older. Thus, both respondents' views and their actual hiring practices reflected discriminatory attitudes toward older workers.

Smith (2001) conducted a study of attitudes toward older workers amongst 106 members of the New Zealand Institute of Personnel Management. This study found that employers viewed older workers as stereotypically different from younger workers. Respondents viewed older workers as lacking in ability to adapt to change and to learn new skills and ideas and considered age discrimination to primarily be a moral issue.

McMurchie (1999) reported that age discrimination in hiring is harmful to the information technology (IT) industry in Canada. The IT industry is predominantly young and people over 45 are hardly ever hired, regardless of their knowledge and relevant job experience (McMurchie, 1999). Thus, it seems that ageism and not lack of merit on the part of older workers is at the heart of this discrimination.

Another manifestation of ageism in employment is the trend of retrenchment as a result of downsizing of organisations (Walker, 1997a). Older adults are the first to lose their jobs as a result of downsizing and are the least likely to find new positions (Walker, 1997a). Of those retrenched over the 12 months period in 1994 in Australia, 26 per cent of those aged 55-59 and only nine per cent of those aged 60-64 were re-employed (Bittman, 2001).

Employers typically view older adults as slow, inflexible, untrainable, and in ill health (Ranford, 1987). Buys and Buys (1996) asserted that the notion of older adults being untrainable is unfounded and that older adults are willing and able to be trained and educated for new employment demands. Whilst perceptions among the general public are of decline in job performance with advancing age, chronological age accounts for only a small
percentage of the variance in actual job performance (Sparrow & Davies, 1988). Thus, age per se does not seem to be of significant importance in job performance.

Having assessed the performance of 1308 service engineers, Sparrow and Davies (1988) found that age differences in job performance were mediated by the time that elapsed from last training. Age differences in job performance were significantly reduced when the time from last training between the two comparison groups was similar (Sparrow & Davies, 1988). Thus, older workers who are not given refresher training and new job training may not perform as well as their younger counterparts. The difference is not due to the workers' age but rather to the lack of training opportunities.

Two meta-analyses (McEvoy & Cascio, 1989; Waldman & Avolio, 1986), together reviewed 136 independent studies conducted over 22 years. These studies found low correlations between age and job performance. Higher correlations, however, were found between supervisors' ratings of employees and employees' age, with older employees being rated lower regardless of actual performance. This suggests that age discrimination against older job applicants may be counter-productive because it could result in missing out on the best person for the job if that person happen to be an older adult.

Braithwaite, Lynd-Stevenson and Pigram (1993) investigated ageism in a sample of 195 Australian undergraduates. The authors reported that the stereotypical view held about older adults was negative. When asked to predict the likelihood of success of younger (27-year-old) and older (59-year-old) job applicants, participants viewed the younger applicants as having significantly better chances to get the job. Finally, asking participants for their own preference of younger (27) or older (59) tutors revealed a significant difference in favour of younger tutors. Braithwaite et al. used only female job applicants, which limits the generalisability of their results to issues involving gender differences. Nevertheless, negative stereotypical views and work-related discrimination of older adults were clearly
observed among Australian undergraduates. If these undergraduates hold on to such attitudes as they join the workforce, they are likely to discriminate against older adults.

Broadbridge (2001) compared the work satisfaction of employees over 40 years old to that of employees under 40 in a sample of 132 managers in the retail industry. It was found that whilst managers of both age groups were generally satisfied with their job, the older group showed greater work satisfaction and were significantly more satisfied on six of 25 variables. Older managers were significantly more satisfied with the location of their work, their credibility with staff, the level of training they received, their influence over organisational policies, their level of independence, and their opportunities for travel (Broadbridge, 2001). Older respondents also indicated that they were less likely to change jobs as compared with their younger counterparts. It may thus be suggested that from an employer's view point, retail managers over 40 years of age would be better as long term investments and can be expected to have more positive attitudes compared to younger managers.

Cases demonstrating older adults’ trainability, willingness, and successful work performance are also found in the literature. For example, Simon, Morse, Speier, and Osofsky (1993) trained 14 older adults (average age 65) as case management aids for mentally ill patients. Thirteen out of the 14 were then employed in that capacity and their performance was rated as excellent.

Mayhew and Swindell (1996) employed retired older adults as research assistants in two projects and reported that they were enthusiastic, reliable, responsible, and generally good to work with. Thus, older adults have been shown empirically to be trainable and demonstrate high quality performance as a result of their training.

Giniger, Dispenzieri, and Eisenberg (1983) compared the performance of younger and older textile workers on tasks that required speed (n = 212) and on tasks that required
skill (n = 455). Whilst not reporting exact age limits, their sample ranged in age from under 25 to over 65 years. Giniger et al. found that older workers outperformed younger ones on both speed and skill. Once age was controlled for, however, experience was the only significant factor accounting for the differences in performance. Whilst generalisability of results is limited to the particular sample and type of industry they show that older workers, having more experience, can outperform younger workers not only on skill but also on speed of performance.

B&amp;Q, which is Britain's largest do-it-yourself chain, experimented with employing older workers (Krohe, 1991). Staffing one of their stores with employees who were all 50 years and older yielded surprising results for B&amp;Q. Older workers were more familiar with customers' queries than were younger workers. Older workers spent more time talking with clients, they cared more about goods, and had better attendance rate (Krohe, 1991).

Comparing the older staffed store with four other stores of similar market areas and sales levels, B&amp;Q found that the older staffed store outperformed all four. Profits in the older staffed store were 18 per cent higher, there were 40 per cent fewer days missed by employees, and nearly 60 per cent less inventory loss through theft and damage (Krohe, 1991). Thus, the B&amp;Q experiment was a clear case in which older workers outperformed younger ones on both job performance and profit production.

Yearta and Warr (1995) compared the performance of younger and older sales personnel in a subsidiary of a multinational company in the UK and found no differences in overall sales. The hiring decision-makers of the company, however, believed younger salespersons to be superior to older ones. Thus, the stereotypical view of older workers as inferior persisted despite contrary work performance, which placed older job seekers at a disadvantage.
A group of older people were provided with training to equip them with the skills to become effective media advocates (Hill & Leonard, 1993). They were given the task of raising awareness by providing newsworthy stories to promote accurate and positive portrayals of older people (Hill & Leonard, 1993). Hill and Leonard (1993) reported that the older people involved in the project moved from cautiousness to enthusiasm as they gained confidence in their newly developed expertise and that one year into the project there were noticeable changes in media reaction. Thus, not only were older adults able to be trained and perform the given task, but they managed to elicit positive public reactions toward older adults through the use of the media.

The Days Inn hotel chain in the US reduced staff turnover in its reservation centres from 130% to 2% by introducing a program to recruit older workers. Furthermore, they achieved a 40% reduction in training and recruitment costs (cited in Buys & Buys, 1996). These experiences demonstrate that recruitment of older workers can be appropriate, effective, and beneficial.

Bishop (1999) proposed that employing and retaining older adult workers can lead to valuable benefits. Older workers' productivity was not impaired compared to younger workers and the quality of their work improved. Their experience within the company was invaluable and their job turnover was 25 per cent lower than that of younger workers. Older workers were five times less likely to change jobs and are hence better investments in terms of training. Finally, older workers are usually more loyal and have better work ethics than do younger workers (Bishop, 1999).

Bottomley (2001) reported on a secondment program that demonstrates the trainability and willingness of older adults to work, as well as the resultant positive experience for employers. The University of Stirling in Scotland operated the program between the years 1982-1994. The program offered graduate students and unemployed
managers, who were both unemployed for a minimum of six months, a chance to get back into the workforce. Participants received interview skills training and on-the-job tutoring. Small to medium size companies with owner-managers were approached and offered to take on program participants into secondment positions. Although it was a 35 hours per week program, companies contributed only £3.50 per hour in exchange for the full time services of participants and to support the tutors. Participants were all receiving unemployment benefits whilst in the program. Almost 50 per cent of participants were over 40 years of age and the program coordinators encountered ageist attitudes as barriers to their placements. However, with the help of their tutors and program coordinators the vast majority of participants found placements. Although participants were paid little for their work, the program proved effective in the long run with more than 50 per cent of all participants finding gainful employment either during the program or within two months thereafter.

Interestingly, a greater number of older participants, for whom it was initially more difficult to find placements, were offered permanent positions with their host companies. Once these older participants had a foot in the door they were found to be indispensable. Bottomley (2001) reported that older participants were typically very low-spirited initially, but that as training progressed, their injured sense of self-worth seemed to heal and they became motivated, optimistic, enthusiastic and energetic. Employers commented that the older participants' knowledge and experience were invaluable. During the course of the program younger participants enjoyed the older ones' experience and maturity and the older participants found the younger ones' attitudes and zest refreshing.

The program reported in Bottomley (2001) was not designed to counter employers' stereotypes about older workers and there is no evidence to suggest that it did. It was, nevertheless, effective in leading older unemployed people to permanent gainful employment. The results of the program suggest that it was not on-the-job experiences with
older workers that created age discrimination against them but rather the lack of such experiences. It further points to the psychological benefits such initiatives have for older unemployed people and demonstrates that what is needed in order to help them is a foot in the door. Finally, it highlights the benefits of intergenerational workplace relationships.

Cleveland, Festa, and Montgomery (1988) suggested that the greater the number of older persons in an applicant pool, the older the appropriate age for the job was perceived to be by employers. This may suggest that as the number of older job applicants increases so will job perceptions change in favour of older adults. Cleveland et al., however, also reported that whilst job perceptions changed, hiring decisions were not influenced. Feldman (1981) proposed that the process engaged in hiring decision-making is mediated by stereotypes held by the employer about the target person. This means that although the anticipated growth in the number of older adults seeking employment may change the perceived appropriate age for jobs, it will not increase their chances of finding employment.

The experience of older workers is consistent with findings from numerous studies that indicate that age discrimination against older workers is widespread (Taylor, Steinberg, & Walley, 2000). Age discrimination has obvious consequences for older workers in terms of lost opportunities; however, there are also serious consequences for employers. In addition to the potential cost of defending anti-discrimination lawsuits, employers who refuse to hire older workers may experience lost productivity, recruiting difficulties, adverse publicity, and low staff morale (Bennington & Calvert, 1998). Further, discriminating against older workers can result in poor retention of talented employees, risking a tarnished public image, and the loss of a consumer base (Gingrich, 2000).

From the above data about older adults in the workplace, it is clear that older adult job seekers are discriminated against in hiring, training, and redundancy compared with younger persons, that this discrimination can be counterproductive, and that work related
Ageist attitudes are found among both employers and undergraduates. It is also clear that there are many on-the-job experiences demonstrating the abilities and good performance of older workers.

Whilst the majority of the studies reviewed suggest negative stereotypes are at the heart of age discrimination against older adults in hiring, the studies reported by Bittman et al. (2001) and Schmidt (1999) suggested that this may not be the case. Respondents in these studies indicated that the reason for this discrimination was older adults' lack of relevant and up-to-date skills. The following section presents evidence from empirical research of actual age discrimination in hiring, which sheds more light on its possible causes.

Age Discrimination in Hiring

Objective evidence that points to age discrimination against older adults in hiring practices is mostly found through surveys, such as Bittman et al. (2001), Meddows-Taylor (1999), Schmidt (1999), and Steinberg et al. (1996), observation of hiring criteria, and unemployment demographics (Steinberg et al., 1998). Empirical evidence of actual age discrimination against older adults in hiring is typically absent from the literature. Nevertheless, the available empirical studies into the area show clear evidence of such discrimination in both the USA and Western Australia.

Bendick, Jackson, and Romero (1996) used correspondence testing to investigate actual age discrimination against older adults in the US. In correspondence testing, pairs of unsolicited fictitious resumes are simultaneously mailed to companies across industries. Resumes were similar in all job relevant information except for the applicant's age, which was either 32 or 57 years, and gender. Hence, in the study by Bendick et al., any differences in employers' responses could be attributed to the manipulated variables, namely age and gender. The results showed clear evidence of age, but not gender discrimination. Older
applicants received a smaller number of positive responses and a greater number of negative responses. Older applicants were also quicker to receive negative responses and slower to receive positive responses.

The jobs applied for in the Bendick et al. (1996) study were managerial positions and all resumes depicted applicants with tertiary education. As the majority of the Australian population does not have tertiary education, the generalisability of these results is limited. Further, it may be that at managerial positions with high educational levels, sexism is less pronounced and hence the failure to identify a possible age by sex interaction.

Gringart and Helmes (2000) utilised correspondence testing in Western Australia using applicants with secondary level of education, which is more representative of the Australian population, and found an interaction between age and gender in discrimination, with older females being discriminated against the most. In both Bendick et al. (1996) and Gringart and Helmes (2000), older adults were discriminated against even though they presented with the same qualifications, skills, and job relevant experience as their younger counterparts. Thus, both Bendick et al. and Gringart and Helmes (2000) concluded that it was evident that the basis for such discrimination was the negative stereotypes employers held about older adult workers. In addition, given the literature reviewed earlier, it may be suggested that the interaction between age and gender found by Gringart and Helmes (2000) is due to older females experiencing a compounding effect of both sex and age discrimination.

Bendick, Brown, and Wall (1999) conducted a study in which pairs of testers applied for vacant sales and management positions. Applicants' appearance, demeanour, and job-related information were matched except for applicant's age that was either 32 or 57 years. The results showed that out of 102 vacant positions that were tested younger applicants were favoured in 42% of cases whereas older applicants were favoured in only one per cent of
tested positions. The majority of cases (31% of the total) favouring the younger applicant occurred at the pre-interview stage. The results of this study indicate that older adult job seekers' applications are rejected without much consideration. This further support the conclusions reached by Bendick et al. (1996) and Gringart and Helmes (2000) that age discrimination against older adults in hiring is based on negative stereotypes employers hold about older workers.

As discussed earlier the literature suggests that the relationship between aging and employment is experienced differently across gender. Gringart and Helmes (2000) found that older female applicants were discriminated against the most. Further investigation into the possible differences in stereotyping of older workers across gender in Australia is therefore warranted. As reviewed earlier, a large body of literature suggests that employers hold negative stereotypes of older workers. There are no conclusive data about these stereotypes in Australia. Further, research by both Schmidt (1999) and Bittman et al. (2001) failed to find systematic negative stereotyping of older workers. As hiring discrimination against older adults is suggested to be stereotype-based, a study investigating the stereotypes that are held by employers and undergraduate students about older workers of both sexes and the extent to which they are held is needed. This would be informative and instrumental to the formulation of ways to combat hiring discrimination against older adults.

Addressing undergraduate students is important because of two reasons. First, the literature suggests that they hold negative work-related stereotypes of older adults. Second, many of them are likely to be future employers. Hence, causing a positive shift in undergraduates' attitudes toward older workers could pave the way for a reduction in hiring discrimination in the future.

In order to address age discrimination in the workforce it is necessary to challenge and change the attitudes toward older workers held by society and employers. In order for
public policy to secure positive outcomes it must continue to be informed by empirical evidence. Being aware of the difficulties experienced by older adult job seekers the Australian federal government took various initiatives aimed at making them more employable. Amongst other strategies, the Australian government has recognised the need for early interventions, and for longitudinal research into the benefits of age balance in the workforce and the need for strategies to effect attitudinal change (House of Representatives Standing Committee on Employment, 2000). Government initiatives that are both legislative and facilitative are the focus of the next section.

**Government Undertakings to Combat Age Discrimination**

Attempts at combating age discrimination in hiring practices in Australia are the Equal Opportunity Act (EOA), which was enacted in 1984 (Equal Opportunity Guidelines, 1998), the waiving of mandatory retirement, the prohibition of age specification in job advertisements, and several other government strategies, described below. The principle underlying the EOA is that everybody deserves a ‘fair go’ regardless of sex, race, or age.

The Equal Opportunity Guidelines (1998) state that:

> Equal opportunity in employment means employing the best person for the job, so long as the choice is made fairly. People who are suitable for particular jobs should not be excluded because of their age. (p. 5)

The EOA enables people to make complaints if they suspect they were unlawfully discriminated against.

It is unlikely, especially with the EOA in force, that potential employers would explain to rejected applicants that they were rejected because they are too old. This leaves applicants powerless to make a complaint in such cases. Thus, at least in the area of hiring practices, the EOA appears to fall short of adequately protecting job applicants from age discrimination.
Bittman et al. (2001) reported that only 8.2 per cent of their survey respondents said that the fact that age discrimination carries legal penalties had a strong influence toward employing older adults, 17.9 per cent said that it had some influence, and 73.7 per cent said it had no influence at all. Hence, the EOA does not seem to be a powerful deterrent against age discrimination in hiring.

Hamilton (2001) argued that regardless of its behavioural outcome, anti-ageist legislation has an important symbolic value. Laws reflect the moral code of society and to that effect such legislation makes clear that age discrimination is wrong. Hamilton's (2001) stance makes clear that whilst other measures can be taken toward remedying age discrimination, Acts such as the EOA make a clear and important social and cultural statement against age discrimination.

Similar attempts at combating ageism in employment are found in the USA where the Age Discrimination in Employment Act was enacted in 1967 and amended in 1986 to further prohibit employers from segregating or classifying workers on the basis of age (Bass & Roukis, 1999; Gillin & Klassen, 1995). In the UK, there is no legislation against age discrimination and it is up to individual companies to employ equal opportunity policies (Glover & Braine, 2001; Lucas, 1993; Taylor, 2001). The UK government proposed that employers should embrace a 'code of conduct' that would exclude age discrimination (Taylor, 2001).

One body that seems to be leading the way in combating age discrimination in the UK is the Employers Forum on Ageing (EFA). This forum is a network of employers that was created in order to maximise the business benefits of a mixed-age workforce (EFA, 2002). EFA has three main objectives: first, to help organisations maximise the benefits from their existing pool of employees; second, to promote an age-balanced workforce by influencing primary decision-makers in government, education, training, and trade unions;
and, third, to raise the awareness of all employers of the benefits that result from having a mixed-age workforce (EFA, 2002).

In Germany, mandatory retirement at age 65 for men and 60 for women is still in force, which is direct discrimination (Frerichs & Naegel, 1997). People over 45 years of age in both the UK and Germany face significant difficulties in finding employment (Frerichs & Naegel, 1997; Lucas, 1993). It may thus be suggested that although acts such as the EOA fall short in some respects they are, nevertheless, steps in the right direction.

Other Australian federal government strategies that are aimed at encouraging older workers to remain in the workforce include (Bishop, 1999):

- The Pension Bonus Scheme offers financial rewards to people who choose to defer claiming the age pension while continuing to work.
- The Return to Work Program provides training in areas such as basic computing skills.
- Support for the Australian Employers Convention held in 1999, which encouraged Australian businesses to review current practices relating to recruitment, retention, training and retirement of older workers and sought a commitment from industry to change employer behaviour through the promotion of best practice.
- The House of Representatives Inquiry into Issues Specific to Workers Over 45 Years of Age Seeking Employment, or Establishing a Business, Following Unemployment.
- Research on the barriers facing mature age workers in obtaining training.
- Research to investigate and report on the barriers that unemployed mature age people encounter and what best practices are being used to assist these people to secure employment.
- Annual Corporate Work and Family Awards including a special award for the organisation that has demonstrated the most outstanding achievement in recognising and meeting the needs of mature age workers.
• Various publications including a Guide to Issues for Older Workers and a Guide to Elder Care Issues in the Workplace.

Whilst initiatives vary between the states of Australia, policy and programs initiated to date have included (Bishop, 1999):

• Funding for computer equipment and programs to support adult learners through University of the Third Age centres.

• Programs to assist unemployed people aged 40 years and over.

• A training and education service, which provides information to employers and advocacy groups on age discrimination and compulsory retirement matters.

• Mature age workforce policy and guidelines that encourage public sector agencies to develop mature workforce programs for their organisations.

• Collaborative programs with the private sector to identify training needs of mature age workers in their respective industries in order to improve job opportunities for this target group.

• Best practice awards promoting mature age employment and lifelong learning.

Government initiatives and programs to assist older workers are relatively new and remain to be evaluated. Thus, their effectiveness in increasing labour force participation rates remains to be seen.

Suggestions made to the House of Representatives Standing Committee (2000) about changing negative attitudes held by employers included (House of Representatives Standing Committee on Employment, 2000):

• A public education campaign to promote an age balanced workforce

• Publicising success stories of older workers.

• Establishment of an employer’s forum on age.

• Annual company reports to include age profiles.
- Targeting employers to demonstrate benefits of hiring older workers.
- More employer funded training for older workers.
- Increased flexibility regarding retirement options.

From the above suggestions, the Committee (House of Representatives Standing Committee on Employment, 2000) made two recommendations. Firstly, that the Government develop a sustained national campaign, aimed at employers, promoting the benefits of older workers and an age balanced workforce, including the formal assessment and evaluation of such a campaign. The second recommendation was to promote among businesses, an employer-led 'forum', similar to EFA in the UK, to publicise the benefits of an age-diverse workforce, and remove barriers to achieving such a workforce.

It is clear that the Australian government is aware of the problems facing older workers, however, it would appear that employer groups are less informed. Legislation, policy changes, and labour market programs and incentives are all relevant steps, but they are unlikely to be effective in changing employers' attitudes toward older workers.

Conclusion

A disproportionate ageing of the Australian population with significantly greater numbers of older adults is inevitable. This will tax resources and may create intergenerational disharmony. Keeping older adults in paid employment longer could minimise the predicted economic deficits and alleviate social difficulties.

Ageism is embedded in Australian culture and the age at which one is considered old is linked to the time of leaving the work force. Work-related ageist attitudes are found among employers and among undergraduate students. As the predictions of population ageing and their implications make evident the increasing importance of, and the need for,
older adults in the workforce, it would be beneficial to address relevant issues in both employer and undergraduate populations.

Many older adults would rather work than be retired and paid employment is significant to their physical and psychological well being. Older adults are generally healthy and able to work well into their 70s.

It is clear that older workers are disadvantaged compared to younger workers and that older job seekers are discriminated against. Actual on-the-job experiences with older workers show that older adults are willing and able to work.

Anti-discrimination legislation falls short of protecting older adult job seekers against hiring discrimination and the success of more recent government initiatives is yet to be seen. Additional ways to combat hiring discrimination against older adults are evidently needed. The most difficult stage in gaining employment for older adults is to get a 'foot in the door'. Both surveys and studies of actual hiring discrimination found that the most likely cause of this is negative stereotyping of older workers. Research conducted in Australia suggested there might also be differences in stereotyping across gender.

In order to promote behavioural changes in stereotypically based behaviours, knowledge of the specific stereotypes underlying the behaviour is imperative (Vaughan & Hogg, 1998). Knowledge of the stereotypes that are held about older workers and the extent to which these are held is, therefore, necessary for the formulation of informed interventions. As there was no validated tool of measurement with which to gather and assess this information, a questionnaire was developed. The next chapter explores the area of measurement of attitudes toward older adults and older workers, which formed the foundation for the questionnaire.
CHAPTER 3

Measuring Ageist Stereotypes

Whilst the systematic stereotyping of older adults in general has been reported in the literature, there has only been a few validated tools with which to identify and measure these stereotypes. As for the specific contexts of employment and hiring discrimination, there is no commonly used tool. Most researchers in this field have developed their own instruments. A number of these instruments are reviewed in this chapter. All of these instruments are shown to possess shortcomings for measuring stereotypes about younger and older workers. These shortcomings suggest a number of features that would be possessed by an effective instrument.

There are several issues that should be addressed in a measure of attitudes toward older workers in employment. First, the measure should be valid and reliable. That is, its content should be derived from information about previously identified stereotypes of older workers, which would allow validation of previous findings, and it should yield similar trends of results across samples and across time. Second, in order to allow the exploration of issues that are not covered by the instrument's items, respondents should be invited to provide additional information that they consider as relevant in hiring discrimination. Third, the measure should include clear definitions of younger and older workers in terms of age ranges. This is important for clarity and accuracy in responding. Fourth, seeking to identify and measure stereotypes of older workers in the employment context should be done relative to younger workers. The reality of hiring discrimination against older workers is that they are rejected in favour
of younger workers and it is, therefore, vital to assess the stereotypical view respondents hold about older workers relative to younger ones.

Measuring the stereotyping of older workers relative to younger workers is important also because it addresses the issue of standard shifts. People use different standards when assessing members of stereotyped groups (Biernat, Manis & Nelson, 1991; Biernat, 1995). For example, a female who raises her voice in conversation could be judged as very assertive whilst the same behaviour may be viewed as mild when done by males. Hence, asking respondents to assess older workers and younger workers separately could bias results.

This is important to the current study because although hiring decision-makers may consider older workers as healthy relative to the older adult population, they may view their health as impaired compared to that of younger workers and job applicants' abilities are likely to be judged across age. Biernat et al. (1991) suggested that the use of separate scales and using objective measures facilitates accuracy. The measurements that are sought in the current study, however, are of abstract constructs such as reliability and adaptability. It is therefore suggested that, short of objective measures, asking respondents for their ratings of older workers relative to younger workers would minimise the biasing effect of standard shifts.

Obtaining measures of the extent of stereotyping can inform interventions of the characteristics where respondents view the most discrepancy between older and younger workers. In order to obtain an appropriate tool with which to validate, measure, and explore employers' and undergraduate students' stereotypes of older workers, a review was conducted of popular measures of general stereotyping of older adults and measures developed for the employment context.
The most commonly used instrument to measure general stereotyping of the aged has been Palmore's Facts on Ageing Quiz (FAQ) (Braithwaite, Lynd-Stevenson, & Pigram, 1993; Scott, Minichello, & Browning, 1998). Having administered the FAQ across various samples, Palmore (1999) identified nine common stereotypes underlying negative prejudice towards older people: the beliefs that most aged are sick, ugly, impotent, senile, mentally ill, isolated, useless, poor, and depressed.

The FAQ comprises 25 items and has two versions. In one version respondents are asked for a true or false response. In the second version respondents are asked to choose one of four answers in a multiple-choice format (Harris, Changas, & Palmore, 1996; Palmore, 1999). An example of an item from the true or false version of the FAQ is "The majority of old people are socially isolated" (Palmore, 1988, p.4). An example of an item from the multiple-choice version of the FAQ is "The senses that tend to weaken in old age are:

a. sight and hearing
b. taste and smell
c. sight, hearing, and touch
d. all five senses

(Palmore, 1988, p. 585)

One important difference between the multiple-choice version of the FAQ and the true and false version is that the former allows for observations of both positive and negative biases toward older adults (Harris et al., 1996).

The FAQ tests respondents' knowledge about older adults. It can detect generalisations and stereotyping, and in addition the multiple-choice version can detect directional biases. Neither version of the FAQ, however, is equipped to measure stereotyping of older adults relative to the stereotyping of younger people.
Neither version of the FAQ measures the extent to which stereotypes are held, as distinct from simple ignorance. As mentioned earlier being able to assess stereotyping of older adults relative to stereotyping of younger people is paramount in the context of employment. Obtaining measures of the extent to which stereotypes are held is vital in cases where the development of interventions aimed at amending stereotype-based behaviours is sought.

Another commonly used tool that measures attitudes toward older adults is the Tuckman and Lorge measure (1953, cited in Braithwaite et al., 1993). The Tuckman and Lorge instrument was designed to measure attitudes in general, however, what was needed for the current study was a measuring instrument that was specifically designed for the employment context. Thus, both the FAQ and the Tuckman and Lorge instruments were not appropriate for the purposes of the current study.

Palmore (2001) reported the development and initial findings of a new tool of measurement called the Ageism Survey (AS). This survey was designed to measure prevalence and types of ageism in different societies and to observe which subgroups of older people report more ageism (Palmore, 2001). The AS is a self-report instrument comprising 20 items. Respondents are older adults who are asked to indicate the frequency with which they experienced prejudice or discrimination. A possible threat to the accuracy of the AS is that older adult respondents may be prone to erroneously relate such experiences to their age. A modified version of the AS, tailored to the context of employment, could be used to obtain information about older adults' experiences of employers' attitudes and behaviours toward them. This could not be utilised by the current study as the AS was published after the survey component was completed.
Whilst measures of general attitudes toward older adults are important and valuable, more context-specific tools are needed in order to identify stereotypes that underlie hiring discrimination. Further, as Vaughan and Hogg (1998) note, knowledge of the specific stereotypes underlying a behaviour is needed in order to promote behavioural changes.

Rosen and Jerdee (1976) developed a work related age stereotypes questionnaire. A list of 65 items was constructed based on the scientific literature, popular literature, and worker evaluation sheets. The list was classified into four scales measuring performance, potential for development, stability, and interpersonal skills. Respondents were asked to imagine that they were about to meet two men for the first time and that the only information available to them about these men was that one was 30 years old and the other was 60. Respondents were asked to indicate the degree to which each of the 65 characteristics described each of the two hypothetical men. Responses were indicated on nine-point scales ranging from not at all accurate to very accurate (Rosen & Jerdee, 1976).

Whilst the Rosen and Jerdee (1976) questionnaire was work related and able to assess stereotyping of an older person relative to stereotyping a younger one it fell short of satisfying the needs of the current study. First, the Rosen and Jerdee (1976) instrument was gender specific. This is problematic because older adult job seekers compete against younger people of both genders and it would thus be preferable to ask employers to make the appropriate comparison. Further, previous research found that older females where discriminated against to a greater degree than were older males (Gringart & Helmes, 2000).

Second, the Rosen and Jerdee questionnaire depicted a hypothetical person that was either 60 or 30 years old. This poses a difficulty because it treats
stereotyping by age as discrete. Research in the area of age discrimination in hiring indicates variation in the age at which workers could be considered as older workers. Thus, using age ranges rather than discrete ages could facilitate better representativeness and ease of responding.

Third, the instructions given to respondents in the Rosen and Jerdee (1976) questionnaire do not ask about older workers nor are the two hypothetical men presented as workers. Thus, whilst the items in the questionnaire related to work related stereotypes, respondents were not asked to consider them in that context. This presented a difficulty for the current study. Based on the findings that negative stereotypes of older workers compared to younger ones were the most likely reason for hiring discrimination against older adults, one aim of the current study was to seek employers' stereotyping of older workers relative to their stereotyping of younger workers.

Fourth, for an informed questionnaire to be designed, more recent literature and research findings had to be considered. Thus, the Rosen and Jerdee (1976) instrument was not satisfactory for the purposes of the current study.

One component of the Taylor and Walker (1994) study of employers' attitudes towards older people was to survey employers' stereotyping of older workers. Respondents were asked to indicate the degree to which they agreed with each of 15 statements about older workers on five point scales ranging from 'Agree strongly' to 'Disagree strongly' (Taylor & Walker, 1994). Whilst this method of inquiry produced valuable information it fails to measure employers' stereotyping of older adults relative to the stereotyping of younger people. As this is paramount to the context of hiring discrimination the Taylor and Walker (1994) measure could not be adapted for the current study.
Schmidt (1999) surveyed attitudes toward older workers among human resource professionals in Western Australia. This research study combined statements about younger and older workers to produce a 56-item instrument. As in Taylor and Walker (1994), respondents were asked to indicate the degree to which they agreed with each of the statements on five point scales ranging from 'Agree strongly' to 'Disagree strongly' (Schmidt, 1999). Younger workers were defined as those 30 years of age or younger and older workers were defined as those 50 years of age or older (Schmidt, 1999).

The age definitions used in Schmidt (1999) could be misleading. A review of relevant research found that workers might be considered to be 'older workers' at any age between 40 and 55. No research, however, reported those under 40 years of age to have been considered 'old' and no research reported those 55 and older to have been considered 'young'. Based on this review it seems that younger workers should be defined as those 40 years of age and younger and older workers as those 55 and older. It could be even more beneficial to define older and younger workers as age ranges with lower and upper limits. This would exclude respondents' unnecessary consideration of the very old and very young, which could sway responses. The replies of some of the respondents in Schmidt (1999) may have thus not been representative of their views of older workers as they may have not considered a worker of 50 as old. Further, defining younger workers as those up to 30 years of age may have restricted consideration of replies as workers between 30 and 40 may be viewed differently whilst still considered younger workers.

Whilst Schmidt (1999) measured stereotypical views of both older and younger workers, there was no assessment of respondents' relative stereotyping of
older workers compared to the stereotyping of younger workers. Thus the instrument used by Schmidt (1999) could not be used in the current study.

Reviewing relevant literature is an integral part of constructing a tool of attitude measurement (De Vaus, 1995; Oppenheim, 1992). Regardless of how thorough previous research might have been, new measuring instruments should incorporate new information that has not been recorded previously. None of the attitude measuring instruments reviewed above allowed respondents to add relevant information. Thus, these instruments were able to validate previously reported stereotypes and to measure the extent to which they were held but they were all unable to explore further stereotypes that might be relevant to discriminatory behaviour.

Gringart and Helmes (2001) found that hiring discrimination was expressed differently across gender and previous literature suggested that older females were disadvantaged due to the compounding effects of sexism and ageism. Measuring employers' stereotyping of older male workers and older female workers is, therefore, required. None of the above measures was designed for such a purpose.

As no existing tool was found to be satisfactory, a new measuring instrument was needed in order to validate, measure and explore employers' and undergraduate students' stereotyping of older workers across gender. An instrument was developed that was based on relevant literature, included age range definitions of older and younger workers based on research findings, was capable of assessing stereotyping of older workers relative to stereotyping of younger workers, and allowed the exploration of further relevant information. The next chapter describes the development of the questionnaire and reports the conduct and findings of Study One.
CHAPTER 4

**Measuring Stereotypes Held About Older Workers: An Empirical Study**

The study described in this chapter was designed to investigate the views held by employers and undergraduate students about older workers of both sexes. Random samples of companies and undergraduates were employed. Using two versions of a questionnaire, one asking about older male workers and one about older female workers, measures of the stereotypic views held about older adult workers were gathered. In addition, respondents were asked to indicate how relevant they considered age was in making hiring decisions and how likely they were to hire older adult workers. Finally, respondents were asked to provide demographic information, namely age, sex, and educational level.

In order to develop a questionnaire with which to validate, measure, and explore attitudes toward older workers, several relevant sources were reviewed in search of the stereotypes held by employers about older workers. These were: Pickersgill, Briggs, Kitay, O'Keeffe, and Gillezeau (1996), Meddows-Taylor (1999), Ventrell-Monsees and McCann (1994), Steinberg et al. (1996), Ranford (1987), Fastenau (1998), Bennington and Tharenou (1996), and Taylor and Walker (1994). This review suggested that whilst not all stereotypes are negative, a number of themes may lie at the heart of age discrimination in relation to work. These themes are: older adults are less trainable and are less willing to work; older adults are too cautious and less productive; they are less adaptable to new technology and are less cooperative; older adults are less strong physically and are not interested in technological changes; they are less flexible and are not subordinate to younger workers of higher positions; older workers have more accidents and are less likely to be promoted; older adults
lack skills and are absent from work more often; older adults' memory is less functional and their intelligence is deteriorating; older workers' performance is not as good as that of younger workers and they are less creative; older adults do not fit in and they are less cost effective; they are less healthy and are poor decision-makers; the job quality of older adults is impaired and they are too dependable; they are less mentally alert, are not as clever, and are less ambitious; they lack energy and motivation and are less efficient; and older workers are more reliable, are harder working and are more loyal.

A questionnaire was developed based on the literature review. In the questionnaire respondents are asked to rank older workers on seven-point scales along several dimensions compared to younger workers. For example, how trainable are older workers compared to younger workers (ranking from 1 = far less trainable to 7 = far more trainable). These scales can be summed in order to obtain an overall measure of attitudes. Respondents are further asked to indicate how important they view age in making hiring decisions and how likely they are to hire older workers. These issues are of interest because the importance of age in making hiring decisions should determine the weight given to the stereotypical views of older workers in hiring. Knowing how likely respondents are to hire older workers is a measure of their discriminatory intentions. Thus, the questionnaire can detect both prejudice and discrimination.

In order to tap relevant information that was not covered by the reviewed literature, an open-ended question was included in the questionnaire. Respondents are asked for any other characteristics that differentiated older workers from younger ones. Finally, respondents were asked to provide demographic data, namely age, gender, and educational level.
As was mentioned in Chapter Four, the age at which one becomes an 'older worker' is not clearly defined. The Office for Older Australians as well as the Australian Bureau of Statistics do not provide a definition for 'old' or 'older' workers. They point to eligibility for the age pension being 65 for men and 61 for women, and to the superannuation preservation age of 55 years as possible guidelines (Healey, 1999). The Australian Council on the Ageing defines 45 to 64 year olds as mature aged workers and those 65 and over as older workers (Choo, 1999). An Australian federal government report noted that many employers consider workers over 45 years old as older workers (Bishop, 1999). A review of the research in the area suggested that workers could be considered old at any age between 40 and 55 (Bittman, Flick & Rice, 2001; Buys & Buys, 1996; Patterson, 1997). None of the reviewed research found workers under 40 years old to be considered older workers and no workers 55 and over were considered young workers. Thus, in seeking respondents' stereotypical views of older workers compared to younger ones, younger workers were defined as those between 25 and 40 and older workers were defined as those between 55 and 70.

There were two more reasons for these age range definitions. First, people in the 55 to 70 age bracket are predicted to be the ones who will need to remain in the workforce due to the ageing of the population. Second, no significant age related declines in ability and job performance are recorded for people up to their mid 70s.

Given that age discrimination in hiring is expressed differently across gender, two forms of the questionnaire were prepared, one asking about older female workers and one about older male workers. This allowed for the observation of any differences in the stereotypes held about older workers of either gender. Respondents are asked for their views about older female or male workers compared to younger
workers of both sexes. The rational for this comparison is that older male and female job seekers compete against younger applicants of both sexes.

As the problems associated with age discrimination in hiring are predicted to increase in the future and as stereotype based discrimination was found among Australian undergraduates (Braithwaite et al., 1993), it was important to assess the possibility of addressing the issue of age discrimination in hiring through the educational system. Targeting potential future employers could be an effective way of preparing for the anticipated growing numbers of older adult jobseekers. Thus, using the questionnaire to validate, measure, and explore the stereotypic views held by undergraduates toward older workers could provide the information needed to develop interventions that could be implemented within the educational system.

The two versions (male and female) of the questionnaire were pilot tested with a sample of 50 undergraduate students. This was done in order to obtain preliminary measures of internal consistency and item total correlations. Each respondent was provided with a comment sheet and was asked to provide feedback about the layout of the questionnaire, the phrasing of questions, the ease of understanding, and the length. Participants indicated that the layout of both versions of the questionnaire was clear and efficient, that the questions were well phrased, that the questionnaire was easy to understand, and that it was neither too long nor too short (for a detailed account of the pilot study see Appendix A.).

Because questionnaire items were extracted from relevant literature, there was no immediate reason for external validation. Further, as there is no clear distinction between stereotypes that are held about older adult workers by employers and other people, it was decided to seek the assistance of undergraduate students for piloting.
Initial calculations of the questionnaire's internal consistency yielded Alpha levels of .83 for the male version and .85 for the female version with five items showing negative item total correlations. Deleting these five items increased Alpha to .87 for the female version and .89 for the male version. These levels of internal consistency were considered satisfactory (for details on these items see Appendix A.).

As there were no conclusive data on employers' and undergraduates' stereotyping of older workers, Study One was designed to validate stereotypes that were found in the literature, to measure the extent to which they were held, and to explore other relevant issues that were not recorded previously. Since Gringart and Helmes (2001) found that older females were discriminated against significantly more than were older males it was expected that employers would view older female workers more negatively than they would older male workers.

Another issue of interest was possible differences between employers and undergraduates. Measuring the extent to which stereotypes are held would indicate in which areas respondents' view the greatest discrepancy between older and younger workers and would inform accurate future interventions.

Exploring other relevant issues that are not recorded in the literature would deepen our understanding and could be instrumental in the development of future interventions. The questionnaire incorporated an open-ended question to allow such exploration. Finally, gathering demographic information would allow deeper analyses and detailed observations. Hence, the questionnaire asks respondents to indicate their age, sex, and educational level.
Method

Design

The study used a 2 x 2 between subjects design with questionnaire version (male and female versions), and sample (employers and undergraduate students) as the independent variables. There were three dependent variables: 'sum of scale' (the sum of the stereotypes scale of the questionnaire), the 'age relevant' question (how relevant was age in making hiring decisions), and the question 'likely to hire' (how likely were respondents to hire older workers).

Respondents

Three hundred companies and 300 undergraduate were addressed. Responses were received from 128 private companies and 187 undergraduate students. Companies were randomly selected across industries in five states, Queensland, New South Wales, Victoria, South Australia, and Western Australia. Undergraduates were randomly selected across disciplines from Edith Cowan University’s mailing list of currently enrolled students.

Companies were located through the Kompass electronic database. Only companies with 10 to 50 employees were used. This was done for three reasons. The first was to minimise the possibility of addressing companies with more that one hiring decision maker as this could have compromised the procedure of the Study. Two. Second, companies with less than 10 employees are likely to be family oriented and may not be hiring as much as larger companies. Third, ABS data suggest that companies with up to 50 employees cover more than 50 per cent of the Australian workforce. For a detailed account of sampling and randomization see Appendix B.
Of the hiring decision-makers sample, there were 89 males and 39 females, mean age between 40 and 45 years. Nine respondents (7%) had a formal education level of up to year 10. Twenty-three (18%) had formal education up to year 12. Eighty-four (65.6%) had tertiary education and 12 (9.4%) were postgraduates. Twenty-nine responses (22.7%) were received from Queensland, 23 (18%) from New South Wales, 24 (18.8%) from Victoria, 24 (18.8%) from South Australia, and 28 (21.9%) responses from Western Australia.

In the undergraduates sample there were 72 males and 115 females, mean age between 20 and 25. Two respondents (1.1%) had a formal education level of up to year 10. Seventy-five (40.1%) had formal education up to year 12. One hundred and eight (57.8%) had tertiary education and two (1.1%) were postgraduates.

Materials

Six cover letters and two follow up cards were used in each sample for the two questionnaire versions. These consisted of two cover letters for initial mailing, two cards for the first follow up, two cover letters for the second follow up, and two cover letters for the third follow up. Two versions of the questionnaire, one asking about older male workers and one asking about older female workers, were used in each sample. In order to allow follow-up monitoring each questionnaire had a code number on the first page. C4-sized envelopes were used for posting and C5-sized envelopes were used for prepaid returns.

Cover letters introduced the issue of population ageing and explained that the number of younger workers will decline and that the number of older job applicants will increase over the coming years. The letters explained to respondents that their input would facilitate better understanding of the work environment faced by older
Hiring discrimination

people. Letters that addressed companies asked for the 'hiring decision-maker’s' views and those sent to undergraduates asked for the person’s own views.

It was explained to respondents that each of them was one of a randomly selected number, and that to be truly representative it was crucial that each questionnaire was returned. Respondents were advised that filling out the questionnaire should take no more than 15 minutes and were asked to place completed questionnaires in the reply paid envelope supplied and to post it back within five working days.

Cover letters made clear that what was sought was only respondents' personal view. It was explained that the number on the first page of the questionnaire was simply to verify receipt of reply and confidentiality of response was assured. Respondents were advised that the results of the survey could be made available in published form and that a summary of results could be made available to them on request. An address and a telephone number were provided in case respondents had any questions or comments. Respondents were thanked for their assistance.

Follow up cover letters included the same information as the initial one, but were successively more insistent in tone. For examples of cover letters see Appendix C.

The cards of the first follow up acted as reminders. Respondents were reminded of the initial mailing of the questionnaire to them. They were thanked in case they had already replied and were asked to reply promptly if they had not. Respondents were advised that in case they did not receive it, or had lost or misplaced the questionnaire they could call the researcher and receive another copy. Follow up cards were similar across samples except that those addressed to companies referred to a questionnaire that was mailed to the hiring decision maker and those sent to
undergraduates referred to a questionnaire that was sent to 'you'. For examples of follow-up cards see Appendix C.

In answering the questionnaire, respondents were asked for the first answer that came to mind. This was done in order to allow for the expression of stereotypes and to minimise conventional or politically correct answers. The questionnaire was divided into four sections. Section A comprised 28 items that addressed stereotypical views found in the literature and sought to assess the extent to which respondents held these. Section B asked for respondents' intentions in terms of their likelihood to employ older adults and the extent to which they view age as relevant in making hiring decisions. Section C comprised one open-ended question asking, 'What other characteristics of older female/male workers differentiate their performance from that of younger workers?' This allowed the exploration of issues that were relevant to age discrimination in hiring that were not found in the literature. Section D asked respondents for demographic data namely age, gender, and educational level.

Respondents were asked to rank older workers on seven-point scales along several dimensions compared to younger workers. This allowed accuracy in responding and a sensitive scale. For example, in section A of the female version:

**How trainable are older (55-70) female workers compared to younger (25-40) workers?**

<table>
<thead>
<tr>
<th>Far less</th>
<th>Less</th>
<th>Slightly less</th>
<th>No different</th>
<th>Slightly more</th>
<th>More</th>
<th>Far more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An example from section B of the male version is:

**How likely are you to hire a male of the 55-70 age group?**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Unlikely</td>
<td>Remotely likely</td>
<td>More likely than likely</td>
<td>Very likely</td>
<td>Certainly</td>
<td></td>
</tr>
</tbody>
</table>

Employer questionnaire versions were identical to those of the undergraduates except that for the latter the likelihood of hiring question asked 'How likely would you be to hire...' rather than 'How likely are you to hire...'. For an example of a questionnaire see Appendix D.

**Procedure**

Respondents in each sample were randomly allocated to one of two groups according to questionnaire versions. For a detailed account of the randomization process see Appendix B.

Six hundred questionnaires, cover letters, and prepaid reply envelopes, 300 in each sample, were simultaneously posted. Questionnaires were posted on a Tuesday, as recommended by De Vaus (1995). This avoided the post office's Monday pile-up and was likely to ensure that respondents received the questionnaires by Thursday so that they could complete them by the end of the weekend.

In the employers' sample, cover letters were addressed to hiring decision-makers. This is because it is their decisions that reflect hiring discrimination. In the undergraduate sample, letters were titled 'Dear Sir/Madam'. Each questionnaire was numbered to enable the researcher to keep check of those who replied and those who needed to be followed up. Three follow-ups were used in order to enhance the response rate as recommended by Dillman (1978).
The first follow-up was sent one week after the initial posting and was mailed to all respondents. It was in the form of a postcard and reminded respondents of the questionnaire. Respondents were thanked for their cooperation if they had filled the questionnaire and asked to do so in case they did not. For an example of a first follow-up cover letter see Appendix C.

The second follow-up was posted three weeks after the initial posting and addressed only those who did not respond by that time. It included a letter, linked to the initial cover letter but was more insistent in tone, a questionnaire, and a posted return envelope. For an example of a second follow up cover letter see Appendix C.

The third follow-up was posted three weeks after the second follow up and addressed only those who did not respond by that time. It included a cover letter, linked to the previous two but in slightly different wording, a questionnaire, and a reply-paid envelope. For an example of a third follow up cover letter see Appendix C.

Data analysis

Data were analysed using Statistical Package for Social Sciences (SPSS) software, version 10. All questionnaires were screened for missing data prior to data entry and those that were incomplete were discarded. After data entry frequency tables were produced to check for missing values and none was detected. The variables were examined separately according to group for univariate outliers and normality. The study had four groups across the employers and undergraduate samples and the two questionnaire versions (male and female) to which they replied, the employers male version (n = 71), employers female version (n = 67), undergraduate male version (n = 94), and undergraduate female version (n = 101). As the three continuous measures of 'sum of scale' (section A of the questionnaire), 'age
relevant’ (section B), and 'likely to hire' (section B) were all related to the construct of age discrimination against older adults in hiring, SPSS multivariate analysis of variance (MANOVA) was chosen.

Results

Out of the 300 packages sent to companies, 24 were returned to the sender by Australia post as address unknown. This left the actual sample with 276. One hundred and sixty-nine questionnaires were returned yielding a response rate of 61 per cent in the employers sample.

Out of the 300 packages that were sent to undergraduates, six were returned to the sender as address unknown, which left the actual sample with 294. Two hundred and thirteen questionnaires were returned yielding a response rate of 72 per cent in this sample.

Returned questionnaires were screened for missing data prior to data entry. Thirty-one incomplete questionnaires were found in the employers' sample and 18 in the undergraduate sample. All incomplete questionnaires were discarded. This left 138 and 195 completed questionnaires in the employers and undergraduate samples respectively.

Prior to analyses, all 28 variables of the stereotype scale and the variables 'sum of scale', 'likely to hire', and 'age relevant' were examined through various SPSS programs for accuracy of data entry, missing values, and fit between their distributions and the assumptions of mutivariate analysis.

No further missing values were detected. The normality of 'sum of scale', 'likely to hire', and 'age relevant' was assessed by visual examination of plots and by calculating skewness and kurtosis and was found to be satisfactory for all variables.
Univariate outliers were defined as values that were more than three standard deviations away from their mean. Depending on the direction of deviation, outlying values were replaced with values equal to three standard deviations above or below their mean.

Thirteen outlying values across the 31 variables were identified and adjusted in the employers male version group. Five outlying values were identified and adjusted in the employers female version group. The undergraduate male version group had 16 outlying values and the undergraduate female version group had 24, all of which were adjusted. No single variable had a significantly greater number of univariate outliers compared with the others.

Using Mahalanobis distance with $p < .001$, 18 cases (about 5%) were identified as multivariate outliers across all 31 variables and were deleted. After the deletion of the 18 multivariate outliers, 315 cases remained for analysis, 65 cases in the employers male version group, 63 in the employers female version group, 90 in the undergraduate male version groups, and 97 in the undergraduate female version group.

The internal consistency reliability of the questionnaire was analysed using SPSS to calculate Cronbach’s alpha in each group. Alpha values indicated that the scale's internal consistency was satisfactory across the four groups. Alpha values are shown in Table 1 and item means and standard deviations across groups are shown in Table 2.
Table 1

**Alpha values by group**

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employers male version</td>
<td>65</td>
<td>0.91</td>
</tr>
<tr>
<td>Employers female version</td>
<td>63</td>
<td>0.95</td>
</tr>
<tr>
<td>Undergraduates male version</td>
<td>90</td>
<td>0.89</td>
</tr>
<tr>
<td>Undergraduates female version</td>
<td>97</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Principal Component Analysis was performed in each sample in order to explore underlying themes in respondents' stereotyping of older workers. As could be expected with such high levels of internal consistency, however, an ambiguous structure of six highly correlated factors was obtained. A Parallel Analysis Routine (PAR) (Holden, Longman, Cota, & Fekken, 1989; Longman, Cota, Holden, & Fekken, 1989) identified two factors. Following the PAR analysis a principal component analysis was performed requesting the extraction of two factors. The two extracted factors were similar across samples and mirrored the levels of questionnaire item ratings with all the items with mean ratings lower than four loading on one factor and those with mean ratings higher than four loading on the other. The factor with the items that had mean ratings greater than four includes characteristics such as 'willing', 'reliable' and 'loyal' and can be suggested to represent consolidated personality characteristics. The second factor which was made up of items with mean ratings lower than four included characteristics such as 'trainable', 'interested', and 'flexible' and can be suggested to represent issues that are related to performance potential. For all items and their mean ratings see Table 2.
<table>
<thead>
<tr>
<th>Item</th>
<th>Employers male version</th>
<th>Employers female version</th>
<th>Undergraduates male version</th>
<th>Undergraduates female version</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Adaptable</td>
<td>2.45</td>
<td>0.98</td>
<td>2.52</td>
<td>1.04</td>
</tr>
<tr>
<td>Interested</td>
<td>2.95</td>
<td>0.94</td>
<td>2.87</td>
<td>1.10</td>
</tr>
<tr>
<td>Trainable</td>
<td>3.05</td>
<td>1.12</td>
<td>3.19</td>
<td>1.09</td>
</tr>
<tr>
<td>Strong</td>
<td>3.10</td>
<td>1.15</td>
<td>3.22</td>
<td>1.10</td>
</tr>
<tr>
<td>Likely to be promoted</td>
<td>3.23</td>
<td>1.03</td>
<td>3.28</td>
<td>1.22</td>
</tr>
<tr>
<td>Ambitious</td>
<td>3.26</td>
<td>1.06</td>
<td>3.28</td>
<td>1.38</td>
</tr>
<tr>
<td>Energetic</td>
<td>3.52</td>
<td>1.05</td>
<td>3.54</td>
<td>1.01</td>
</tr>
<tr>
<td>Healthy</td>
<td>3.54</td>
<td>0.83</td>
<td>3.67</td>
<td>1.16</td>
</tr>
<tr>
<td>Creative</td>
<td>3.69</td>
<td>0.92</td>
<td>3.75</td>
<td>1.24</td>
</tr>
<tr>
<td>Functional memory</td>
<td>3.74</td>
<td>0.87</td>
<td>3.81</td>
<td>0.99</td>
</tr>
<tr>
<td>Mentally alert</td>
<td>3.78</td>
<td>0.84</td>
<td>3.81</td>
<td>0.86</td>
</tr>
<tr>
<td>Flexible</td>
<td>3.80</td>
<td>1.37</td>
<td>3.86</td>
<td>1.03</td>
</tr>
<tr>
<td>Fit in</td>
<td>3.98</td>
<td>0.99</td>
<td>4.00</td>
<td>1.65</td>
</tr>
<tr>
<td>Productive</td>
<td>4.01</td>
<td>1.18</td>
<td>4.22</td>
<td>1.23</td>
</tr>
<tr>
<td>Motivated</td>
<td>4.09</td>
<td>1.07</td>
<td>4.22</td>
<td>1.34</td>
</tr>
<tr>
<td>Efficient</td>
<td>4.29</td>
<td>0.88</td>
<td>4.32</td>
<td>1.49</td>
</tr>
<tr>
<td>Satisfactory performance</td>
<td>4.38</td>
<td>1.04</td>
<td>4.36</td>
<td>1.19</td>
</tr>
<tr>
<td>Cost effective</td>
<td>4.51</td>
<td>1.09</td>
<td>4.43</td>
<td>1.12</td>
</tr>
<tr>
<td>Cooperative</td>
<td>4.57</td>
<td>0.99</td>
<td>4.48</td>
<td>1.06</td>
</tr>
<tr>
<td>Job quality</td>
<td>4.63</td>
<td>0.86</td>
<td>4.57</td>
<td>1.06</td>
</tr>
<tr>
<td>Hard working</td>
<td>4.71</td>
<td>1.01</td>
<td>4.59</td>
<td>0.91</td>
</tr>
<tr>
<td>Willing to work</td>
<td>4.83</td>
<td>1.15</td>
<td>4.60</td>
<td>1.35</td>
</tr>
<tr>
<td>Competent</td>
<td>4.88</td>
<td>1.02</td>
<td>4.64</td>
<td>1.13</td>
</tr>
<tr>
<td>Skilled</td>
<td>5.09</td>
<td>1.08</td>
<td>4.84</td>
<td>1.37</td>
</tr>
<tr>
<td>Cautious</td>
<td>5.34</td>
<td>0.87</td>
<td>5.09</td>
<td>1.01</td>
</tr>
<tr>
<td>Dependable</td>
<td>5.35</td>
<td>0.96</td>
<td>5.14</td>
<td>1.40</td>
</tr>
<tr>
<td>Loyal</td>
<td>5.49</td>
<td>0.87</td>
<td>5.35</td>
<td>0.90</td>
</tr>
<tr>
<td>Reliable</td>
<td>5.61</td>
<td>0.99</td>
<td>5.41</td>
<td>1.17</td>
</tr>
</tbody>
</table>

Hiring discrimination 84
A 2 x 2 between subjects multivariate analysis of variance (MANOVA) was performed on three dependent variables: 'sum of scale', 'age relevant', and 'likely to hire'. The independent variables were sample (employers and undergraduates) and questionnaire version (male and female).

SPSS MANOVA was used for the analysis. The assumptions of MANOVA were met and alpha was set at .05.

With the use of Pillai's Trace criterion the combined DVs were significantly affected by sample, $F(3,309) = 19.27, p < .05$.

Univariate test results showed that sum of scale was significantly affected by sample, $F(1,311) = 31.85, p < .05$. There was no significant interaction between sample and questionnaire version and neither of the other two DVs was significantly affected by sample. No significant differences between questionnaire versions were detected. Both employer groups had significantly higher sum of scale scores compared to either undergraduate group $F(3,311) = 10.95, p < .05$. In other words, employers reported an overall more favourable view of older adult workers than did undergraduate students. Descriptive statistics are shown in Table 3.

**Table 3**

Mean scores for Sum of scale, Age relevance, and Likely to hire.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Sum of scale M</th>
<th>SD</th>
<th>Age relevance M</th>
<th>SD</th>
<th>Likely to hire M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM male version</td>
<td>65</td>
<td>115.90</td>
<td>15.43</td>
<td>3.45</td>
<td>1.68</td>
<td>3.57</td>
<td>1.17</td>
</tr>
<tr>
<td>EM female version</td>
<td>63</td>
<td>115.08</td>
<td>15.43</td>
<td>3.24</td>
<td>1.58</td>
<td>3.49</td>
<td>1.20</td>
</tr>
<tr>
<td>UG male version</td>
<td>90</td>
<td>103.75</td>
<td>14.00</td>
<td>3.38</td>
<td>1.34</td>
<td>3.62</td>
<td>1.07</td>
</tr>
<tr>
<td>UG female version</td>
<td>97</td>
<td>106.29</td>
<td>14.90</td>
<td>3.29</td>
<td>1.63</td>
<td>3.82</td>
<td>1.22</td>
</tr>
</tbody>
</table>

Note. EM = Employers; UG = Undergraduates
The effects of respondents' sex, age, and educational level on the three DVs were each analysed through a MANOVA for each of the two samples.

One more variable of interest in the employers' sample was type of industry. However, Kompass's criteria were found to be idiosyncratic with some sections overly inclusive and some too specific. As this posed a serious threat to the validity of analyses, no analyses of type of industry were performed.

As respondents' age was indicated on the questionnaire in blocks of five-year age groups this variable was divided into three groups for analyses, those up to 40 years of age, those between 45 - 55, and those over 55. This age group division was used for two reasons. First, ABS data indicated that age discrimination in hiring is significantly more pronounced for job seekers over 40. Second, the questionnaire defined older adults as those between 55 and 70. Thus, the above age group divisions allowed the observation of discriminatory attitudes toward older workers as a function of relevance to respondents' age.

In the employers' sample, three 2 x 2 between subjects MANOVAs were performed on three dependent variables: 'sum of scale', 'age relevant', and 'likely to hire' separately for each of the demographic IVs of respondents' age, gender, and educational level. None of the demographic variables showed significant differences in the employers' sample and no significant differences were detected across the five states. The undergraduate sample showed significant effects for both sex and age of respondents and their results were analysed further with additional analyses.

A 2 x 2 between subjects MANOVA was performed on three dependent variables: 'sum of scale', 'age relevant', and 'likely to hire'. The independent variables were undergraduate respondents' sex and questionnaire version (male and female).
With the use of Pillai's Trace criterion the combined DVs were significantly affected by sex of respondents, $F(3,181) = 3.77, p = .01$. Univariate test results showed that 'likely to hire' was significantly affected by sex of respondents, $F(1,183) = 7.94, p < .01$, and a significant interaction between respondents' sex and questionnaire version was detected, $F(1,183) = 6.35, p = .01$. Neither of the other two DVs was significantly affected by sex of respondent. Post hoc comparisons using Tukey's HSD test revealed that undergraduate female respondents in the female version group had significantly higher likely to hire scores compared with undergraduate male respondents. Thus, undergraduate females indicated that they were significantly more likely to hire older female workers than were male undergraduate respondents. Descriptive statistics are shown in Table 4 and the interaction is shown in Figure 1.

Table 4

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Sum of scale</th>
<th>Age relevance</th>
<th>Likely to hire</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Male for male version</td>
<td>42</td>
<td>105.28</td>
<td>13.02</td>
<td>3.48</td>
</tr>
<tr>
<td>Male for female version</td>
<td>30</td>
<td>104.00</td>
<td>12.89</td>
<td>3.77</td>
</tr>
<tr>
<td>Female for male version</td>
<td>48</td>
<td>102.42</td>
<td>14.80</td>
<td>3.29</td>
</tr>
<tr>
<td>Female for female version</td>
<td>67</td>
<td>107.31</td>
<td>15.70</td>
<td>3.07</td>
</tr>
</tbody>
</table>
A 2 x 2 between subjects MANOVA was performed on three dependent variables: 'sum of scale', 'age relevant', and 'likely to hire'. The independent variables were undergraduate respondents' age (up to 40 and 40 - 55) and questionnaire version (male and female). The division of respondents' age to these age groups followed ABS data that showed job seekers over 40 to be significantly more discriminated against than younger job seekers. As there were no respondents over the age of 55 in the undergraduate sample, this age group does appear in the analysis.

As there were unequal numbers of cases across cells for this analysis and because it was assumed that differences in cell sizes reflected real processes in the populations sampled, the SPSS regression approach was used. Hence, each cell mean was given equal weight regardless of its sample size and each main effect and interaction was assessed after adjustments were made for all other main effects and
interactions. Multivariate test results were assessed using Pillai's criterion, which is both conservative and robust against unequal cell sizes.

With the use of Pillai's Trace criterion the combined DVs were significantly affected by age of respondents, $F(3,181) = 3.14, p = .026$. Univariate test results showed that age had a main effect for both age relevant, $F(1,183) = 4.66, p = .032$, and likely to hire, $F(1,183) = 8.41, p = .004$. No significant interactions were detected.

The younger (up to 40) group had significantly lower 'likely to hire' scores and significantly higher age relevant scores compared with the older (40 - 55) group. In other words, younger undergraduate respondents viewed age to be significantly more important in hiring and were significantly less likely to hire older workers than were older undergraduate respondents. Descriptive statistics are shown in Table 5.

Table 5

Undergraduates' mean scores for Sum of scale, Age relevance, and Likely to hire as a function of age and questionnaire version.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Sum of scale</th>
<th>Age relevance</th>
<th>Likely to hire</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Up to 40 for male</td>
<td>86</td>
<td>103.69</td>
<td>14.23</td>
<td>3.44</td>
</tr>
<tr>
<td>Up to 40 for female</td>
<td>81</td>
<td>104.25</td>
<td>12.98</td>
<td>3.36</td>
</tr>
<tr>
<td>40 - 55 for male</td>
<td>4</td>
<td>105.25</td>
<td>8.42</td>
<td>2.00</td>
</tr>
<tr>
<td>40 - 55 for female</td>
<td>16</td>
<td>116.62</td>
<td>19.67</td>
<td>2.94</td>
</tr>
</tbody>
</table>

Section C of the questionnaire comprised an open-ended question that asked respondents what other characteristics of older workers differentiated their performance from that of younger workers. Responses to this section presented
various attributes for which older workers were viewed as superior or inferior compared with younger workers.

There were about twice as many positive attributes related to older workers compared to negative ones in each group. No significant qualitative or quantitative differences between questionnaire versions were apparent in the responses to this section of the questionnaire. Whilst some of the attributes were anecdotal or group specific, some repeated across groups.

All four groups indicated that older workers had a better work ethic than did younger workers, that they had more appreciation of their job, and that they took fewer sick days. Three out of the four groups proposed that older workers were more presentable than younger workers, more punctual, and more responsible. Both employers groups suggested older workers were wiser than were younger workers. Both undergraduate groups responded that older workers were more proud of their job and that they had more life experience compared to younger workers.

Of the negative attributes, all four groups stated that older workers had difficulties with new technology. Three out of the four groups suggested that older workers were set in their ways and that they had impaired eyesight compared to younger workers. Both undergraduate groups responded that older workers were less attractive than were younger workers. The responses to section C of the questionnaire are summarised in Tables 6 through 9 for each of the four groups.
Table 6

Employers' male version group. Attributes for which older male workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better work ethics</td>
<td>Have difficulties with new technology</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Do not like to do overtime</td>
</tr>
<tr>
<td>More likely to continue in the job</td>
<td>Do not like menial tasks</td>
</tr>
<tr>
<td>Take less sick days</td>
<td>Not willing to relocate</td>
</tr>
<tr>
<td>Better at following instructions</td>
<td>Set in their ways</td>
</tr>
<tr>
<td>More thorough</td>
<td>Have impaired eye sight</td>
</tr>
<tr>
<td>Better decision makers</td>
<td>Have impaired motor skills</td>
</tr>
<tr>
<td>More presentable</td>
<td></td>
</tr>
<tr>
<td>More punctual</td>
<td></td>
</tr>
<tr>
<td>Have more common sense</td>
<td></td>
</tr>
<tr>
<td>More reliable</td>
<td></td>
</tr>
<tr>
<td>More responsible</td>
<td></td>
</tr>
<tr>
<td>More respectful</td>
<td></td>
</tr>
<tr>
<td>More honest</td>
<td></td>
</tr>
<tr>
<td>Have more life experience</td>
<td></td>
</tr>
<tr>
<td>Wiser</td>
<td></td>
</tr>
</tbody>
</table>
Table 7

Employers’ female version group. Attributes for which older female workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Have difficulties with new technology</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Harder to train</td>
</tr>
<tr>
<td>Take less sick days</td>
<td>Can not stand modern workplace pressure</td>
</tr>
<tr>
<td>Better team workers</td>
<td>Not as good in job interviews</td>
</tr>
<tr>
<td>Prepared to go the extra mile</td>
<td>Lack people skills</td>
</tr>
<tr>
<td>More focused on the job</td>
<td>Have lower self confidence</td>
</tr>
<tr>
<td>Have less out of work commitments</td>
<td>Set in their ways</td>
</tr>
<tr>
<td>More organised</td>
<td></td>
</tr>
<tr>
<td>More punctual</td>
<td></td>
</tr>
<tr>
<td>Are intrinsically motivated</td>
<td></td>
</tr>
<tr>
<td>More presentable</td>
<td></td>
</tr>
<tr>
<td>More responsible</td>
<td></td>
</tr>
<tr>
<td>More mature</td>
<td></td>
</tr>
<tr>
<td>More flexible</td>
<td></td>
</tr>
<tr>
<td>More stable</td>
<td></td>
</tr>
<tr>
<td>Have more experience</td>
<td></td>
</tr>
<tr>
<td>Wiser</td>
<td></td>
</tr>
</tbody>
</table>
Table 8

Undergraduates' male version group. Attributes for which older workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Not up to date on new technology</td>
</tr>
<tr>
<td>Perform at better quality</td>
<td>Have sexist views</td>
</tr>
<tr>
<td>More focused on the job</td>
<td>Less multicultural in their views</td>
</tr>
<tr>
<td>Better at problem solving</td>
<td>Hard to relate to by younger people</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Less attractive</td>
</tr>
<tr>
<td>More proud of their job</td>
<td>Have less drive</td>
</tr>
<tr>
<td>Take less sick days</td>
<td>Have impaired eye sight</td>
</tr>
<tr>
<td>Have better people skills</td>
<td>Slower</td>
</tr>
<tr>
<td>More presentable</td>
<td></td>
</tr>
<tr>
<td>Less dependent on modern technology</td>
<td></td>
</tr>
<tr>
<td>Are better at valuing money</td>
<td></td>
</tr>
<tr>
<td>Are intrinsically motivated</td>
<td></td>
</tr>
<tr>
<td>More confident</td>
<td></td>
</tr>
<tr>
<td>More comfortable with themselves</td>
<td></td>
</tr>
<tr>
<td>Have more life experience</td>
<td></td>
</tr>
</tbody>
</table>
Undergraduates' female version group. Attributes for which older workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Not up to date with technology</td>
</tr>
<tr>
<td>More focused on the job</td>
<td>Are less favoured by clients</td>
</tr>
<tr>
<td>More thorough</td>
<td>Can not handle stress</td>
</tr>
<tr>
<td>Perform better without supervision</td>
<td>Are not subordinate to younger managers</td>
</tr>
<tr>
<td>More proud of their job</td>
<td>Are close minded</td>
</tr>
<tr>
<td>Are better team workers</td>
<td>Are less attractive</td>
</tr>
<tr>
<td>More service oriented</td>
<td>Are set in their ways</td>
</tr>
<tr>
<td>More sensitive to other's needs</td>
<td>Are slower in their cognitive performance</td>
</tr>
<tr>
<td>Better under pressure</td>
<td></td>
</tr>
<tr>
<td>Have less family responsibilities</td>
<td></td>
</tr>
<tr>
<td>Take less sick days</td>
<td></td>
</tr>
<tr>
<td>More punctual</td>
<td></td>
</tr>
<tr>
<td>Relate better to people</td>
<td></td>
</tr>
<tr>
<td>Enhance younger workers' performance</td>
<td></td>
</tr>
<tr>
<td>Are intrinsically motivated</td>
<td></td>
</tr>
<tr>
<td>More objective in discussions</td>
<td></td>
</tr>
<tr>
<td>More responsible</td>
<td></td>
</tr>
<tr>
<td>Have more life experience</td>
<td></td>
</tr>
</tbody>
</table>
Discussion

The expectation that employers would view older female workers more negatively than they would older male workers was not supported by the results. Whilst Gringart and Helmes (2001) reported that older female job seekers experienced greater discrimination compared to older male job seekers, no significant differences across questionnaire versions were found in the current study. Thus, older female workers were not viewed more negatively overall than were older male workers.

Considering the results of the current study together with ABS census data suggests that the greater discrimination experienced by female applicants in the Gringart and Helmes (2001) study was due to an additive effect of both sexism and ageism. The current study found that male employers were more likely to hire older male workers (mean = 3.67) than older female workers (mean = 3.44) and that female employers were more likely to hire older female workers (mean = 3.59) than older male workers (mean = 3.29), although none of these differences were statistically significant. According to 1996 Australian census data, there were 27.4 per cent females and 72.6 per cent males in managerial and administrative positions. It is, therefore, likely that the gender differences reported in Gringart and Helmes (2001) were due to male employers' preference for male applicants coupled with the significantly greater number of males in hiring positions. Thus, older female job seekers may find themselves disadvantaged due to a combination of ageism and sexism because of the predominance of males in hiring decision-making positions.

Both employer groups viewed older workers significantly more positively overall compared to either undergraduate groups. It could be that undergraduates are less informed about older workers' abilities and it could be that having little or no first hand experience with older workers exacerbates their in-group out-group bias. That
Hiring discrimination

is, undergraduates who dissociate themselves from older adults and consider them to be a part of another social group to their own are likely to be biased and perceive older adults as inferior.

In Table 2 the means are in descending order, ratings up to 4 indicate older workers' inferiority compared to younger workers, ratings of 4 indicate no difference, and ratings above 4 indicate older workers' superiority. As can be seen in Table 2 the mean ratings of questionnaire items from highest to lowest were in the same order across both samples and questionnaire versions. This demonstrates systematic stereotyping of older workers among both employers and undergraduates. Thus, whilst undergraduates indicated greater discrepancies between older and younger workers the order of their mean ratings of questionnaire items was identical to that of the employers.

Following the more negative views of older workers expressed by undergraduates about older workers, it stood to reason that undergraduates would show more discrimination toward older workers. Table 3, however, shows that the mean 'likely to hire' rating was higher for undergraduates than for employers. Thus, whilst undergraduates expressed greater prejudice against older workers than did employers their behavioural intentions were more favourable. Questioning undergraduates about the importance of age in making hiring decisions and for their likelihood to hire older workers is hypothetical and respondents have little accountability on their part. Thus, it appears that undergraduates' responses to section B of the questionnaire possibly reflected social desirability considerations.

As can be seen in Table 3, the ratings of the relevance of age in making hiring decisions for all groups was between 3 and 4, which was between 'some what relevant' to 'relevant'. Thus, both undergraduates and employers indicated that they
took age into consideration in making hiring decisions. Table 3 also shows that the ratings of likelihood of hiring for all groups was between 3 and 4, which was between 'remotely likely' and 'likely'. Thus, all four groups indicated that they were less than likely to hire older workers.

In the employers' sample there were no significant associations between the demographic variables and the dependent variables. In contrast, the age and gender of respondents in the undergraduate sample did affect responses on the dependent variables. Undergraduate females responding to the female version of the questionnaire indicated that they would be significantly more likely to hire older female workers than were male respondents. This is interesting because, although male respondents favoured hiring older males over older females, Table 4 shows that the mean 'likely to hire' ratings of female respondents was higher than that of male respondents. Power calculations showed effect sizes of .8 for the difference in hiring preference in the female version and .047 in the male version across gender. Thus, female respondents were more likely to hire older workers of both sexes and whilst the gender preference was the same for male and female respondents, it was significantly greater for undergraduate females than for males.

Younger undergraduate respondents viewed age as significantly more important in making hiring decisions and were significantly less likely to hire older workers than were older undergraduates. Considering that the mean age in the undergraduate sample was between 20 and 25 and that for the employers' sample was between 40 and 45, a greater sense of an age-based in-group versus out-group bias is likely to have been experienced in the undergraduate sample compared to the employers sample.
The results of the current study are at odds with Schmidt (1999) and Bittman et al. (2001) who failed to find employers' systematic stereotyping of older workers. Schmidt (1999) reasoned that the failure of her study to find systematic stereotyping was because the participants were HR managers who were aware of common stereotypes and refrained from indicating that they embraced such views. As for Bittman et al. (2001) their design and methodology was not equipped to detect systematic stereotyping (see the section on older adults in the workforce in Chapter Two for more elaborate discussion) and hence their failure to detect it.

The results of the current study are in accord with those of Rosen and Jerdee (1976a), Taylor and Walker (1994), and Smith (2001) and have validated previously reported stereotypes. The respondents in Rosen and Jerdee (1976a) viewed older workers as deficient compared with younger workers in terms of productivity, efficiency, motivation, capability to work under pressure, innovation, creativity, logic, ambition, eagerness, reception of new ideas, learning capability, adaptability, versatility, and flexibility. Older workers were viewed as more reliable, dependable, honest, trustworthy, and less likely to quit or be absent from work (Rosen & Jerdee, 1976a). Considering that the Rosen and Jerdee (1976a) sample combined undergraduates and employers, the mean ratings in Table 2 show that the results of the current study concur with their findings. The fact that the results of these two studies are in agreement indicates that very little has changed in terms of people's stereotypical views of older workers over the 23-year period between the two studies.

Taylor and Walker (1994) found that older workers were mostly considered to have done a lot of mileage, be too cautious, unable to do heavy physical work, and be uninterested in technological change. Older workers were also viewed as more reliable than younger workers (Taylor & Walker, 1994). As can be seen in Table 2,
respondents in the current study indicated that older workers are much more cautious than younger workers, are less physically strong, and are more reliable. Tables 6, 7, 8, and 9 show that, in responding to section C of the questionnaire, employers indicated that older workers have difficulties with new technology and undergraduates thought that older workers are not up to date with new technology.

Smith (2001) found that in general all respondents viewed older workers as lacking in ability to adapt to change and to learn new skills and ideas. As can be seen in Table 2, the results of the current study were consistent with Smith's results. Two characteristics of most discrepancy between younger and older workers in the current study were adaptability and trainability. As with the undergraduates in the current study, older respondents in Smith (2001) viewed older workers more favourably overall than did younger respondents. Thus, the stereotyping of older workers and demographic trends in Smith (2001) concurred with the results of the current study.

The current study differs from the study reported by Rosen and Jerdee (1976a) on the issue of the division of stereotypes into scales. Rosen and Jerdee (1976a) divided their questionnaire items into four scales namely performance capacity, potential for development, stability, and interpersonal skills. This division was performed on conceptual bases and Rosen and Jerdee (1976a) reported no empirical verification of these scales. The PAR analysis that was performed in the current study found only two factors. One factor included all the items with ratings lower than 4 and the other factor included all the items with ratings higher than 4. This suggests that these factors were produced on statistical rather than substantial bases. Cases where factor structure parallels the mean ratings of raw items is referred to as 'difficulty factors' (Bernstein, Garbin, & Teng, 1988). It was suggested that such factor structure has little to offer in terms of highlighting underlying themes.
Hiring discrimination 100

(Bernstein et al., 1988). The levels of internal consistency in the current study suggest that the items of the questionnaire all measure a single construct. It can thus be suggested that stereotyping of older workers expressed by employers and undergraduates in the current study is unidimensional. Alpha levels ranged from .89 to .95 with three out of the four groups showing alpha levels equal to or greater than .90. As can be seen in Table 2, the characteristic of most inferiority of older workers compared to younger workers was adaptability to new technology and the characteristic of most superiority of older workers was reliability. Considering the high levels of internal consistency and the fact that the order of mean ratings was identical across groups, suggest that a continuous and unidimensional stereotyping of older workers was identified with adaptability to new technology at one end and reliability at the other.

It may be suggested that those characteristics for which older workers were viewed as inferior carry more weight in hiring decisions. Whilst this is an issue for further research, some insight can be gained from the results of Bittman et al. (2001).

Considering the fact that their respondents combined 'older' and 'younger' characteristics in describing the most frequently hired worker, Bittman et al. (2001) suggested that respondents might have described their ideal worker rather than that that is often hired. The results of Bittman et al. indicate the frequency with which each characteristic was considered. Hence, viewing characteristics that were used by Bittman et al. in relation to the mean ratings of the stereotype scale of the current study could indicate the relative importance of these characteristics in making hiring decisions.

Bittman et al. (2001) reported that 94.2 per cent of their respondents preferred a worker who adapts well to change compared with 5.7 per cent who preferred an
employee who knows what works and does not like change for its own sake. This suggests that adaptability and flexibility are important qualities in potential employees. The current study found that older workers were viewed as stereotypically inferior compared to younger workers on these characteristics and, given with the findings of Bittman et al., they seem to be at the heart of hiring discrimination against older adults.

Ninety-one and a half per cent of Bittman et al.'s (2001) respondents preferred someone who is very sharp mentally compared with 8.2 per cent who preferred an employee with physical strength and stamina. This suggests that the mental alertness of the job applicant is important in making hiring decisions. All four groups in the current study viewed mental alertness of older workers to be inferior to that of younger workers. Further, respondents in the current study viewed older workers to be inferior to younger ones in physical strength. Thus, with respect to the characteristics of mental alertness and physical strength, older adults would be rejected based on negative stereotyping by 100 per cent of respondents in Bittman et al.'s study.

Bittman et al. (2001) reported that 90.2 per cent of respondents preferred someone who works well as a part of a team and 9.8 per cent preferred an ambitious and independent employee. The current study found that older workers were viewed as more cooperative and less ambitious than younger workers were. Hence, older adult job seekers would be advantaged due to positive stereotyping in this case.

Sixty-six per cent of Bittman et al. (2001) respondents preferred an all rounder and 33.9 per cent preferred an employee with specialist skills. The current study found that older workers were viewed to be more skilled and less trainable than were younger workers. As 66 per cent of the sample in Bittman et al. preferred an all
rounder rather than a highly skilled worker older applicants would be disadvantaged with 66 per cent of the sample in Bittman et al.

Sixty-five per cent of respondents in Bittman et al. (2001) preferred a trustworthy and reliable employee and 34.5 per cent preferred a worker who was innovative, who enjoys a challenge. The current study found that older workers' reliability was superior to that of younger workers, which places older job seekers at an advantage when this characteristic is considered.

The results of Bittman et al. (2001) do not provide a quantifiable measure of the importance that each respondent placed on the characteristics of the ideal worker. They do, however, indicate the frequency with which these characteristics are considered in making hiring decisions, which would directly affect success rates of older adult job seekers. Two of the three most frequently preferred qualities in Bittman et al. (2001) were adaptability and mental alertness. The current study found older workers were stereotypically inferior on these qualities compared to younger workers. Although the current study found older workers were viewed as more cooperative and more reliable than younger workers were, these strengths do not seem to overcome the weaknesses in terms of job seeking success. It is thus suggested that whilst the characteristics of the ideal worker may incorporate features of older and younger stereotypes, those that are considered most frequently favour the hiring of younger workers.

Measuring respondents' stereotypical views of older workers compared to younger ones would inform future information-based interventions aimed at correcting negative misconceptions. As can be seen in Table 2, employers viewed older workers as inferior to younger workers on 12 characteristics, similar to younger workers in their ability to fit in, and superior to younger workers on 15 characteristics.
It stands to reason that it is those characteristics on which older workers were viewed as inferior that are at the heart of hiring discrimination against them and should thus be the focus of future interventions.

As can be seen in Table 2, older workers were seen as less adaptable to new technology, less interested in technological changes, less trainable, less ambitious, less flexible, less likely to fit in, less energetic, less physically strong, less healthy, less creative, less mentally alert, and have less functional memory compared with younger workers.

Literature that was reviewed in Chapter Two showed these stereotypes to be inaccurate. Older workers adapt well to new working environments and circumstances (Hill & Leonard, 1993; Simon et al., 1993). They are interested in their career and in meeting new challenges (Bottomley, 2001; Krohe, 1991). Older workers may need to be trained differently but their subsequent performance is just as good as their younger counterparts (Charness et al., 2001; Kok Tee, 2002). They are ambitious and wish to advance, are not less flexible, and fit in well with workers of all ages (Bottomley, 2001; Krohe, 1991; Mayhew & Swindell, 1996; Yearta & Warr, 1995).

Older adults are heterogenous (Pasupathi et al., 1995), and as energy levels and physical strength are related to physical fitness, a fit older adult would be more energetic and strong physically that a sedentary younger one (Seedsman, 1996; Sterns & Milkos, 1995). Further, age-related decline in physical strength is of no consequence to the vast majority of jobs. As for health, individuals age differently and there are no universal age-related diseases (Forbes & Hirdes, 1993). Further, 80 per cent of Australians over the age of 70 are not using any aged care services (Bishop, 1999). Thus, the majority of older adults in Australia are in good health.
Creativity is related to an individual's knowledge base and older workers usually have a larger knowledge base than do younger and less experienced workers. Further, older workers in creative and intellectually challenging positions have shown intellectual advancement with age (Scooler et al., 1999). Whilst reaction time shows age-related declines, no significant job related declines in mental alertness have been found between older and younger workers (Schaie, 1996).

As for older workers' memory, no significant declines in memory performance are found prior to the mid-to late-70s and as far as intellectual functioning is concerned, no differences in job performance between older and younger workers should be expected (Schaie, 1996).

As can be seen in Table 2, there were five additional characteristics in the male version and four additional characteristics in the female version on which undergraduates rated older workers as inferior compared to younger workers. However, as the ratings of these characteristics ranged from 3.58 to 4.00 and as the order of stereotypes ratings was identical for undergraduates and employers, it is suggested that one information-based intervention based on employers' negative stereotyping could address both undergraduates and employers.

Section C of the questionnaire comprised an open-ended question that invited respondents to provide further information on differences between older and younger workers. No qualitative differences were found across questionnaire versions and the majority of respondents commented that there were no additional issues and that the questionnaire was comprehensive. Those who did provide additional information had mainly indicated older workers' strengths rather than weaknesses. There were no indications of negative affect toward older workers among employers and the only affect-related comment was that a number of undergraduates on both versions of the
questionnaire suggested that older workers were less attractive. Thus, no additional issues were identified that required amending the questionnaire. Responses to section C are summarised for each group in Tables 6 through 9.

Despite the large number of positive characteristics found in response to section C, all groups indicated that they were less than likely to hire older workers. It could thus be suggested that whilst respondents viewed older adults as people of high morals and social conduct they considered them as lesser workers overall compared to younger people.

There are two main limitations to the current study. Generalisability of results of the current study is limited to Australian companies with 10 to 50 employees that are registered with the Kompass electronic database and to undergraduate students from Edith Cowan University. An inherent risk in mail surveys is that it is difficult to be certain of respondents' identity. Thus, whilst addressing all communications to hiring decision-makers, there was no way of knowing that they were the ones who actually responded.

Future research could use greater and more representative samples of both employers and undergraduates. In order to further establish the reliability and validity of the questionnaire the stereotype scale could be used with various populations and contexts. To establish concurrent validity, responses to the questionnaire could be compared to those generated by other instruments that measure attitudes toward older adults. Future research could assess the questionnaire's test-retest reliability by viewing the concordance with which respondents complete the questionnaire on two separate occasions. Personally addressed questionnaires could be posted to increase the probability of getting the right person to respond. Finally, future research could also assess the relative importance of specific stereotypes that are held about older
workers in making hiring decisions. This would inform and direct initiatives aimed at combating discrimination in employment against older workers as it would provide accurate information of the most important misconceptions that need to be addressed and would direct attention to areas where older adults' abilities need most enhancement.

There are several merits to the current study. It used a national sample of employers across industries and sampled undergraduate students across disciplines. Based on previous research, the questionnaire clearly defined older and younger workers in terms of age ranges, which avoids ambiguity and facilitates accuracy in responding. The extent to which stereotypes were held about older workers was measured in relation to younger workers. This is important because it places the issue in a realistic frame where older job seekers are rejected in favour of younger ones. Respondents were invited to provide additional relevant information so that issues that were not addressed in the questionnaire could be identified. Further to gathering information about the stereotyping of older workers the questionnaire asked respondents to indicate how important age was in making hiring decisions and asked for their likelihood of hiring older workers. This is important because it allows the observation of respondents' hiring intentions in context with their stereotypical views of older workers and provides insight into the importance that these views play in making hiring decisions.

In conclusion, the questionnaire that was developed to validate, measure, and explore stereotyping of older workers in employment showed promising preliminary evidence of reliability and validity. Systematic and unidimensional stereotyping of older workers was clearly identified among employers and undergraduate students. The characteristics on which older workers were seen as inferior compared to younger
workers were identified and their extent was measured. An information-based intervention listing these misconceptions and explaining their inaccuracy in light of empirical data may help adjust employers' and undergraduates' attitudes to older workers and reduce hiring discrimination. Finally, the questionnaire could be used as a measure of the effectiveness of interventions in bringing about attitude change and reducing discriminatory intentions toward older workers.
CHAPTER 5

Combating Stereotyping and Discrimination of Older Workers

The literature reviewed in Chapter Two and the findings of Study One both indicate that employers and undergraduate students hold both positive and negative stereotypes about older workers. For example, older workers are positively stereotyped as reliable and loyal. Both employers and undergraduates, however, hold negative and inaccurate perceptions about the capabilities of older workers. Such misconceptions and negative stereotyping lead to pervasive discrimination against older adult job seekers (Buys & Buys, 1996). Hence, there is a need for empirically informed interventions aimed at promoting attitude change toward older workers and the reduction of hiring discrimination against them.

The purpose of this chapter is to identify promising interventions to promote attitude change toward older workers and reduce hiring discrimination against older adult job seekers. The chapter is divided into four parts.

The first part reviews strategies and interventions that are used by the Australian government to combat hiring discrimination against older adults. As will be discussed the only enterprise that is directly aimed at amending employers' attitudes toward older workers involves information-based interventions. This intervention style has thus far shown little promise and possible ways to improve its effectiveness will be suggested.

The second part of the chapter reviews other strategies to combat ageism that were found in the literature. These include intergenerational programs, the use of mass media, information dissemination or educational interventions, and the use of age advocacy groups and promotion of success stories and role models. Whilst most
of these avenues show little promise in amending employers' attitudes, the use of
mass media in comprehensive awareness campaigns may show promise.

As negative stereotyping is suggested to be at the heart of hiring
discrimination against older adults, the third part of the chapter reviews recent
findings from the social stereotyping literature that are relevant to changing
stereotypes about older workers. This part discusses factors that contribute to the
formation, maintenance, application, activation, inhibition, and modification of
stereotypes. Attitudes and stereotyping have been popular subjects amongst social
psychologists and a great deal has been written in the area. It is therefore
acknowledged that whilst many sources have been consulted the literature reviewed in
this section draws on general attitude and stereotyping sources but maintains its focus
on those that are directly relevant to ageing and employment. For more
comprehensive general reviews see for example, Biernat (1995), Eagly and Chaiken
(1993), Hamilton, Sherman, and Ruvolo (1990), Macrae and Bodenhousen (2000),
Petty et al. (1997), Pratkanis, Breckler, and Greenwald (1989), Tesser and Shaffer
(1990), and Wood (2000).

As will be discussed, stereotypes and attitudes are not easy to change and the
automaticity of stereotype activation can result in biased judgement and
discrimination even in cases where people wish to change their stereotype-based
behaviours. This part of the chapter ends by identifying one intervention that shows
promise, which involves the induction of cognitive dissonance. As will be discussed,
although information-based intervention on their own have so far shown little
promise, combining such interventions with cognitive dissonance-based interventions
may be more effective than either of these interventions alone.
The fourth part of the chapter expands and explains the cognitive dissonance-based intervention to combat stereotype-based behaviours. It reviews related literature and lists the relevant factors needed to enhance the potential effectiveness of such an intervention.

**Combating Hiring Discrimination**

Government initiatives taken to combat discrimination against older adults in employment were reviewed in Chapter Two. Three main themes can be identified in these initiatives, namely legislative, financial, and educational.

The Equal Opportunity Act, the waiving of compulsory retirement, and equal opportunity policies in hiring are all strategies that are aimed at combating hiring discrimination against older adults. Legislative strategies, however, seem to fall short. This is not to say that legislative means should be abandoned, but rather that they have not been sufficient in combating hiring discrimination against older adults. Indeed Hamilton (2001) argued that anti-ageist legislation is important as it reflects the moral code of society and makes clear that age discrimination is wrong.

Programs such as The Pension Bonus Scheme, which offers financial rewards to people who choose to defer claiming the age pension while continuing to work, could motivate older adults to work longer. Further, directing resources toward training and updating the skills of older adults could make them more employable. For example, the Western Australian Department of Training (WADT) has recently initiated programs targeted at enhancing the skills of mature and older adults in order to increase their chances to get jobs. Such enterprises, however, do not address employers’ attitudes towards older workers nor do they combat the stereotypes held about older adults in the workforce.
Disseminating information to employers about the actual performance abilities of older workers and the benefits of an age-balanced workforce is aimed at promoting attitude change toward older workers and promote their hiring. The educational theme assumes that providing employers with current and accurate knowledge about older workers' actual performance and explaining the benefits associated with having an age-balanced workforce will result in attitude change toward older workers and will reduce hiring discrimination against older adults.

For example, the federal government Departments of Employment, Workplace Relations and Small Business, and Health and Aged Care together sponsored The Australian Employers Convention. This was a three-year enterprise run between 1999 and 2001, managed by Jobs East, and was aimed at achieving an age balance in the workforce (Inaugural Conference of The Australian Employers Convention, TAEC, 1999). The TAEC held annual national conferences, facilitated direct communication between its members and Commonwealth Government Ministers, and provided relevant information from around the world (TAEC, 1999). Hence, the primary mode of intervention employed by the TAEC was providing employers with information that was relevant to the ageing of the workforce. Whilst it might be too early to assess the effects of TAEC on the hiring of older adults, the evidence presented below questions the effectiveness of information-based interventions in changing attitudes and amending stereotype-based behaviours.

Stereotype-based behaviours sometimes persist even in the face of stereotype-contradicting information. For example, Biernat (1995) found that people stereotypically viewed men to be taller than women and that this stereotype was maintained even after participants were told that the height was controlled for in a set of slides presented to them (Biernat, 1995). Hence, the stereotype persisted even in
the face of contradictory information. In contrast, Funder (1995) suggested that
contradictory information could change stereotypical views but that it is mediated by
perceivers' interest in the domain in question. Thus, information-based interventions
could be effective in changing attitudes toward older workers to the extent that hiring
decision-makers' interest can be raised to the issue.

Duncan (2001) suggested that if age discrimination against older adults in
employment is underlined by irrational prejudice then it is unlikely that information­
based persuasion campaigns aimed at reforming employers' attitudes toward older
workers will have the desired effect. Duncan further proposed that such campaigns
might strengthen employers' discriminatory attitudes because they would drive
employers to justify these irrational prejudices.

Parsons and Mayne (2001) proposed that although data about the ageing of the
population and ageism in the work place has been one of the most popular topics
across the HR literature in the 1990s, no significant changes in actual HR practices
followed. Taylor (2001), as well as Tillslay and Taylor (2001) have stated that
awareness and information-based campaigns are unlikely to be effective in remedying
age discrimination against older adults in employment. This point is further
illustrated when considering HR textbooks. Although prominent authors, such as
Robbins (1992) and Clark (1992) have consistently raised the issue of ageism in
employment and despite the fact that these and other authors state that "the best
person for the job" should be hired, age discrimination in employment is found across
all developed countries.

Thibodeau, Aronson, and Miller (1992) suggested that although many policy
makers attempt to modify behaviour through the use of information campaigns, these
usually fail to meet their objectives. Indeed evaluations of information-based
education campaigns targeted at employers in the UK met with limited success (Taylor et al., 2000). They proposed that such programs represented little more than exhortations to business and did not contain sufficient information on how to implement and develop good workplace practice. They concluded that a more sustained and comprehensive approach is required which takes into account specific variables such as industry, occupation, gender, and location to provide information that is useful to specific employer groups (Taylor et al., 2000).

The above discussion points to a lack of effectiveness in information-based interventions in the area of hiring discrimination against older adults. Following Taylor et al. (2000), however, it could be suggested that one reason for this is that the information that was provided in these interventions was poorly fitted to the attitudes of their targets. Study One identified the specific characteristics where older workers were considered to be inferior compared to younger ones. These findings could be used in the development of an information-based intervention and tested within the same populations. Thus, the effectiveness of an information-based intervention, which fits the attitudes of its targets, could be tested.

Whilst testing empirically driven information-based interventions within relevant populations is important, other promising interventions should be identified. To this end other strategies to combat ageism that are found in the literature are reviewed in the following section.

**Strategies to Combat Ageism**

A number of additional strategies to combat ageism have been suggested in the literature and are discussed below. Intergenerational programs, the use of mass media, and information dissemination or educational interventions will be discussed.
Other strategies to be discussed are the use of age advocacy groups and promotion of success stories and role models.

Considerable attention has been given to the effect of contact between groups as a strategy to reduce discrimination. The theory is that if people knew each other better they would be less prejudiced. However, research in which more regular contact with older people was associated with more positive attitudes does not untangle the issue of cause and effect: whether increased contact determines attitudes or whether attitudes dictate level of contact. Critics have argued that quality of contact is more important than frequency of contact (Braithwaite et al., 1993; Butler, 1980). In fact, it has been found that unequal-status contact with older people can reinforce, rather than reduce, stereotypes. For example, visits to nursing homes may reinforce the stereotype of senility and poor health of the elderly (Palmore, 1999).

Even when personal contacts occur between people of equal status, contact that involves conflict or competition is likely to reinforce prejudice. This may occur during times of high unemployment when older and younger workers are competing in the labour market (Palmore, 1999). On the other hand, when contact between equal status individuals involves working together toward a common goal, this tends to reduce prejudice. The contact hypothesis and interdependence theory suggest that people pay more attention to and are more motivated to learn about persons with whom they are cooperatively dependent (Gingrich, 2000). When outcomes and successes depend on cooperation with others, the influence of stereotypes is decreased and effort is directed toward getting to know the individual (Gingrich, 2000). Therefore, intergenerational projects or committees whereby older and younger people work together to achieve mutual goals may effectively act to reduce prejudice between the generations (Palmore, 1999). Bottomley (2001) reported that whilst
finding secondment positions for older adults was initially difficult, the majority of employers found those who were placed with them to be indispensable.

These data suggest that intergenerational workplace experiences could reduce ageist stereotypes and prejudice, but they do not provide us with a way to change employers' attitudes in a way that will increase the chances of older adults being hired in the first place. Further, Encel (1998) found that even employers who were satisfied with the performance of older adults in their employ indicated that they would be unlikely to hire older workers. Thus having contact with older workers would not necessarily improve the employability of older adult job seekers.

Pasupathi et al. (1995) argued for an educational policy in which school-aged children are exposed to people of all ages in a positive way by providing children with older tutors in the classroom and teaching materials that do not stereotype elderly people. A number of schools introduced intergenerational programs involving students and healthy, active older people. Some studies employed a pre-post test methodology to assess change in the children's attitudes and showed inconsistent results (Scott et al., 1998). In one study in which third-grade students participated in an eight-week counsellor-led guidance program, positive attitude change was detected. However, another study that paired older adults with students in activities such as song, dance, storytelling and discussion found only slight increases in attitude and knowledge measures (Scott et al., 1998). Thus, the educational contact policy showed little promise in terms of changing ageist attitudes.

An interesting avenue through which to combat hiring discrimination is the use of mass media. Donovan and Leivers (1993) conducted a pilot study to determine the feasibility of using social marketing techniques via mass media to modify beliefs underlying discrimination against Aboriginal Australians. The government funded a
two-week campaign aimed to neutralise negative stereotypical beliefs about
Aborigines and employment and to generate positive beliefs, with the aim of
encouraging indigenous employment (Donovan & Leivers, 1993).

The two-week campaign was not expected to bring about substantial change
but a gradual shift in people's evaluations. The campaign took place in Bunbury,
Western Australia and utilised television, radio, and newspaper advertisements
promoting success stories of Aboriginal employees. Consistent with data indicating
that stereotype change is more likely when discrepant information is dispersed across
a number of individuals rather than relate to a single person, 12 individuals appeared
in a series of advertisements (Donovan & Leivers, 1993).

The pre-post test independent samples design measured several specific
beliefs, for example, 'very few Aborigines hold jobs'. The campaign claimed success
in modifying beliefs underlying racial discrimination in employment. Because the
post-test took place in the week immediately following the campaign, the results may
have been affected by demand characteristics. A follow-up survey could have
determined whether attitude changes were long lasting. Donovan and Leivers (1993)
proposed that similar campaigns could be effective in other areas of discrimination.
Sustained campaigns of a similar nature need to be evaluated to assess whether their
following attitude changes are long lasting and whether they lead to changes in actual
discriminatory behaviours.

The use of television, newspapers, magazines, and other mass media could be
powerful agents in efforts to combat negative stereotypes about older people and
ageing (Palmore, 1999). Media coverage of ageing has generally portrayed older
people in stereotypical fashion, reinforcing negative attitudes toward ageing (Hill &
Leonard, 1993). The 1992 NSW Premier's Forum on Ageing considered the issue of
improving media portrayal of older people (Hill & Leonard, 1993). This led to consultations with influential media decision-makers who admitted their use of stereotyping and agreed there was a need to catch up with changing demographics. Thus, whilst the use of mass media to combat ageist attitudes may prove effective the available data on such campaigns need to be validated.

Educational workshops could be suggested as possible interventions to change employers' attitudes toward older workers and reduce hiring discrimination. According to Palmore (1999) general education appears to reduce misconceptions and ignorance about ageing. Classes and workshops on gerontology that use a before-and-after test of knowledge demonstrated that even short-term education can reduce prejudice against elders (Palmore, 1999). Several studies found that people with more accurate knowledge about facts of ageing hold less negative stereotypes about the aged (Palmore, 1999). Whilst this suggests that information-based interventions may show promise in the area of hiring discrimination against older adults, educational interventions were found to be mostly effective with young people (Scott et al., 1998). Considering the mean age of the employers' sample in Study One was between 40 and 45 years, such educational interventions show little promise in altering the attitudes of typical employers.

Scott et al. (1998) evaluated the impact of an educational intervention program on the attitudes and knowledge of 138 students aged 17 to 18 years from six Melbourne high schools. The program took place during the last three weeks of their schooling and involved nine one-hour sessions. Pre-test results indicated that, although the extent of knowledge differed significantly between the schools, students' knowledge of older people was minimal overall and they held negative attitudes toward the ageing process (Scott et al., 1998). Despite this evident lack of
knowledge, however, the educational intervention program failed to produce significant changes in students' knowledge and attitudes toward older adults (Scott et al., 1998). The authors concluded that school-based educational programs would not act to reduce negative attitudes unless major changes, such as increased intergenerational interaction, also occur at a broader social level. Thus, information-based educational campaigns have shown little promise in combating ageism.

One reason for the failure of the educational program by Scott et al. (1998) might have been that the program took place at the very end of the school year during the lead up to exams (Scott et al., 1998). As this would be a cognitively taxing time of the year it may be suggested that little resources were available for processing and internalising the program content. Hiring decision-makers are also often under cognitive pressure and for any information-based educational workshop to show promise, such pressures should be minimised. Providing hiring decision-makers with such conditions may be difficult. Thus, the results of educational information-based workshops aimed at reducing ageism are questionable and their implementation with hiring decision-makers could be problematic.

The use of comprehensive age awareness programs is considered to be an important way forward (Griffiths, 1997). In 1992 a public awareness campaign was organised by the NSW Office on Ageing. This campaign included: an advertising campaign on buses featuring a well known ageing film critic; an art gallery exhibition featuring the work of older Australians; a kit for employers including facts about older workers and a poster; an extensive public relations media campaign; and four employer awareness seminars called 'Managing Diversity' (McFee, 1993). Although McFee (1993) pointed out that the employer awareness seminars reached about 400 employers and were evaluated, there is no report of this evaluation. Nor does McFee
Hiring discrimination report on any formal assessment of the campaign as a whole. McFee also reported that substantial private sector sponsorship was expected to fund Stage-Two of the campaign and that there had been approaches by a publisher to produce a book on the campaign. The current author, however, found no further information about this.

One comprehensive awareness program is currently being trialed in Singapore (Yip-Chow, 2002). This awareness campaign includes constantly exposing the public to positive messages about older adults and promoting intergenerational bonding. These are published via street boards, radio programs, and public performances of older adults (Yip-Chow, 2002). As this is a recent program, its effects on attitudes and actual behaviour toward older adults remain to be seen.

Several guidelines could be followed in order to minimise stereotype-based behaviours. Hamilton et al. (1998) offered five such guidelines:

1) **Stereotype expectancies are more likely to be influential when stimulus cues to group membership are salient.** To the extent that the salience of group membership cues is reduced, and the salience of other types of stimulus information is enhanced, the effect of stereotypes on social perceptions will be reduced.

2) **Stereotypic expectancies are more likely to be influential in the absence of individuating information about the target person.**

3) **Stereotypic expectancies are more likely to be influential when the individuating information about a target person is ambiguous and open to interpretation.**

4) **Stereotypic expectancies are more likely to be influential when information about a target person is sought rather than given.**

5) **Stereotypic expectancies are more likely to be influential when the behaviour of the stereotype holder is unconstrained.**

(Hamilton et al., 1998, p.55-56.)

The general principle underlying the above guidelines is that the effect of stereotypes on social perception and behaviour could be reduced once the social context can be arranged in such a way that diagnostic individuating information can be both provided and utilised (Hamilton et al., 1990). In situations such as hiring decision-making,
where it is important to make unbiased judgements about individuals from various social groups, incorporating principles from the above guidelines will serve to reduce the effect of negative stereotyping. Whilst this contributes little to the development of effective interventions it does point to the conditions that could be employed by companies in order to minimise stereotype-based hiring discrimination.

Educating hiring decision-makers was suggested as a way to reduce hiring discrimination against older adults. Perry, Kulik and Bourhis (1996) suggested that organisations adopt policies that monitor age distributions within positions to identify areas where age discrimination might be occurring and that organisations hold hiring staff accountable for any age discrimination identified by this process.

Perry et al. (1996) suggested that training hiring decision-makers in how to recognise and avoid the tendency to make age-biased evaluations could prove effective in reducing hiring discrimination. Further, interventions aimed at changing the context, preventing hiring decision-makers from making selection decisions when they are cognitively busy or eliminating job age-types, may be effective measures for reducing age discrimination in employment. Thus, implementing anti-discrimination policies, promoting accountability for discriminatory behaviour, teaching hiring decision-makers to identify their own biases and preventing hiring decision-making under cognitive load were all suggested to play an important role in reducing hiring discrimination against older adults. Whilst such enterprise may be worthy, none of its initiatives directly address changing attitudes and stereotyping of older workers and is therefore unlikely to succeed.

Singer and Sewell (1989) pointed out that training programs developed to reduce stereotyping have not always been successful. A large-scale race relation training program designed for police recruits reported that after six weeks of intensive

Psychological reactance could also account for such failures. That is, being pressed to change their attitudes might have been perceived as a threat to personal freedom to these new recruits resulting in them clinging to their attitudes rather than changing them. Future research shall thus need to identify the appropriate level and type of age-related information to ensure that age-related training programs produce the desired effects.

The above review suggests that whilst several avenues to combat ageism have been explored, most do not show promise in the area of hiring discrimination. Mere exposure to older adults have not been effective and nor were intergenerational interactions. Dissemination of information programs and educational initiatives have also shown little promise. Mass media and comprehensive awareness programs may prove effective but are expensive and need further validation. As negative stereotyping is suggested to be at the heart of hiring discrimination against older adults, more information about the mechanisms that promote stereotype-based behaviours and the factors that facilitate or inhibit their use is required. This is the focus of the following section.

**Stereotyping and Discrimination**

In order to reduce the cognitive load needed to make sense of others, people form categories to simplify the process of person perception (Hamilton & Sherman, 1994; Macrae & Bodenhausen, 2000; Macrae, Milne, & Bodenhausen, 1994). These categories represent various social orientations and can be activated in response to encountering a relevant group member or related stimuli (Macrae & Bodenhausen,
Further, individuals acquire stereotypes from their environments without conscious awareness and regardless of whether these benefit or harm them or their social group (Levy, 1996). Activated stereotypes affect behaviour and the processing of information related to stigmatised group members. Hence, once many people believe a stereotype to be accurate and applicable to the majority of people in a social category, prejudice and discrimination occur (Nesdale & Durkin, 1998). For example, when employers discriminate against older job seekers because they believe them to be less trainable, a prejudicial negative stereotype is active. Whilst hiring discrimination against older adults places stereotyping in a negative light the tendency to stereotype by itself is not necessarily harmful, as will be explained next.

The formation, maintenance, and activation of stereotypes are natural and beneficial in directing appropriate behaviour (Baron, 1995; Ottati & Lee, 1995). From an evolutionary viewpoint stereotyping is necessary for survival as it facilitates swift action under stress or danger (Ottati & Lee, 1995). For example, stereotyping all lions as dangerous predators would motivate people to stay well away from possible danger. Ecologically, stereotypes develop naturally by the essence of their environmental functions as perceived by individuals (Ottati & Lee, 1995). For example, sit on chairs, eat bread, and be nice to neighbours. Thus, stereotyping is important to survival, adaptation behaviour, need fulfilment, and appropriate social behaviour. This is important because it makes evident that in seeking to change stereotype-based behaviours, efforts should be concentrated on amending the content of stereotypes and pointing to appropriate behaviour rather than trying to counter the natural process of stereotyping. As stereotypes are so significant to one's life it can be expected that their amendment should require considerable effort (Macrae & Bodenhausen, 2000).
For stereotypes to fill a survival function and to guide appropriate behaviour, they have to hold a kernel of truth and correspond to the physical and social reality (Baron, 1995; Ottati & Lee, 1995). For example, as was explained in Chapter Two, there are normative age-related declines in abilities. In the past generalising and exaggerating these declines to believe that older adults were inferior workers compared to younger ones may have been desirable for both young and old and may have resulted in appropriate behaviour. The young may have felt justified in taking positions of retiring older adults, and may have believed that older adults should not be expected to work. Older adults may have felt justified in turning to a more leisurely stage of life, and may have believed that they are doing the right thing by giving their place to younger generations. In light of the ageing of the population and enhanced longevity, however, such beliefs and behaviours are no longer appropriate. The numbers of younger job seekers are declining and those of older adult job seekers are on the increase. Thus, people need to be better informed about the actual abilities and performance of older workers in order to amend stereotype content. Further, people's awareness should be raised to the predicted demographic changes so that they can adjust their behaviour accordingly. To these ends effective interventions are required and further understanding of the factors that could be involved in hiring discrimination is needed. These factors are reviewed next. This is followed by a review of the mechanisms that are involved in stereotyping and possible strategies to amend stereotype-based behaviours.

As stereotypes are 'social' schema it follows that we also have schema relating to professions. Indeed Cleveland and Landy (1983, cited in Singer, 1986) suggested that certain professions were viewed stereotypically as younger person's jobs whilst other positions were considered to be more suitable for older persons. Local findings
Hiring discrimination

support this suggestion and indicate that employer age preferences vary across
different sectors of industry. For example, most banking, finance, legal and
accounting firms preferred 30 to 40 year old applicants, whilst education and health
favoured older workers (House of Representatives Standing Committee on
Employment, 2000). Thus, hiring discrimination against older adults may sometimes
be exacerbated due to the stereotypical view held by hiring decision-makers over
specific jobs. Further, in such cases interventions might need to be job or industry
specific in order to be effective. Whilst stereotyping of jobs might contribute to
hiring discrimination, the predicted demographic changes are likely to change these
stereotypes, as will be explained next.

It has been suggested that stereotyping can be based on any salient feature of
the stimulus context, such that evaluations of identical stimuli will vary, depending on
contextual factors such as group composition (Hamilton & Sherman, 1994). This
suggests that older job seekers may be evaluated differently depending on the age
group of an applicant pool. Indeed, Lee and Clemmons (1985, cited in Finkelstein,
Burke & Raju, 1995) examined age composition of the applicant pool, predicting that
age would be salient when there were few older people applying for the job and found
support for this hypothesis. Whilst this could suggest that as our population ages and
greater numbers of older adults apply for jobs, they will become less likely to be
discounted as potential candidates, it is not supported by research. Cleveland et al.
(1988) found that although increasing numbers of older persons in an applicant pool
produced a shift in participants' perception of the appropriate age for the job, it did not
change their favouring of younger workers when making hiring decisions. Thus,
population ageing may change the stereotypic view of jobs but it is unlikely to change
employers' attitudes toward older adult job seekers.
Three conceptual approaches have guided theorising and research on stereotyping and out-group perceptions: the psychodynamic, sociocultural, and cognitive perspective. The psychodynamic approach emphasises the importance of motivational forces that perpetuate the use of stereotypes, including the use of defence mechanisms, such as projection and displacement to redirect self-related sources of tension onto others (Hamilton & Sherman, 1994). Hence, according to this approach, stereotyping of older workers may serve an ego protective function for hiring decision-makers either by their derogation because they are perceived as competition for limited resources or by the building of self-esteem through engaging in downward social comparison.

The sociocultural approach focuses on the role of social learning and reinforcement on the acquisition and maintenance of intergroup beliefs and attitudes. According to this approach, socialisation processes underlie the acquisition of stereotypes and the perpetuation of prejudice. When direct experience with elderly people is limited, young people's beliefs are likely to be influenced by what the media and others say about older adults. Stereotyping has been suggested to provide a social function by facilitating identification with one's own social and cultural in-group (Snyder & Miene, 1994). This perspective suggests that hiring decision-makers are motivated to view older workers as out-group members because they perceive them to be stereotypically impaired and hence discriminate against them.

The cognitive approach suggests that stereotypes are belief systems that guide information processing. This approach focuses on how these structures arise and how they bias information processing in terms of person perceptions and interactions with members of stereotyped groups (Hamilton & Sherman, 1994). Stereotypes are abstract knowledge representations that identify a social group with a given set of
traits or behavioural characteristics and act as expectancies that guide processing of information about groups and their members. Thus, according to this approach, having established stereotypical views of older adults biases hiring decision-makers’ judgements of older job applicants.

In accord with the psychodynamic approach Butler (1987, cited in Palmore, 1999) argued that fear of ageing underlies ageist attitudes, giving rise to negative stereotypes, attitudes, and discriminatory behaviour. Our use of language reflects and supports negative ageism by equating old age with negative characteristics, like decline and deterioration. Research has found that 4-year old children can accurately describe their culture’s stereotypes of ethnicity, race, men, women, youth and age and these stereotypes are found to be very persistent despite interpersonal experiences that provide disconfirmatory instances (Adler, 2000). Thus, negative ageist attitudes are embedded in our culture, are obtained at early childhood and may be maintained as they have an ego protective function.

Snyder and Miene (1994) investigated the functions served by stereotyping of the elderly. They designed interventions in the form of stories describing same-sex characters interacting with elderly people. These interventions were based on either the cognitive, ego protective, or social perspective. The story character realises that he or she has a stereotype of the elderly and gains insight into how this stereotype arose and the function it serves.

In the cognitive intervention the character believes that all old people are like his or her grandparent and the insight involves recognising the diversity of older people. The ego protection intervention focused on the character’s fear of ageing and becoming incapacitated like his or her grandparent and insight was gained by the realisation that he or she was blaming the elderly. The social intervention focused on
limited contact with the elderly and reliance on friends’ beliefs followed by the realisation of the character that he or she could now form their own beliefs. In a control condition, no story was read (Snyder & Miene, 1994).

Post intervention measures of stereotyping revealed that only the ego protection intervention had an effect and that it was different across gender. Stereotyping reduction was found among women but not men. For men it aroused stereotyping where it did not previously exist. These findings imply that fear of ageing may be a concern limited to females and this may be a consequence of women being held to stricter cultural standards regarding changes in physical appearance associated with ageing. Men are socialised to believe that they can become more distinguished, successful and powerful with age and therefore the ego protection intervention may have actually created a threat, activating stereotypes that were previously dormant (Snyder & Miene, 1994). As hiring decisions makers in Australia are predominantly male, these findings suggest that interventions aimed at reducing hiring discrimination against older adults should not be limited to any one of the theoretical orientations explained above.

According to the cognitive approach, stereotypes serve a cognitive economy function by reducing processing demands (Ottati & Lee, 1995; Snyder & Miene, 1994). Indeed dual task research found that under conditions of high cognitive demands, people reverted to stereotypical views rather than observing individuating information (Dijksterhuis & van Knippenberg, 1995; Hilton & von Hippel, 1996; Macrae, Milne, et al., 1994). This is a relevant point because hiring decision-makers often operate under cognitive pressure and may thus rely on stereotypic views in their judgement of job applicants.
The cognitive perspective also suggests that categorisation involves information gain, as well as information loss. This suggests that information-based interventions could be effective as new and accurate information about older workers' performance that is provided to hiring decision-makers and could replace previously held misconceptions. However, it was found that information consistent with existing schema is more easily accommodated than contradictory material (Perdue & Gurtman, 1990). Given that hiring decision-makers already hold a discrete cognitive representation of older workers, it is likely that this schema will bias future encoding and storage of information about them (Perdue & Gurtman, 1990). Whilst this suggests that information-based interventions may fall short, the use of credible sources could be instrumental in providing information that is inconsistent with existing schema (Macrae, Shepherd, & Milne, 1992). Thus, information that is inconsistent with hiring decision-makers' schema of older workers could be effective providing that it comes from a credible source.

Regardless of theoretical orientation, changing stereotypes is considered to be most difficult (Macrea & Bodenhausen, 2000; Petty, Wegner & Fabrigar, 1997; Wood, 2000). Considering that stereotyping is fundamental to the perception of social reality and to appropriate behaviour it can be expected that trying to change people's stereotypes should meet with resistance. Several methods have been examined in an attempt to reduce stereotype-based behaviours. These are stereotype inhibition, conscious suppression of stereotypes, desired outcome factors, and individuating presentation of stereotyped group members. Whilst only the desired outcome factor could contribute to the potential effectiveness of developed interventions, each of the other avenues offers relevant ways to monitor stereotype-based behaviours.
One possible means of reducing stereotype-based behaviours is stereotype inhibition. Studies by Kunda and Sinclair (1999) showed that circumstances could motivate people to refrain from stereotyping. Participants who received criticism from a black person or observed another person receiving praise or criticism from a black person all activated the black stereotype. Those who personally received praise from a black person, however, inhibited the stereotype to a level even lower than for those who saw no black person whatsoever. Whilst these findings do not immediately offer a way to reduce hiring discrimination they do suggest that positive interactions initiated by older adults could motivate others to inhibit their stereotyping. Thus, teaching older adults to initiate a positive interaction in a job interview could facilitate the inhibition of hiring decision-makers' stereotyping.

Another possible method for combating stereotype-based behaviour is the conscious suppression of stereotypes. Macrae, Bodenhausen, Milne, and Jetten (1994), however, found that participants who had previously been instructed to suppress stereotypic thoughts were more likely to avoid interacting with a target member of the stereotyped group in a later encounter, than those who were given no instructions to suppress (Macrae, Bodenhausen, et al., 1994). A ‘rebound effect’ occurred whereby attempts to suppress unwanted stereotypic thoughts resulted in their subsequent reappearance with even greater insistence than if they had not been suppressed. These findings suggest that efforts to deliberately inhibit stereotypical thoughts may lead to increased prejudiced behaviour when cognitive controls are relaxed in subsequent encounters. Hence, it is possible that hiring decision-makers who make an effort to inhibit their stereotypes of older workers, may in fact subsequently relate to older people in more prejudiced ways.
Another important factor in impression formation is related to the desired outcome in a given situation. As every person belongs to many categorised social groups, Kunda and Sinclair (1999) hypothesised that people's interest would affect whether participants categorised a black doctor by the negative stereotype for blacks or the positive stereotype for doctors. It was found that participants inhibited the stereotype that conflicted with their desired impression of the black doctor. Participants who received praise activated the doctor stereotype and those who received criticism activated the black stereotype, suggesting that people chose among applicable stereotypes selecting those that did not conflict with their desired impression (Kunda & Sinclair, 1999). As these findings suggest that desired outcomes can direct stereotype activation, the need to avoid prejudice in order to find the best person for the job might be effective at allowing hiring decision-makers to inhibit negative stereotyping of older applicants and concentrate on job related merits. This should thus be made a salient point in an intervention.

If older adult job seekers could present themselves to be unlike the stereotypical older worker, they would minimise stereotyping on the part of hiring decision-makers. Vrugt and Schabracq (1996) found that stereotypes regarding the perceived lack of flexibility of older employees were influenced by information about the employee's individual characteristics and representativeness. The greater the inconsistency between individuating information and the stereotype, the less stereotypical was the perceiver's assessment of the employee. However, when a younger and an older employee were both presented as equally flexible, ratings for the older worker corresponded to a less flexible impression, indicating that category information modified the individuating attribute information (Vrugt & Schabracq, 1996). When the older employee was presented as a very flexible, individualised
person, he or she was less likely to be subjected to age bias, and probably was viewed as being unrepresentative of the majority of older workers (Vrugt & Schabracq, 1996). In real-life situations, where resumes are the most common way to apply for vacant positions, however, older adult job seekers are mostly unable to present themselves to employers in a highly individualised manner. Even if this was possible, hiring decision-makers would still make comparisons, viewing traits like flexibility as relative to the perceived flexibility of younger workers.

One major difficulty associated with attempting to alter stereotype-based behaviours is that stereotype activation is automatic and out of conscious control (Devine, 2001; Levy, 2001; Macrae & Bodenhausen, 2000; Petty et al., 1997; Wood, 2000). It has been suggested that age stereotypes are deeply entrenched in our culture and that negative inferences about older people may take place automatically and without awareness (Hamilton & Sherman, 1994). Age has been suggested to be a critical (or primitive) category that is universally and automatically applied in perceiving others (Brewer & Lui, 1989; Hamilton & Sherman, 1994). People often report that they hold egalitarian views, are low in prejudice and that stereotyping does not influence their behaviour or judgements. Research, however, suggests that activation of stereotypic information may occur automatically and despite conscious countervailing views (Devine, 1989; Perdue & Gurtman, 1990). Thus, hiring decision-makers may unconsciously follow their negative misconceptions about older adult job seekers.

Research on construct accessibility in memory indicates that information that is easiest to retrieve has the most potential to be used in social judgements (Perdue & Gurtman, 1990). Therefore, if schemata of older people are strongly encoded with negative trait data, this information is highly likely to be automatically accessed when
developing impressions of older people. Over time stereotypes of older people would tend to be self-reinforcing due to their easy and repeated accessibility. Hence, the existence of negative stereotypes of older people may eventually produce biased evaluations automatically (Perdue & Gurtman, 1990). Indeed Perdue and Gurtman (1990) found that participants who were primed by the word 'old' were faster to sort negative characteristics and those who were primed by the word 'young' were faster to sort positive characteristics and that was true even for subliminal presentation of primes.

The findings by Perdue and Gurtman (1990) are in accord with Levy (1996) who found that although people hold both positive and negative stereotypes of ageing, commonly referred to as the wisdom and senility stereotypes, participants were slower to react to wisdom primes than senility primes. Whilst this demonstrates that negative characteristics are automatically connoted to older people and that negative evaluations of older people are likely to occur spontaneously, recent research suggests that stereotype activation is amenable to training.

Kawakami, Dovidio, Moll, Hermsen, and Russin (2000) examined the effects of stereotype negation training on stereotype activation. They proposed that if repeated pairing of certain characteristics with specific categories could lead to stereotyping and automatic activation, then repeated negation of these characteristics and pairing the categories with new characteristics should reduce the likelihood of automatic activation of stereotypes. Kawakami et al. found that after 480 trials participants showed no automatic stereotype activation to the category 'skinhead' as measured by a Stroop task. In a second study Kawakami et al. trained participants in negating racial stereotypes and found that after 384 trials no automatic activation of
Hiring discrimination 133

stereotypes was evident as measured by person categorisation. Further, these effects were still evident 24 hours after training.

The results of the Kawakami et al. (2000) studies suggest that hiring decision-makers could be trained in negation of stereotypes of older workers as a means to reduce hiring discrimination. The external validity of these studies is yet to be seen, however, and the effects of negation training on actual behaviour toward stereotyped group members have not yet been explored. Further, in their first study Kawakami et al. used elderly stereotypes as well as skinheads but found that Stroop task performance was unrelated with the former stereotypes. That is, whilst priming participants with skinhead stereotypes slowed their colour naming, priming with elderly stereotypes did not. Hence, it is doubtful whether stereotype negation training could be effective in reducing automatic activation of older adults' stereotypes.

Finally, whilst such training could be implemented in educational institutions, asking hiring decision-makers to engage in such training could prove difficult and might be seen as intrusive.

Several authors have recently challenged the notion of automatic stereotype activation (Blair, Ma, & Lenton, 2001; Rudman, Ashmore, & Gray, 2001; Wittenbrink, Judd, & Park, 2001). Relevant to the area of ageing, Dasgupta and Greenwald (2001) examined the effects of exposure to images of admirable older adults on implicit and explicit attitude measures in a sample of 26 undergraduates. They found significant reductions in implicit stereotyping of older adults, which held true even 24 hours post experiment, but this was not the case on explicit measures. Considering their implicit measures results, Dasgupta and Greenwald (2001) questioned the automaticity of stereotype activation and proposed that people's
attitudes toward stigmatised groups could be changed through repeated exposure to admirable members of such groups.

The Dasgupta and Greenwald (2001) findings could suggest that hiring decision-makers might shift their attitudes toward older workers following repeated exposure to images of admirable older adults. However, the results obtained by Dasgupta and Greenwald also showed that, although significant shifts in reaction times indicated reductions in implicit stereotyping, participants remained more favourably disposed toward younger people overall on both implicit and explicit attitude measures. In light of this result, and considering the small sample size, lack of external validity, and lack of knowledge of the effects of such manipulations on actual behaviour toward stigmatised group members, further research is required before such techniques could be implemented on a large scale in applied settings.

Although the notion of automaticity of stereotype activation has recently been challenged it is still supported by the majority of evidence to date (Baron, 1995; Devine, 2001; Levy, 2001; Macrae & Bodenhousen, 2000; Ottati & Lee, 1995; Petty et al., 1997; Wood, 2000). This suggests that even employers with the best of intentions may inevitably fall victim to the influence of negative stereotypes of older workers when assessing employability. This possibility, and the difficulties of stereotype change, lead to serious concerns about the inevitability of prejudice and discrimination.

Another important point that should be considered in developing interventions is that the issue of labour force participation for older workers is fundamentally a human rights issue in that older workers are disadvantaged in terms of financial, social, and human fulfilment (Remenyi, 1994). Indeed Smith (2001) and Arrowsmith and McGoldrick (1996, cited in McGoldrick & Arrowsmith, 2001) both found age
Hiring discrimination was viewed by employers to be primarily a moral issue. It is therefore suggested that employers' moral values should be tapped if a change in their discriminatory hiring practices toward older workers is desired.

In light of the literature reviewed thus far, potentially effective interventions aimed at promoting attitude change and reducing stereotype-based behaviours should offer countering information from a credible source, provide a rational argument for behavioural change in terms of desirable outcomes, and tap the moral values of their targets. This is in accord with Macrae and Bodenhausen (2000), Petty et al. (1997), and Wood (2000) who, having reviewed substantial literature in the area of attitude and attitude change, all suggested that harnessing both 'hot' (self involving) motives and 'cold' (rational) motives enhances the effectiveness of interventions.

Literature in the area of attitudes and attitude change suggests that interventions using cognitive dissonance could combine 'hot' and 'cold' motives, tap moral values, and be effective in stereotype change and reducing stereotype-based behaviours (Aronson, 1999; Devine, 1989; Festinger, 1957; Johnson, 1996; Macrae & Bodenhausen, 2000; Monteith, 1993; Petty et al., 1997; Wood, 2000). These observations provide the focus of the following section that considers the nature of promising interventions.

**Promising Interventions**

One type of prejudice reduction intervention that shows promise is based on inducing cognitive dissonance. Such interventions are based on the notion that becoming aware of behaving in a way that is incongruent with one's self-concept creates unpleasant cognitive dissonance. In order to reduce this dissonance, the
person adjusts their subsequent behaviour to be more in line with his or her self-concept (Aronson, 1999; Festinger, 1957).

The motivation to change one’s own behaviour as a result of cognitive dissonance is internal (Aronson, 1999). This is the opposite of laws, regulations, and policies that are external sources that dictate one’s behaviour. Thus, whilst laws and regulations that are imposed on people can meet with resistance to comply, an intervention based on cognitive dissonance is less likely to suffer this difficulty.

Devine (1989) conducted three studies which examined the involvement of stereotypes and personal beliefs in prejudiced behaviour. She found that in terms of knowledge of the commonly held stereotypes about blacks, there were no significant differences between white undergraduates who were highly prejudiced against blacks and those who were relatively low on prejudice. Devine (1989) therefore proposed that differences in prejudiced behaviour were not due to differences in the knowledge of stereotypes and that controlled cognitive processes governed such behaviours.

Devine (1989) found that undergraduates who were both high and low in prejudice who viewed stereotype-related words as subliminal messages demonstrated subsequent prejudiced behaviour. Hence, Devine suggested that stereotypes were established equally across members of a community and were automatically activated as a response to members or symbols of stereotyped groups.

Devine (1989) also found that the extent of expressed prejudice was directly related to participants’ previous endorsements about blacks. That is, participants who endorsed a more positive stance toward blacks expressed themselves in a less prejudiced manner even though their knowledge of the commonly held stereotype did not differ from highly prejudiced ones.
In light of her findings, Devine (1989) surmised that people who view themselves as less prejudiced or hold personal beliefs that are incongruent with the culturally held, and automatically activated, stereotype engage in a cognitive process of adjustment toward their own views and beliefs. This cognitive adjustment, suggested Devine (1989), may be a result of an internal disharmony low prejudiced people experience when facing an opportunity to express prejudice because it places the integrity of their self-concept under threat. Whilst not ignoring the limitations of generalisability of results due to sample and issue specificity, Devine’s (1989) findings suggest that cognitive dissonance could reduce negative stereotype-based behaviours.

Following Devine’s (1989) findings, Monteith (1993) conducted two studies investigating the self-regulatory mechanisms with which people controlled prejudiced behaviour. Monteith (1993) had both high and low prejudiced participants believe that they behaved in a discriminatory manner against a gay male job applicant. Both studies showed that low prejudiced participants experienced greater discomfort as a result of their prejudiced behaviour and adjusted their subsequent behaviour to be more congruent with their low-prejudiced self-concept. Monteith (1993) proposed that participants who were highly prejudiced against gay people did not experience a discrepancy in being prejudiced, as it posed no threat to their self-concept. Monteith (1993) suggested that as both high and low prejudiced people view themselves to be egalitarian heightening the awareness of highly prejudiced people of the discord between their behaviour and their egalitarian self-image would lead to discrepancy experiences which could set them on the path of learning toward reduced prejudice.

Monteith (1993) also proposed a model explaining the way people learn to replace prejudiced responses and respond instead in a way that is congruent with their
According to Monteith’s model, people who view themselves as less prejudiced experience self-directed negative affect if they are aware of having engaged in prejudiced behaviour. This negative affect, which acts as contingent punishment, leads to the individual’s enhanced focus on the self, followed by attention to cues that are present when the discrepancy occurs and a search to identify the prejudiced response. A strong association between cues, prejudiced response, and punishment becomes established over time. This association then facilitates replacing the prejudiced behaviour that is congruent with the stereotype by non-prejudiced behaviour that is in line with the person’s self-concept. Thus, it may be suggested that promoting a discrepancy between individuals’ self-concept and prejudiced behaviour followed by prejudice eliciting stimuli could initiate a learning process that leads to reduced prejudice.

Lipepe and Eisenstadt (1994) conducted three studies that investigated the effectiveness of induced compliance (inducing a person to behave in a way that is discrepant to his/her personal attitudes and/or beliefs) and subsequent cognitive dissonance in changing white Americans’ specific attitudes and general beliefs about black Americans. White undergraduate students were first asked to write an essay in favour of increasing the financial assistance given to black students and were later measured on their attitudes toward the topic of the essay and their general beliefs about blacks.

Using factorial designs, Lipepe and Eisenstadt (1994) manipulated the level of choice by allowing participants to write either a pro- or an anti-black essay, or giving them no such choice. Delay of subsequent measurement, and whether or not participants’ identity was given with their responses, were also manipulated. The authors found that the greatest positive shifts in both essay specific attitudes and
general beliefs were in the high choice and identity provided condition. These shifts were consistent across delay and held true regardless of participants' pretest attitudes. Choice, however, was most significant in delayed measure conditions. Thus, induced compliance and subsequent cognitive dissonance were found not only to change participants' task specific attitudes, but to be efficacious in bringing about a shift in their general beliefs toward blacks. Further, these changes were found to be consistent over time when choice was high.

The generalisability of these results is limited to white American undergraduates' attitudes and beliefs toward black Americans. Nevertheless, Lieppe and Eisenstadt's (1994) studies clearly suggest that high levels of both choice and publicity enhance attitude shifts that are facilitated by cognitive dissonance.

Another finding of Lieppe and Eisenstadt (1994) was that some participants complied more than others with the request to write a pro-black essay. Having obtained pre-test attitudinal measures in their third study, the authors found that racial ambivalence seemed to be the most important factor in these differences in compliance. That is, the more ambivalent participants were about their racial attitudes, the more compliant they were. Lieppe and Eisenstadt (1994) proposed that attitudinal ambivalence could make people more prone to cognitive dissonance manipulations. Thus, when seeking to change people's attitudes through cognitive dissonance manipulations it may be worthwhile to expose them to information that is incongruent with their stereotypical views on the issue in question to facilitate attitudinal ambivalence.

Aronson (1999) suggested that induced compliance could be effective in leading to cognitive dissonance in cases where people oppose the proposed behavioural change. For example, Lieppe and Eisenstadt (1994) asked white
Hiring discrimination

Americans who were highly prejudiced against blacks to write a pro-black essay. Methods of induced compliance, however, are unlikely to induce cognitive dissonance in cases where people hold a view that is congruent with a sought behaviour even though they behave differently (Aronson, 1999). For example, people may hold the view that caring for the environment is of great importance whilst actually practicing very little regard for the environment in their daily life. Asking these people to write an essay about environmental preservation is not likely to lead to cognitive dissonance. Aronson (1999) suggested that in such cases a sense of hypocrisy could be induced that would lead to cognitive dissonance. That is, when people are made aware that they do not practice what they preach they feel hypocritical. This feeling, in turn, leads to cognitive dissonance because people typically do not view themselves as hypocrites. Attempting to reduce the dissonance these people tend to adjust their subsequent behaviour to be more congruent with their self-concept (Aronson, 1999).

The hypocrisy paradigm may have particular appeal for the issue of age discrimination against older adults in hiring because whilst white Americans can forever view blacks as out-group members, every person who lives long enough becomes old. It is thus feasible that in the case of work-related ageism, most if not all people would be against discrimination regardless of their actual behaviour.

Aronson, Fried, and Stone (1991) investigated the hypocrisy hypothesis in the intentions to use condoms in a sample of undergraduates. The authors hypothesised that making participants realise that they do not practice what they preach would induce a feeling of hypocrisy, cut off the path of denial, and create cognitive dissonance that would lead to behavioural change.

Aronson et al. (1991) reported an illustrative study involving the mediating role of hypocrisy. They varied the degree to which participants were made aware of
their own past insufficient condom use and the extent to which they were active in advocating to others in favour of condom use. The results indicated that participants who were both reminded of past behaviour and were made active in preaching to others showed the greatest shift in their intentions to use condoms, and that this shift was consistent at three months follow-up. Further, participants who were only given information about AIDS and the dangers of unprotected sex did not show a significant shift in their intentions to use condoms (Aronson et al., 1991).

Whilst the results supported the hypothesis that participants' intentions to use condoms may not be reflective of their actions, the hypocrisy manipulation may lack external validity. Whilst not ignoring the limitations in terms of sample size ($n = 40$) and specificity of the issue, Aronson et al.'s (1991) study provided evidence of the effectiveness and the long lasting effect of hypocrisy-induced cognitive dissonance in changing behaviour. Further, it should be born in mind that actual condom use behaviour is difficult to measure.

Dickerson, Thibodeau, Aronson, and Miller (1992) utilised the hypocrisy paradigm to investigate water conservation behaviour in a sample of undergraduate females. Dickerson et al. (1992) varied participants' level of mindfulness of their wasteful past behaviour and the level of commitment they made to conserve water. Measuring participants' subsequent showering time, it was found that those who were both mindful and committed took the shortest showers (Dickerson et al., 1992). These results are in accord with Aronson et al.'s (1991) condom use study and provide a clear measure of actual behaviour change following hypocrisy-induced cognitive dissonance. Again, as with Aronson et al. (1991), no significant changes were observed for participants who were only provided with information related to water conservation.
The five studies described above (Aronson et al., 1991, Devine, 1989, Dickerson et al., 1992, Lippe & Eisenstadt, 1994, Monteith, 1989) all suggest that stereotype based behaviours and attitudes can change through the use of cognitive dissonance. Taken together these studies indicate several factors need to be borne in mind for the construction of a successful intervention based on cognitive dissonance. Both Devine (1989) and Monteith (1993) proposed that behavioural change following cognitive dissonance is mediated by a threat to one’s self-concept. Hence, people for whom behavioural change is sought should embrace a view that is contradictory to that behaviour as a part of their self-concept. Lippe and Eisenstadt (1994) found choice and publicity to be significant factors in promoting behavioural change through cognitive dissonance. Aronson et al. (1991) and Dickerson et al. (1992) both reported that behavioural change followed cognitive dissonance when people were reminded of their unsatisfactory past behaviour, were committed to change, and were made active in preaching to others.

Whilst the above studies demonstrate that cognitive dissonance induction could facilitate attitudinal and behavioural changes, their participants all shared similar levels of knowledge in the areas concerned. For example, participants in Dickerson et al. (1992) all had similar knowledge related to water conservation. Thus, participants whose cognitive dissonance was induced were in effect exposed to both relevant information and cognitive dissonance induction. This is different to hiring decision-makers and undergraduate students whose knowledge of the capabilities and actual performance of older workers was found to be inaccurate and stereotypical. This lack of accurate knowledge provides an opportunity to assess the effectiveness of information-based intervention and cognitive dissonance-based interventions alone as well as a combination of both. This is important because the
induction of cognitive dissonance alone may fall short in promoting attitude change and reducing hiring discrimination against older adults due to the lack of information that is relevant to their capabilities and actual performance.

Combining cognitive dissonance-based and information-based interventions might enhance the effectiveness of interventions. According to Festinger (1957), one way to reduce the discomfort experienced by cognitive dissonance is to seek and incorporate information that is congruent with a chosen alternative. For example, having chosen to purchase a particular make of an automobile, individuals seek technical and general information that is favourable of the car they chose (Festinger, 1957). This suggests that combining cognitive dissonance induction with information that is congruent with the desirable choice could enhance interventions' effectiveness. In the case of hiring discrimination against older adults, inducing cognitive dissonance in relation to such prejudice and providing information about the actual abilities and performance of older workers could be more effective than using either cognitive dissonance-based or information-based interventions alone. Thus, cognitive dissonance-based interventions and information-based interventions may be complementary in that the former could provide the motivation needed for embracing the latter. This suggests that using a combination of these two intervention styles would be more efficacious that using either of them alone.

Making use of the factors identified above that could contribute to the effectiveness of a cognitive dissonance-based intervention, a unique and novel intervention targeting hiring decision-makers was developed in order to promote attitude change toward older workers and lead to reductions in discriminatory behaviour toward them. Using the information gathered in Study One, an empirically driven information-based intervention was also developed. The following chapter
details the development of these interventions and describes their implementation in Study Two, with samples of hiring decision-makers and undergraduate students.
CHAPTER 6

Testing Interventions to Reduce Hiring Discrimination Against Older Adults

The study described in this chapter was designed to test interventions aimed to promote attitude change toward older workers and increase the likelihood of hiring older adult job seekers. The interventions were tested on random samples of companies and a sample of undergraduate research volunteers. Two types of interventions were developed. One was based on induction of cognitive dissonance and the other was an information-based intervention in the form of a fact sheet.

Respondents were mailed one of three interventions, the cognitive dissonance intervention, the fact sheet, or a combination of both. The questionnaire that was developed for Study One was amended and used to test the effects of the interventions among those who received them and a new control group who received no intervention.

Study One identified specific characteristics for which older workers were stereotypically viewed as inferior compared to younger workers. These were identified as misconceptions that are refuted by empirical data. The characteristics identified in Study One were used to develop an information-based intervention in the form of a fact sheet. The fact sheet lists these misconceptions and explains their inaccuracy in light of empirical data.

As was suggested in Chapter Five, one reason for the previously observed lack of effectiveness of information-based interventions could be that the information that was provided in them was poorly fitted to the attitudes of their targets. Further, there were no conclusive data on employers' and undergraduates' attitudes toward older
Hiring discrimination

workers. The specific negative stereotypes held about older workers that were identified in Study One were used to develop the fact sheets that were used in the current study within the same populations. Thus, the effectiveness of an empirically driven information-based intervention, which fits the attitudes of its targets, could be tested. As explained in Chapter Five, another factor that could contribute to the effectiveness of information-based interventions is that they should be provided from a credible source. Interventions in the current study were posted from James Cook University, which is a well-established and respected research institution in Australia. (This was achieved because James Cook University employs one of the supervisors of this project).

As was explained in the section about promising interventions in Chapter Five, the potential effectiveness of cognitive dissonance-based interventions may be enhanced by the incorporation of six factors. These factors are: choice, knowledge of inappropriate past behaviour, publicity, commitment to appropriate behaviour in the future, preaching to others, and threatening the self-concept. The cognitive dissonance-based intervention that was developed in the current study is novel and unique in its incorporation of all of the above six factors. Respondents were given the choice of whether or not to participate and were advised that both employers and undergraduates were found to discriminate against older adults. Respondents were advised that their names were going to be published as people who oppose hiring discrimination against older adults and are committed to non-discriminatory practice.

In order to address the issue of threatening respondents' self-concept, discriminatory behaviour toward older adults was presented as being at odds with the principle of giving people a fair go, which is an endeared and important value in Australian culture. This way, respondents' values were tapped and placed at odds
with discriminatory behaviour. Both Devine (1989) and Monteith (1993) found significant differences in the effectiveness of cognitive dissonance-based interventions as a function of level of prejudice. Behavioural and attitudinal changes were observed among individuals low in prejudice but not among those who were highly prejudiced. Nevertheless, both high and low prejudiced people viewed themselves to be egalitarian to the same extent. Monteith (1993) suggested that the self-concept of the highly prejudiced was not threatened and hence no significant behavioural and attitudinal changes followed interventions. Thus, people's views of themselves as egalitarian were not disturbed as a consequence of being informed that they discriminated against those against whom they held highly prejudiced attitudes.

As some hiring decision-makers and undergraduates could be highly prejudiced against older adults whilst others could be low on such prejudice this posed a threat to the potential effectiveness of the cognitive dissonance-based intervention. The issue of high and low prejudiced people may be addressed by finding a value, or principle, that is likely to be common to both and placing the undesirable behaviour at odds with that value. In this way, even those who are highly prejudiced could find their self-concept under threat. Whilst different levels of prejudice against older adults are likely to be found among potential respondents, such differences are less likely to be found in relation to the endorsement of the principle that all individuals should be given a fair go. The principle of giving each individual a fair go is important in hiring as it facilitates objectivity in employing the best person for the job and is fundamental to the issue of equal opportunity in employment (Equal Opportunity Guidelines, 1998). Presenting hiring discrimination against older adults to be at odds with this principle could thus make such behaviour threatening to one's self concept regardless of one's level of direct prejudice against older adults. Thus, the cognitive dissonance
intervention of the current study made use of the fact that age discrimination in hiring is at odds with the principal of giving people a fair go in order to place such discrimination at odds with respondents' self-concept.

Two other issues that were considered and utilised in developing the cognitive dissonance-based interventions of the current study were the inclusion of 'hot' and 'cold' arguments and pointing to desired outcomes. Literature on persuasion and attitude change, reviewed in Chapter Five, suggests that successful interventions should include motivational and self-involving (hot) arguments as well as rational (cold) arguments and that individuals exercise control over stereotype-based behaviour in accord with desired outcomes (Johnson, 1991; Kunda & Sinclair, 1999; Macrae & Bodenhausen, 2000; Petty et al., 1997; Wood, 2000). The cognitive dissonance-based intervention included 'hot' arguments in terms of a threat to the self-concept and 'cold' arguments pointing to desired outcomes in explaining to respondents that hiring discrimination could be counter-productive in cases where the best person for the job happens to be older.

As explained at the beginning of this chapter, the current study comprised three intervention conditions. In one condition, respondents were mailed the information-based intervention in the form of the fact sheet (FS). In another condition respondents received the cognitive dissonance-based intervention (CD). In the third condition respondents received both the cognitive dissonance-based intervention and the fact sheet (CDFS). Using these three intervention conditions allowed the assessment of the effectiveness of each intervention alone and the comparison of their effects with the effects of the other interventions and with controls.

The CDFS condition is a unique and novel combination. It follows Festinger (1957) who suggested that one way to reduce the discomfort experienced by cognitive
dissonance is to seek and incorporate information that is congruent with a chosen alternative. This suggests that, providing cognitive dissonance is indeed induced, the combination of CDFS would enhance the intervention's effectiveness.

As was mentioned at the beginning of this chapter, a modified version of the questionnaire that was developed and used in Study One was used to measure the effectiveness of the interventions in the current study. As the results of Study One showed no significant differences across questionnaire versions (male and female versions), the two versions were collapsed and the questionnaire now asked about 'older workers' only.

Another measure was used in order to assess the effectiveness of the different interventions. This measure took the form of a question that was not an integral part of the questionnaire. Respondents were asked to rate their level of hiring preference as a function of worker's age regardless of job description. This was important because it allowed the observation of differences in general age preference in hiring across interventions. Although this question does not directly measure actual hiring behaviour it stands to reason that respondents who would indicate no age preference in hiring or preference of older workers are likely to consider job applications submitted by older adult job seekers. Those who would indicate a priori preference for younger workers, however, are likely to discard the applications of older adults without much consideration.

Using the questionnaire and the general age preference in hiring question thus yielded four continuous dependent variables. First, the sum of the stereotype scale would be a measure of general attitudes. Second, asking respondents to indicate the likelihood of them hiring older workers would provide a measure of hiring intentions in each respondent's employment context. Third, asking respondents how relevant
they consider age in making hiring decisions would provide a measure of the importance given to both age and the stereotypic view of older workers in hiring. Finally, asking respondents about their age preference in hiring regardless of job description would provide a measure of hiring tendencies as a function of workers' age.

Study Two examined two hypotheses and one research question. First, based on the literature that indicated that information-based interventions were low in effectiveness, it was hypothesised that respondents in the FS condition would be least affected as reflected in all dependent variables and might not be significantly different to the control condition. Second, following the literature suggesting that CD manipulations were effective in promoting attitude change and amending stereotype-based behaviours, it was hypothesised that respondents in the CD conditions would be affected to a significantly greater degree compared to both FS and controls. Finally, the research question was whether the CDFS combination would enhance the intervention's effectiveness so that it would produce significantly greater effects on the dependent measures.

Method

Design

The study comprised two stages. The first was an intervention stage and the second was a follow-up test. In the first stage, respondents were sent one of three intervention materials; one involved a cognitive dissonance manipulation; another involved a fact sheet, and the third was a combination of the other two. In the test stage, those who responded to the intervention plus a new control group were all sent questionnaires in order to assess the effects of the different interventions.
The first stage used a 2 x 2 x 2 between subjects design with cognitive dissonance (yes or no), fact sheet (yes or no), and sample (employers and undergraduate students) as the independent variables. There were four dependent variables: 'age preference' (respondents' general age preference in hiring), 'sum of scale' (the sum of the stereotype scale of the questionnaire), 'age relevant' (how relevant was age in making hiring decisions), and 'likely to hire' (how likely were respondents to hire older workers). These dependent variables were based upon those used in the first study.

Respondents

One thousand and two hundred companies were randomly selected across industries in five states, Queensland, New South Wales, Victoria, South Australia, and Western Australia. The undergraduate sample comprised 196 students, which was the entire pool of students who expressed interest in participating in psychological research at Edith Cowan University.

Companies were located through the Kompass Australia electronic database of APN Business Information Group. Only companies with 10 to 50 employees were used. This was done for the same reasons as in Study One: to minimise the possibility of addressing companies with more than one hiring decision-maker, to address those who would be more likely to hire than family oriented companies, and companies with up to 50 employees cover more than 50 per cent of the Australian workforce. See Appendix B for a detailed account of sampling and randomization.

Responses were received from 267 private companies. Of this sample of employers, there were 203 males and 64 females, mean age between 45 and 50. Twenty-three respondents (8.6%) had a formal education level of up to year 10.
Forty-six (17.2%) had formal education up to year 12. One hundred and eighty three (68.5%) had tertiary education and 15 (5.6%) were postgraduates.

Fifty-five responses (20.6%) were received from Queensland, 43 (16.1%) from New South Wales, 51 (19.1%) from Victoria, 63 (23.6%) from South Australia, and 55 (20.6%) responses were received from Western Australia.

Ninety-seven undergraduate students responded. In this sample there were 17 males and 80 females, mean age between 25 and 30. Three respondents (3.1%) had a formal education level of up to year 10. Thirty-five (36.1%) had formal education up to year 12, and fifty-nine (60.8%) had tertiary education.

Materials

Six sets of intervention materials and two sets of follow up cards were used across the two samples in the intervention stage. C4-sized envelopes were used for posting and C5-sized envelopes were used for prepaid returns.

The testing stage used two sets of questionnaires and follow up cards across the two samples. Four cover letters were used across the two samples and follow-ups.

There was concern that responses to questionnaires at the testing stage would be biased if both the intervention and testing materials were mailed from the same source. In order to minimise these demand characteristics the materials of the intervention and testing stages were each posted from a different source so that they appeared as two independent studies. The intervention materials were prepared by the current researcher at Edith Cowan University, shipped to James Cook University in Queensland and posted from there. The testing materials were posted from Edith Cowan University in Western Australia. Each set of intervention materials used the corresponding university letterhead. Two different researchers, one in each
Intervention stage

There were three types of intervention materials. One aimed at inducing cognitive dissonance (CD), one that provided information in a form of a fact sheet (FS), and one that combined these two sets of materials (CDFS). All interventions consisted of written materials, reply cards, and postage paid reply envelopes. Each reply card was coded to enable the researcher to keep check of those who were addressed in the following testing stage and those who were not.

The cognitive dissonance intervention (CD) was in the form of a one-page letter. It incorporated the six factors relating to CD manipulations that were found in the literature. These were: choice, knowledge of inappropriate past behaviour, a threat to the self-concept, publicity, commitment to appropriate behaviour in the future, and preaching to others.

Respondents had voluntarily replied, hence the issue of choice was addressed. The issues of population ageing, and the consequent need for older adults in the workforce, were briefly introduced. This was done in order to point to the importance and relevance of the issue.

Drawing on the information gathered in Study One and previous relevant studies, past behaviour of Australian employers (or undergraduate students) in discriminating against older adults in hiring was explained. It was explained that age discrimination in hiring is against the very principle of giving each individual a fair
go, which is held so dear in Australia. This was done in order to link discriminatory
behaviour with fundamental morals of Australian society. Hence, the letter was
making discriminatory behaviour at odds with the self-concept of respondents.

Respondents were advised that a booklet with a list of names of hiring
decision-makers (or undergraduate students) that oppose age discrimination in hiring
and view it as immoral was being produced. Respondents were asked to print their
name on the reply card and post it back so that they could be included in the list. It
was made clear that the booklet was to be published and that it would show other
hiring decision-makers (or undergraduate students) and the wider community that
those on the list feel that each older job seeker should be given a fair go. Further, it
was explained that those on the list were committed to that feeling and belief. Thus,
the issues of publicity of the actions of respondents, commitment to appropriate
behaviour in the future, and preaching to others were addressed.

The undergraduates' sample materials were the same as those for the
employers except for two things. First, in the undergraduates' materials
discriminatory behaviour of undergraduate students toward older workers was
addressed. Second, the undergraduate materials were titled 'Dear Sir/Madam' whilst
the employers' materials addressed the hiring decision-maker. An example of CD
materials is presented in Appendix F.

The fact sheet intervention (FS) was in the form of a one-page fact sheet based
on the findings generated in Study One. It listed the 12 most common and most
extremely expressed stereotypes about older workers and provided empirically based
counter evidence. This was similar in form to the information fact sheets produced by
government bodies. See Appendix E for an example of the Western Australian
Department of Training (WADT) fact sheet.
Examples of fact sheet items are:

<table>
<thead>
<tr>
<th>Misconceptions</th>
<th>Empirical data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Older workers are less adaptable.</td>
<td>1. Older workers adapt well to new working environments and circumstances.</td>
</tr>
<tr>
<td>2. Older workers are not interested in changes in the workplace.</td>
<td>2. Older workers are interested in their career and in meeting new challenges.</td>
</tr>
</tbody>
</table>

Respondents were requested to tick a box on the reply card acknowledging having read the fact sheet and post back the card. An example of FS materials is presented in Appendix F.

The combined cognitive dissonance and fact sheet intervention (CDFS) materials combined both sets of the CD and FS sheets. Reply cards were the same as for the CD condition. CDFS intervention materials were counterbalanced to control for order effects. Two sets of CDFS materials were produced; one presented the CD materials first and FS second, and the other reversed this order. An example of CDFS materials is presented in Appendix F.

Follow-up cards were used across all conditions in order to enhance response rate. Postcards reminded respondents of the materials that were sent to them. Respondents were thanked for their cooperation in case they had already responded and were urged to do so in case they did not. The cards explained to respondents that they were a part of a small randomly selected representative sample of companies/undergraduates and that their response was therefore uniquely important. Examples of follow-up cards are presented in Appendix G.

The level of personal involvement and sense of commitment that were asked from respondents in both the CD and the CDFS conditions were greater than that required from respondents in either the fact sheet or control conditions. This is because respondents in both the CD and CDFS conditions were asked to provide their names and to commit to non-discriminatory behaviour. Due to these differences it
was expected that response rates in both the CD and CDFS conditions would be lower compared with FS and controls. As it was difficult to predict the magnitude of these differences it was decided to assign equal numbers to each condition.

**Testing stage**

The testing stage used a modified version of the questionnaire that was used in Study One plus one additional question. As no significant differences were found between the male and female versions in Study One, the questionnaire in the current study addressed both genders.

In order to tap any differences in general hiring preferences as a function of intervention an age preference question was added. Respondents were asked to rank their preference of hiring older or younger workers regardless of a specific job description. This question was kept separate from the main body of the questionnaire and respondents were asked to reply to it before going on to the questionnaire. Rating points were not given numerical values. This was done in order to minimise bias in responding in case respondents' favouritism was associated with numerical values. This was different to the rest of the questionnaire where ratings were numbered so that greater numerical values corresponded to greater strength on each item. This was done in order to maximise differences in ratings scores.
An example of the age preference question is given below:

Before proceeding past this page I ask that you indicate your general (not job specific) preference of hiring older (55-70) workers or younger (25-40) workers. I simply ask for your personal view and not what may seem conventional or politically correct.

Please circle ONE option only.

- I strongly prefer to hire younger workers
- I prefer to hire younger workers
- I slightly prefer to hire younger workers
- No difference in hiring preference
- I slightly prefer to hire older workers
- I prefer to hire older workers
- I strongly prefer to hire older workers

Cover letters introduced the issue of population ageing and explained that the number of younger workers will decline and that the number of older job applicants will increase over the coming years. It was explained to respondents that their input would facilitate better understanding of the work environment faced by older people. Letters that addressed companies asked for the 'hiring decision-maker's' views and those sent to undergraduates were titled 'Dear Sir/Madam'.

The letters explained to respondents that each of them was one of a randomly selected number and that it was crucial that each questionnaire was returned. Respondents were advised that filling out the questionnaire should take no more than 15 minutes and were asked to place completed questionnaires in the reply paid envelope supplied and to post it back within five working days.

Cover letters made clear that what was sought was only the respondent's personal views. The letters explained that the number on the first page of the questionnaire was simply to verify receipt of reply and confidentiality of response was assured. Respondents were advised that the results of the survey could be published and that a summary of results could be made available to them on request. An address
and a telephone number were provided in case respondents had any questions or comments. Respondents were thanked for their assistance.

Follow up cover letters included the same information as the initial ones, but were successively more insistent in tone. For examples of cover letters see Appendix G.

The cards of the first follow up reminded respondents of the initial mailing of the questionnaire to them. They were thanked in case they had already replied and were asked to do so if they had not. Respondents were advised that they could call the researcher and receive another copy in case they did not receive, lost or misplaced the questionnaire. Examples of follow up cards are presented in Appendix G.

The questionnaire was divided into four sections. Section A comprised 28 items that addressed stereotypical views found in the literature and sought to assess the extent to which these were held. Section B asked for a statement of the likelihood that respondents would employ older adults and the extent to which they viewed age to be relevant in making hiring decisions. Section C comprised one open-ended question asking, 'What other characteristics of older workers differentiate their performance from that of younger workers?' This allowed the exploration of issues that were not found in the literature. Section D asked respondents for demographic data (i.e., age, gender, and educational level).

Respondents were asked to rate older workers on seven-point scales along several dimensions compared to younger workers. For example, in section A:

**How trainable are older (55-70) workers compared to younger (25-40) workers?**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainable</td>
<td>Far less</td>
<td>Less</td>
<td>Slightly less</td>
<td>No different</td>
<td>Slightly more</td>
<td>More</td>
<td>Far more Trainable</td>
</tr>
</tbody>
</table>
An example from section B:

**How likely are you to hire a worker of the 55-70 age group?**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Unlikely</td>
<td>Remotely likely</td>
<td>Likely</td>
<td>More than likely</td>
<td>Very likely</td>
<td>Certainly</td>
</tr>
</tbody>
</table>

Employers' questionnaire versions were identical to those of the undergraduates except that for the latter the likelihood of hiring question asked 'How likely would you be to hire...' rather than 'How likely are you to hire...'. This was done because the hiring question for the undergraduates was hypothetical. Examples of a questionnaire and age preference question are presented in Appendix H.

**Procedure**

Respondents in each sample were randomly allocated to one of four groups, CD, FS, CDFS, and control. There were 300 companies and 49 undergraduates in each group. Based on Study One response rates it was estimated that one follow-up in the intervention stage and two in the testing stage would yield sufficient sample sizes for analyses. For a detailed account of randomization and response considerations see Appendix B.

**Intervention**

Intervention materials were mailed from James Cook University simultaneously to 900 employers and 147 undergraduates across the three intervention groups. Materials sent to employers addressed hiring decision-makers and those sent to undergraduates were titled 'Dear Sir/Madam'.

Participants' acknowledgments of receipt of fact sheets in the FS condition and agreement with the cognitive dissonance materials in both the CD and CDFS
conditions were gathered through the reply cards described above. Follow up cards were mailed to all potential respondents one week after the initial posting of interventions. Four weeks from initial posting of interventions were allowed for response gathering. Only those participants from whom reply cards were received were addressed in the following testing stage.

Testing Stage

Five hundred and fifty-six employers and 137 undergraduates were addressed at the testing stage with four groups in each sample, CD, FS, CDFS, and control. Questionnaires, cover letters, and prepaid reply envelopes were simultaneously mailed on a Tuesday, as recommended by De Vaus (1995). This was done in order to avoid the post office’s Monday pile-up and because it was likely to ensure that respondents received the questionnaires by Thursday so that they could complete the questionnaires over the weekend and return it early the following week.

In the employers’ sample, cover letters were addressed to hiring decision-makers and in the undergraduate sample they were titled 'Dear Sir/Madam'. Each questionnaire was numbered to enable the researcher to keep check of those who replied and those who needed to be followed up. Two follow-ups were used in order to enhance the response rate.

The first follow-up was sent one week after the initial posting and was mailed to all respondents. It was in the form of a postcard and reminded respondents of the questionnaire. Respondents were thanked for their cooperation had they completed the questionnaire, and asked to do so in case they did not.

The second follow-up was posted three weeks after the initial posting and addressed only those who did not respond by that time. It included a letter, linked to
the initial cover letter but more insistent in tone, a questionnaire, and a reply-paid return envelope.

Response rates

Out of the 556 companies addressed at the testing stage 30 were returned to the sender as address unknown. Thus the actual sample size for potential responses was $n = 526$. Three hundred and six questionnaires were returned, yielding a response rate of 58 per cent in the employers' sample at testing.

Out of 137 in the undergraduate sample, two were returned to the sender as address unknown, which left the actual sample with 135. One hundred and six questionnaires were returned yielding a response rate of 78 per cent in this sample at testing.

Data Analysis

Data was analysed using SPSS version 10. Questionnaires were screened for missing data prior to data entry. Frequency tables were produced to check for missing values after data entry. As the three continuous variables of - 'age preference', 'sum of scale', and 'age relevant' were all related to the construct of age discrimination in hiring, SPSS MANOVA was the analysis of choice. Study One's results showed that the variable 'likely to hire' was treated differently by employers and undergraduates and was thus analysed using SPSS univariate analysis of variance separately in each sample.
Results

Returned questionnaires were screened for missing data prior to data entry. Twenty-two incomplete questionnaires were found in the employers' sample and four in the undergraduate sample. All incomplete questionnaires were discarded. The fit between respondents' names on the reply cards and reported gender in the questionnaires was assessed in the CD and CDFS groups. There was a fit of 97%, with two contradictions in the CD group. The two contradicting questionnaires were discarded. This left 282 and 102 completed and useable questionnaires in the employers' and undergraduate samples respectively.

Prior to analyses, all 28 variables of the stereotype scale and the variables 'age preference', 'sum of scale', 'likely to hire', and 'age relevant' were examined through various SPSS programs for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate analysis.

The variables were examined separately in their groups for univariate outliers and normality. The study had eight groups across the employers and undergraduate samples with three intervention groups and a control group in each sample. The groups were: employers CD group (n = 32), employers FS group (n = 97), employers CDFS group (n = 29), employers control group (125), undergraduate CD group (n = 26), undergraduate FS group (n = 21), undergraduate CDFS group (n = 23), and undergraduate control group (n = 32).

No missing values were detected. Normality was assessed through visual examination of plots and by calculating deviations of skewness and kurtosis and was found to be satisfactory.

Univariate outliers were defined as values that were more than three standard deviations away from their mean. Depending on the direction of deviation, outlying
values were replaced with values corresponding to three standard deviations above or below their mean.

Five outlying values were detected and adjusted in the employers CD group. 19 outlying values were found and replaced in the employers FS group. Three outlying values were detected and adjusted in the employers CSFS group and nine were found and replaced in the employers control group. Both undergraduate CD and CDFS groups had three outlying values each that were adjusted. The undergraduate FS group had one outlying value that was replaced and two outlying values were identified and adjusted in the undergraduate control group. No single variable had a significantly greater number of univariate outliers compared with the others.

Using Mahalanobis distance with $p < .001$, 21 cases (about 5%) were identified as multivariate outliers across all 32 variables and were deleted. After the deletion of the multivariate outliers, 364 cases remained for analysis, 30 cases in the employers CD group, 91 in the employers FS group, 28 in the employers CDFS group, 118 in the employers control group. In the undergraduate sample, there were 24 in the CD group, 21 in the FS group, 20 in the CDFS group, and 32 in the control group.

The internal consistency reliability of the stereotype scales was analysed using SPSS to calculate Cronbach's alpha in each group. Alpha levels indicated that the scales' internal consistency was satisfactory across all eight groups. Alpha values are shown in Table 10. The stereotype scale item means and standard deviations across the four employers groups are shown in Table 11 and those of the undergraduate groups are shown in Table 12.
Table 10

**Alpha values by group**

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employers CD</td>
<td>30</td>
<td>0.88</td>
</tr>
<tr>
<td>Employers FS</td>
<td>91</td>
<td>0.90</td>
</tr>
<tr>
<td>Employers CDFS</td>
<td>28</td>
<td>0.90</td>
</tr>
<tr>
<td>Employers control</td>
<td>118</td>
<td>0.89</td>
</tr>
<tr>
<td>Undergraduates CD</td>
<td>24</td>
<td>0.84</td>
</tr>
<tr>
<td>Undergraduates FS</td>
<td>21</td>
<td>0.92</td>
</tr>
<tr>
<td>Undergraduates CDFS</td>
<td>20</td>
<td>0.81</td>
</tr>
<tr>
<td>Undergraduates control</td>
<td>32</td>
<td>0.90</td>
</tr>
</tbody>
</table>
Table 11
Stereotype scale item means and standard deviations by employers groups

<table>
<thead>
<tr>
<th></th>
<th>Employers CD</th>
<th>Employers FS</th>
<th>Employers CDFS</th>
<th>Employers control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptable</td>
<td>2.77</td>
<td>0.73</td>
<td>2.70</td>
<td>0.77</td>
</tr>
<tr>
<td>Interested</td>
<td>3.13</td>
<td>0.78</td>
<td>3.06</td>
<td>0.95</td>
</tr>
<tr>
<td>Trainable</td>
<td>3.40</td>
<td>1.38</td>
<td>3.32</td>
<td>0.94</td>
</tr>
<tr>
<td>Strong</td>
<td>2.90</td>
<td>0.84</td>
<td>3.08</td>
<td>0.80</td>
</tr>
<tr>
<td>Likely to be promoted</td>
<td>3.60</td>
<td>0.97</td>
<td>3.59</td>
<td>0.92</td>
</tr>
<tr>
<td>Ambitious</td>
<td>3.27</td>
<td>0.83</td>
<td>3.34</td>
<td>0.87</td>
</tr>
<tr>
<td>Energetic</td>
<td>3.30</td>
<td>0.79</td>
<td>3.46</td>
<td>0.82</td>
</tr>
<tr>
<td>Healthy</td>
<td>3.47</td>
<td>0.78</td>
<td>3.61</td>
<td>0.80</td>
</tr>
<tr>
<td>Creative</td>
<td>3.60</td>
<td>0.81</td>
<td>3.82</td>
<td>0.92</td>
</tr>
<tr>
<td>Functional memory</td>
<td>3.70</td>
<td>0.79</td>
<td>3.83</td>
<td>0.75</td>
</tr>
<tr>
<td>Mentally alert</td>
<td>3.57</td>
<td>0.73</td>
<td>3.80</td>
<td>0.79</td>
</tr>
<tr>
<td>Flexible</td>
<td>3.90</td>
<td>1.37</td>
<td>4.00</td>
<td>1.18</td>
</tr>
<tr>
<td>Fit in</td>
<td>3.90</td>
<td>0.96</td>
<td>4.10</td>
<td>0.88</td>
</tr>
<tr>
<td>Productive</td>
<td>3.93</td>
<td>1.17</td>
<td>4.10</td>
<td>1.03</td>
</tr>
<tr>
<td>Motivated</td>
<td>4.40</td>
<td>0.77</td>
<td>4.20</td>
<td>0.92</td>
</tr>
<tr>
<td>Efficient</td>
<td>3.97</td>
<td>1.00</td>
<td>4.21</td>
<td>0.82</td>
</tr>
<tr>
<td>Satisfactory performance</td>
<td>4.37</td>
<td>0.93</td>
<td>4.32</td>
<td>0.95</td>
</tr>
<tr>
<td>Cost effective</td>
<td>4.50</td>
<td>1.28</td>
<td>4.60</td>
<td>1.08</td>
</tr>
<tr>
<td>Cooperative</td>
<td>4.50</td>
<td>0.94</td>
<td>4.69</td>
<td>0.93</td>
</tr>
<tr>
<td>Job quality</td>
<td>4.40</td>
<td>0.85</td>
<td>4.57</td>
<td>0.76</td>
</tr>
<tr>
<td>Hard working</td>
<td>4.63</td>
<td>0.76</td>
<td>4.52</td>
<td>0.87</td>
</tr>
<tr>
<td>Willing to work</td>
<td>5.17</td>
<td>0.95</td>
<td>4.84</td>
<td>1.10</td>
</tr>
<tr>
<td>Competent</td>
<td>4.60</td>
<td>0.80</td>
<td>4.77</td>
<td>0.79</td>
</tr>
<tr>
<td>Skilled</td>
<td>5.03</td>
<td>0.67</td>
<td>4.83</td>
<td>0.96</td>
</tr>
<tr>
<td>Cautious</td>
<td>5.20</td>
<td>0.80</td>
<td>5.23</td>
<td>0.74</td>
</tr>
<tr>
<td>Dependable</td>
<td>5.20</td>
<td>0.80</td>
<td>5.10</td>
<td>0.86</td>
</tr>
<tr>
<td>Loyal</td>
<td>5.40</td>
<td>0.81</td>
<td>5.35</td>
<td>0.90</td>
</tr>
<tr>
<td>Reliable</td>
<td>5.45</td>
<td>0.95</td>
<td>5.47</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Hiring discrimination 165
<table>
<thead>
<tr>
<th>Stereotype scale item means and standard deviations by undergraduates groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduates CD</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Adaptable</td>
</tr>
<tr>
<td>Interested</td>
</tr>
<tr>
<td>Trainable</td>
</tr>
<tr>
<td>Strong</td>
</tr>
<tr>
<td>Likely to be promoted</td>
</tr>
<tr>
<td>Ambitious</td>
</tr>
<tr>
<td>Energetic</td>
</tr>
<tr>
<td>Healthy</td>
</tr>
<tr>
<td>Creative</td>
</tr>
<tr>
<td>Functional memory</td>
</tr>
<tr>
<td>Mentally alert</td>
</tr>
<tr>
<td>Flexible</td>
</tr>
<tr>
<td>Fit in</td>
</tr>
<tr>
<td>Productive</td>
</tr>
<tr>
<td>Motivated</td>
</tr>
<tr>
<td>Efficient</td>
</tr>
<tr>
<td>Satisfactory performance</td>
</tr>
<tr>
<td>Cost effective</td>
</tr>
<tr>
<td>Cooperative</td>
</tr>
<tr>
<td>Job quality</td>
</tr>
<tr>
<td>Hard working</td>
</tr>
<tr>
<td>Willing to work</td>
</tr>
<tr>
<td>Competent</td>
</tr>
<tr>
<td>Skilled</td>
</tr>
<tr>
<td>Cautious</td>
</tr>
<tr>
<td>Dependable</td>
</tr>
<tr>
<td>Loyal</td>
</tr>
<tr>
<td>Reliable</td>
</tr>
</tbody>
</table>

Hiring discrimination 166
The results of Study One showed that the variable 'likely to hire' was treated differently by the undergraduate sample and the employers. Although the undergraduates' 'sum of scale' scores were significantly lower than those reported by employers the undergraduates had higher 'likely to hire' scores. Hence, it was decided to analyse 'likely to hire' separately in each sample.

As there were unequal numbers of cases across cells and because it was assumed that differences in cell sizes reflected real processes in the populations sampled, the SPSS regression approach was used. Hence, each cell mean was given equal weight regardless of its sample size and each main effect and interaction was assessed after adjustments were made for all other main effects and interactions. Multivariate test results were assessed using Pillai’s criterion, which is both conservative and robust against unequal cells (Tabachnick & Fidell, 1996).

A 2 x 2 x 2 between subjects multivariate analysis of variance (MANOVA) was performed on three dependent variables: 'age preference', 'sum of scale', and 'age relevant'. The independent variables were sample (employers and undergraduates), CD (yes or no), and FS (yes or no).

SPSS MANOVA was used for the analysis. The assumptions of MANOVA were met and alpha was set at .05.

With the use of Pillai's Trace criterion, the combined DVs were significantly affected by sample, $F(3,354) = 3.66, p < .05$, and by CD, $F(3,354) = 3.03, p < .05$. Hence, employers and undergraduates were significantly different across a combination of the three DVs. Descriptive statistics are presented in Table 13.
Table 13

Mean scores for Age preference, Sum of scale, and Age relevant.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employers CD</td>
<td>30</td>
<td>3.83</td>
<td>1.20</td>
<td>115.23</td>
<td>12.80</td>
<td>3.07</td>
<td>1.31</td>
</tr>
<tr>
<td>Employers FS</td>
<td>91</td>
<td>3.74</td>
<td>1.07</td>
<td>116.48</td>
<td>12.99</td>
<td>3.27</td>
<td>1.29</td>
</tr>
<tr>
<td>Employers CDFS</td>
<td>28</td>
<td>4.50</td>
<td>1.04</td>
<td>125.11</td>
<td>13.81</td>
<td>3.14</td>
<td>1.86</td>
</tr>
<tr>
<td>Employers control</td>
<td>118</td>
<td>3.69</td>
<td>1.22</td>
<td>115.01</td>
<td>14.39</td>
<td>3.30</td>
<td>1.52</td>
</tr>
<tr>
<td>Undergraduates CD</td>
<td>24</td>
<td>3.87</td>
<td>0.90</td>
<td>116.54</td>
<td>11.06</td>
<td>2.71</td>
<td>1.20</td>
</tr>
<tr>
<td>Undergraduates FS</td>
<td>21</td>
<td>3.76</td>
<td>1.04</td>
<td>113.52</td>
<td>14.00</td>
<td>3.24</td>
<td>1.44</td>
</tr>
<tr>
<td>Undergraduates CDFS</td>
<td>20</td>
<td>3.95</td>
<td>0.89</td>
<td>114.10</td>
<td>8.80</td>
<td>2.40</td>
<td>1.46</td>
</tr>
<tr>
<td>Undergraduates control</td>
<td>32</td>
<td>3.53</td>
<td>1.27</td>
<td>111.59</td>
<td>14.32</td>
<td>2.97</td>
<td>1.51</td>
</tr>
</tbody>
</table>

In order to investigate the effects of the IVs across samples further, univariate analyses were conducted for the four DVs separately in each sample. Whilst no significant effects were found in the undergraduate sample, the employers showed significant effects for 'age preference', 'sum of scale', and 'likely to hire'. These significant results are reported next.

A 2 x 2 (CD (yes or no) x FS (yes or no)) between subjects ANOVA was performed on employers' age preference scores. The assumptions of ANOVA were deemed to be satisfactory. With alpha set at .05 both main effects were found to be significant, but no significant interaction was detected: CD $F(1,263) = 6.95, p < .05$; FS, $F(1,263) = 4.28, p < .05$. Hence, both the CD and the FS enhanced age preference scores. Descriptive statistics are shown in Table 13.

As the mean of the CD and FS combination group was higher than that of the other three groups (see Table 13 above) and because it was of interest to assess the effects of the different interventions, post hoc pairwise comparisons using Tukey's HSD test were performed across the four groups. These revealed that the mean age preference scores in the cognitive dissonance and fact sheet combination group was
significantly higher than that of the fact sheet group and the control group. No other pairwise comparisons achieved significance. In other words, employers who received the combined cognitive dissonance/fact sheet intervention showed a significantly greater preference for hiring older workers than did employers who received only the fact sheet and those who received no manipulation.

A 2 x 2 (CD (yes or no) x FS (yes or no)) between subjects ANOVA was performed on employers' sum of scale scores. The assumptions on ANOVA were deemed to be satisfactory. With alpha set at .05 both main effects and the interaction were found to be significant: Cognitive dissonance $F(1,263) = 4.71, p < .05$; fact sheet, $F(1,263) = 7.75, p < .05$; and cognitive dissonance by fact sheet interaction, $F(1,263) = 4.26, p < .05$. Post hoc pairwise comparisons were conducted among the four cell means using the Tukey HSD test. These revealed that the mean sum of scale scores in the cognitive dissonance and fact sheet combination group was significantly higher than in any of the other groups. No other pairwise differences achieved significance. In other words, those respondents who received both the cognitive dissonance and fact sheet reported significantly more favourable views of older workers than did any of the other groups. Descriptive statistics are presented in Table 13 and the interaction is shown in Figure 2.
A 2 x 2 (CD (yes or no) x FS (yes or no)) between subjects ANOVA was performed on employers' likely to hire scores. The assumptions on ANOVA were deemed to be satisfactory. With alpha set at .05 the only significant effect was a significant cognitive dissonance by fact sheet interaction, \( F(1,263) = 4.69, p < .05 \). Descriptive statistics are presented in Table 14 and the interaction is shown in Figure 3. Post hoc comparisons using the Tukey HSD test revealed no significant pairwise differences.
Table 14

Mean employers likely to hire score as a function of group.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive dissonance</td>
<td>30</td>
<td>3.60</td>
<td>1.07</td>
</tr>
<tr>
<td>Fact sheet</td>
<td>91</td>
<td>3.58</td>
<td>0.91</td>
</tr>
<tr>
<td>Cognitive dissonance and fact sheet</td>
<td>28</td>
<td>4.11</td>
<td>0.87</td>
</tr>
<tr>
<td>control</td>
<td>118</td>
<td>3.75</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Figure 3. Mean employer likely to hire score as a function of cognitive dissonance and fact sheet.
The manipulation groups were too small to be analysed by demographic variables. Hence, the effects of respondents' sex, age, educational level, and state (in the employers' sample) on the four DVs were each analysed through a multivariate analysis of variance (MANOVA) for the control groups in each of the two samples.

One more variable of interest in the employers' sample was type of industry. However, Kompass's criteria were found to be idiosyncratic with some sections overly inclusive and some too specific. The classifications used by Kompass are different to those used by the ABS and many companies are included in more than one criterion. According to the APN Information Group (personal communication, Pollock, 2001) the main objective of the criteria used in Kompass database is to maximise exposure rather than segregate companies into clearly defined domains. As this posed a serious threat to the validity of results, no analyses of type of industry were performed.

As information regarding the age of the respondents was collected in blocks of five-year age groups this variable was divided into three groups for the analyses: those up to 40 years of age, those between 45 - 55, and those over 55. This particular age group division was used for two reasons. First, ABS data indicated that age discrimination in hiring is significantly more pronounced for job seekers over 40. Second, the questionnaire defined older adults as those between 55 and 70. Thus, the above age group divisions allowed the observation of discriminatory attitudes toward older workers as a function of relevance to respondents' age.

No significant differences were found between the five States in the employers' sample. Age of respondents showed significant effects in both samples and respondents' sex was found to be significant in the employers' sample. The significant results are reported next.
A between subjects MANOVA was performed on the employers' control
group scores for four dependent variables: age preference, sum of scale, age relevant,
and likely to hire. The independent variable was employer respondents' sex.

SPSS MANOVA was used for the analysis. The assumptions of MANOVA
were met and alpha was set at .05.

With the use of Pillai's Trace criterion the combined DVs were significantly
affected by respondents' sex, $F(4,113) = 2.65, p = .037$. Univariate test results showed
that 'age relevant' was significantly affected by respondents' sex,
$F(1,116) = 5.74, p = .018$. Male employer respondents had significantly higher age
relevant scores compared to their female counterparts. In other words, male
employers viewed age to be significantly more important in making hiring decisions
than did female employers. Descriptive statistics are presented in Table 15.

Table 15

<table>
<thead>
<tr>
<th>Sex</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>83</td>
<td>3.72</td>
<td>1.29</td>
<td>114.53</td>
<td>14.54</td>
<td>3.52</td>
<td>1.49</td>
<td>3.64</td>
<td>1.11</td>
</tr>
<tr>
<td>Female</td>
<td>35</td>
<td>3.63</td>
<td>1.03</td>
<td>116.17</td>
<td>14.18</td>
<td>2.80</td>
<td>1.47</td>
<td>4.03</td>
<td>1.32</td>
</tr>
</tbody>
</table>

A between subjects MANOVA was performed on the employers control
group scores for four dependent variables: age preference, sum of scale, age relevant, and
likely to hire. The independent variable was employer respondents' age (up to 40, 40
- 55, and 55 +).
SPSS MANOVA was used for the analysis. The assumptions of MANOVA were met and alpha was set at .05.

With the use of Pillai's Trace criterion the combined DVs were significantly affected by age of respondent, $F(8,226) = 2.58, p = .01$. Univariate test results showed that age preference, $F(2,115) = 4.79, p = .01$ and sum of scale, $F(2,115) = 5.43, p < .01$ were significantly affected by age of respondent. Pairwise comparisons using Tukey HSD test revealed that the 55+ group had significantly higher age preference and sum of scale scores than either of the other two groups. No other pairwise differences achieved significance. In other words, employers who were 55 years and over expressed a significantly greater interest in hiring older workers than did younger employers. Further, the older employers group had a significantly more positive view of older workers overall compared to any of the younger groups. Descriptive statistics are presented in Table 16.

Table 16

Mean employers scores for age preference, sum of scale, age relevant, and likely to hire by respondents age.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 40</td>
<td>33</td>
<td>3.39</td>
<td>1.00</td>
<td>114.03</td>
<td>14.39</td>
<td>3.21</td>
<td>1.56</td>
<td>3.79</td>
<td>1.36</td>
</tr>
<tr>
<td>40 - 55</td>
<td>60</td>
<td>3.60</td>
<td>1.26</td>
<td>112.23</td>
<td>13.89</td>
<td>3.23</td>
<td>1.51</td>
<td>3.72</td>
<td>1.19</td>
</tr>
<tr>
<td>55 +</td>
<td>25</td>
<td>4.32</td>
<td>1.18</td>
<td>123.00</td>
<td>13.10</td>
<td>3.60</td>
<td>1.50</td>
<td>3.80</td>
<td>0.91</td>
</tr>
</tbody>
</table>
A between subjects MANOVA was performed on the undergraduates control group scores for four dependent variables: age preference, sum of scale, age relevant, and likely to hire. The independent variable was undergraduate respondents' age (up to 40, 40 - 55, there were no 55 + respondents).

SPSS MANOVA was used for the analysis. The assumptions of MANOVA were met and alpha was set at .05.

With the use of Pillai's Trace criterion the combined DVs were significantly affected by age of respondent, $F(4,27) = 3.38, p = .023$. Univariate test results showed that age preference, $F(1,30) = 7.22, p = .012$ and sum of scale, $F(1,30) = 12.39, p = .001$ were significantly affected by age of respondent.

Descriptive statistics are presented in Table 17.

Undergraduate respondents in the 40 - 55 age group had significantly higher age preference and sum of scale scores compared with those in the up to 40 age group. In other words, the older undergraduate group showed a significantly greater preference for hiring older workers and had a significantly more favourable view of older workers compared with the younger undergraduate group.

Table 17

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Age preference</th>
<th>Sum of scale</th>
<th>Age relevant</th>
<th>Likely to hire</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Up to 40</td>
<td>25</td>
<td>3.24</td>
<td>0.92</td>
<td>107.56</td>
<td>11.70</td>
</tr>
<tr>
<td>40 - 55</td>
<td>7</td>
<td>4.57</td>
<td>1.81</td>
<td>126.00</td>
<td>14.22</td>
</tr>
</tbody>
</table>
Section C of the questionnaire comprised an open-ended question that asked respondents what other characteristics of older workers differentiated their performance from that of younger workers. Responses to this section presented various attributes for which older workers were viewed as better or lesser compared with younger workers.

In the employers' sample, the cognitive dissonance group, the fact sheet group, and the control all had about three times as many positive attributes related to older workers compared to negative ones. The cognitive dissonance and fact sheet combination group, however, had eight times more positive attributes than negative ones. This group also had the greatest number of positive attributes and the smallest number of negative ones. The cognitive dissonance group had about the same number of negative attributes as the combination group, but had the least number of positive attributes. The fact sheet and control groups had about the same number of positive and negative attributes with the former showing the greatest number of negative attributes overall.

All four employers groups indicated that older workers had better work ethics than did younger workers, had more appreciation of their job, had more common sense, and that they were more reliable. Three out of four groups proposed that older workers were more experienced than younger workers, more proud of their job, more willing to do all kinds of jobs, more responsible, more loyal, and more honest.

Both the combination and the fact sheet groups suggested that older workers were more knowledgeable than younger workers, better understand the company, and that they were better mentors. Both the combination and control groups responded that older workers were more likely to stay in the job, were more stable, and that they
were wiser. The CDFS and CD groups both suggested that older workers were more
dependable and mature than were younger workers.

Both the CD and control groups responded that older workers were more hard
working, that they were better under pressure, and that they were more friendly than
younger workers. The CD and FS groups both stated that older workers had more life
experience.

Both the FS and control groups responded that older workers were more
focused on their job, better at following instructions, better problem solvers, more
punctual, more accurate, more patient, and that they were intrinsically motivated.

As for negative attributes, all four groups of employers responded that older
workers were set in their ways. Both the fact sheet and control groups commented
that older workers were slower than younger workers were and that they had
difficulties with new technology. The cognitive dissonance and fact sheet groups both
suggested that older workers were resistant to change. Both the cognitive dissonance
and the control groups indicated that older workers were weaker than younger
workers and both the combination and cognitive dissonance groups suggested that
older workers were not as good as younger workers in the IT area.

In the undergraduate sample, all but the fact sheet group had about twice as
many positive attributes related to older workers compared to negative ones. The fact
sheet group, however, had about four times more positive attributes than negative
ones. This group also had the least number of negative attributes related to older
workers. All four groups had about the same number of positive attributes and with
the exception of the fact sheet group, all had the same number of negative attributes.

All four undergraduate groups responded that older workers are more reliable,
more likely to stay in the job, more loyal, and more patient than younger workers.
Three out of the four groups suggested that older workers were more experienced, more appreciative of their job, more dependable, had more life experience, were intrinsically motivated, and were wiser than younger workers.

Both the cognitive dissonance and control groups proposed that older workers had better work ethics, were better decision-makers, and were more dedicated than younger workers. The cognitive dissonance and combination groups both stated that older workers were more committed, had more common sense, and were more stable than younger workers. Both cognitive dissonance and fact sheet groups commented that older workers were more knowledgeable, more genuine, more mature, and knew what they want better than did younger workers.

The control and fact sheet groups both responded that older workers were better problem solvers. Both the control and combination groups stated that older workers were more focused on the job, better mentors, and that they took fewer risks than did younger workers.

As for negative attributes, all four undergraduate groups responded that older workers were set in their ways and that they were less healthy than were younger workers. Three out of the four groups stated that older workers were not up to date with technology, were harder to train, and were weaker compared to younger workers. Both the control and cognitive dissonance groups suggested that older workers were less adaptable than were younger workers. The responses to section C of the questionnaire are summarised in tables 18 through 25 for each of the eight groups.
Table 18

**Employers' cognitive dissonance group. Attributes for which older workers were viewed as better or worse compared with younger workers**

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Not as good in the IT area</td>
</tr>
<tr>
<td>Willing to go the extra mile</td>
<td>Weaker</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Are set in their ways</td>
</tr>
<tr>
<td>Willing to do any task</td>
<td>Resist change</td>
</tr>
<tr>
<td>Better under pressure</td>
<td>Take more sick days</td>
</tr>
<tr>
<td>Have more common sense</td>
<td></td>
</tr>
<tr>
<td>More reliable</td>
<td></td>
</tr>
<tr>
<td>More dependable</td>
<td></td>
</tr>
<tr>
<td>More trustworthy</td>
<td></td>
</tr>
<tr>
<td>More friendly</td>
<td></td>
</tr>
<tr>
<td>More settled</td>
<td></td>
</tr>
<tr>
<td>More mature</td>
<td></td>
</tr>
<tr>
<td>More honest</td>
<td></td>
</tr>
<tr>
<td>Have more life experience</td>
<td></td>
</tr>
</tbody>
</table>
Table 19

**Employers’ fact sheet group. Attributes for which older workers were viewed as better or worse compared with younger workers**

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Not up to date with new technology</td>
</tr>
<tr>
<td>More knowledgeable</td>
<td>Have difficulties with new technology</td>
</tr>
<tr>
<td>More experienced</td>
<td>Do not like menial tasks</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Less willing to do overtime</td>
</tr>
<tr>
<td>Have greater desire to work</td>
<td>Have less stamina</td>
</tr>
<tr>
<td>More focused on the job</td>
<td>Are set in their ways</td>
</tr>
<tr>
<td>More proud of their work</td>
<td>Think they know best</td>
</tr>
<tr>
<td>Better at sticking with repetitive jobs</td>
<td>Slower</td>
</tr>
<tr>
<td>Strive to perform at their pick</td>
<td>Resist change</td>
</tr>
<tr>
<td>Better understand the company</td>
<td>Hard to fit in with younger workers</td>
</tr>
<tr>
<td>Better at following instructions</td>
<td>More opinionated</td>
</tr>
<tr>
<td>Better problem solvers</td>
<td>More punctual</td>
</tr>
<tr>
<td>More punctual</td>
<td>More responsible</td>
</tr>
<tr>
<td>More responsible</td>
<td>Have more common sense</td>
</tr>
<tr>
<td>Have more common sense</td>
<td>More reliable</td>
</tr>
<tr>
<td>More reliable</td>
<td>More accurate</td>
</tr>
<tr>
<td>More accurate</td>
<td>More honest</td>
</tr>
<tr>
<td>More honest</td>
<td>More respectful</td>
</tr>
<tr>
<td>More respectful</td>
<td>More considerate</td>
</tr>
<tr>
<td>More considerate</td>
<td>More patient</td>
</tr>
<tr>
<td>More patient</td>
<td>More accepting</td>
</tr>
<tr>
<td>More accepting</td>
<td>More loyal</td>
</tr>
<tr>
<td>More loyal</td>
<td>Less greedy</td>
</tr>
<tr>
<td>Less greedy</td>
<td>More settled</td>
</tr>
<tr>
<td>More settled</td>
<td>Intrinsically motivated</td>
</tr>
<tr>
<td>Intrinsically motivated</td>
<td>Are better communicators</td>
</tr>
<tr>
<td>Are better communicators</td>
<td>Better mentors</td>
</tr>
<tr>
<td>Better mentors</td>
<td>Have more life experience</td>
</tr>
<tr>
<td>Have more life experience</td>
<td>Better communicators</td>
</tr>
<tr>
<td>Better communicators</td>
<td>Have better verbal skills</td>
</tr>
</tbody>
</table>
### Table 20

**Employers' cognitive dissonance and fact sheet group. Attributes for which older workers were viewed as better or worse compared with younger workers**

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Less computer literate</td>
</tr>
<tr>
<td>More knowledgeable</td>
<td>Set in their ways</td>
</tr>
<tr>
<td>More experienced</td>
<td>Less flexible</td>
</tr>
<tr>
<td>More skilled</td>
<td>Have impaired eyesight</td>
</tr>
<tr>
<td>Better at meeting deadlines</td>
<td></td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td></td>
</tr>
<tr>
<td>More proud of their work</td>
<td></td>
</tr>
<tr>
<td>Willing to do all kinds of jobs</td>
<td></td>
</tr>
<tr>
<td>Strive to perform at their pick</td>
<td></td>
</tr>
<tr>
<td>Better understand the company</td>
<td></td>
</tr>
<tr>
<td>Have better judgement</td>
<td></td>
</tr>
<tr>
<td>More committed to meeting demands</td>
<td></td>
</tr>
<tr>
<td>More concerned of the company</td>
<td></td>
</tr>
<tr>
<td>More likely to stay in the job</td>
<td></td>
</tr>
<tr>
<td>More versatile</td>
<td></td>
</tr>
<tr>
<td>More practical</td>
<td></td>
</tr>
<tr>
<td>More dedicated</td>
<td></td>
</tr>
<tr>
<td>More cautious</td>
<td></td>
</tr>
<tr>
<td>More responsible</td>
<td></td>
</tr>
<tr>
<td>Have more common sense</td>
<td></td>
</tr>
<tr>
<td>Have more positive approach to work</td>
<td></td>
</tr>
<tr>
<td>More reliable</td>
<td></td>
</tr>
<tr>
<td>More loyal</td>
<td></td>
</tr>
<tr>
<td>More dependable</td>
<td></td>
</tr>
<tr>
<td>More organised</td>
<td></td>
</tr>
<tr>
<td>More tidy</td>
<td></td>
</tr>
<tr>
<td>Better at accepting change</td>
<td></td>
</tr>
<tr>
<td>Better mentors</td>
<td></td>
</tr>
<tr>
<td>Better lateral thinking</td>
<td></td>
</tr>
<tr>
<td>More stable</td>
<td></td>
</tr>
<tr>
<td>More mature</td>
<td></td>
</tr>
<tr>
<td>Wiser</td>
<td></td>
</tr>
<tr>
<td>Better at accepting instructions</td>
<td></td>
</tr>
<tr>
<td>More accountable</td>
<td></td>
</tr>
<tr>
<td>More trustworthy</td>
<td></td>
</tr>
</tbody>
</table>
Table 21

Employers' control group. Attributes for which older workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Have better work ethics</td>
</tr>
<tr>
<td>Have better work ethics</td>
<td>More experienced</td>
</tr>
<tr>
<td>More qualified</td>
<td>More focused on the job</td>
</tr>
<tr>
<td>More experienced</td>
<td>Better at following instructions</td>
</tr>
<tr>
<td>More focused on the job</td>
<td>Require less supervision</td>
</tr>
<tr>
<td>Better at following instructions</td>
<td>Willing to go the extra mile</td>
</tr>
<tr>
<td>Require less supervision</td>
<td>Better under pressure</td>
</tr>
<tr>
<td>Willing to go the extra mile</td>
<td>More efficient</td>
</tr>
<tr>
<td>Better under pressure</td>
<td>More cooperative</td>
</tr>
<tr>
<td>More efficient</td>
<td>More appreciative of the job</td>
</tr>
<tr>
<td>More cooperative</td>
<td>More proud of their work</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Willing to do all kinds of jobs</td>
</tr>
<tr>
<td>More proud of their work</td>
<td>More likely to stay in the job</td>
</tr>
<tr>
<td>Willing to do all kinds of jobs</td>
<td>Better problem solvers</td>
</tr>
<tr>
<td>More likely to stay in the job</td>
<td>Better team workers</td>
</tr>
<tr>
<td>Better problem solvers</td>
<td>More punctual</td>
</tr>
<tr>
<td>Better team workers</td>
<td>More attentive</td>
</tr>
<tr>
<td>More punctual</td>
<td>More responsible</td>
</tr>
<tr>
<td>More attentive</td>
<td>Have more common sense</td>
</tr>
<tr>
<td>More responsible</td>
<td>More accurate</td>
</tr>
<tr>
<td>Have more common sense</td>
<td>More reliable</td>
</tr>
<tr>
<td>More accurate</td>
<td>More loyal</td>
</tr>
<tr>
<td>More reliable</td>
<td>More honest</td>
</tr>
<tr>
<td>More loyal</td>
<td>More patient</td>
</tr>
<tr>
<td>More honest</td>
<td>More friendly</td>
</tr>
<tr>
<td>More patient</td>
<td>Are intrinsically motivated</td>
</tr>
<tr>
<td>More friendly</td>
<td>More stable</td>
</tr>
<tr>
<td>Are intrinsically motivated</td>
<td>Wiser</td>
</tr>
<tr>
<td>More stable</td>
<td>More considerate of other workers</td>
</tr>
<tr>
<td>Wiser</td>
<td>Weaker</td>
</tr>
</tbody>
</table>


Table 22

Undergraduates' cognitive dissonance group. Attributes for which older workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Not up to date with new technology</td>
</tr>
<tr>
<td>More knowledgeable</td>
<td>Set in their ways</td>
</tr>
<tr>
<td>More experienced</td>
<td>Are harder to train</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Less efficient</td>
</tr>
<tr>
<td>More likely to stay in the job</td>
<td>Less adaptable</td>
</tr>
<tr>
<td>Better decision-makers</td>
<td>Less interested</td>
</tr>
<tr>
<td>Have better people skills</td>
<td>Less confident</td>
</tr>
<tr>
<td>More committed</td>
<td>Have lower self esteem</td>
</tr>
<tr>
<td>More efficient</td>
<td>Weaker</td>
</tr>
<tr>
<td>Easier to get along with</td>
<td>Less healthy</td>
</tr>
<tr>
<td>More dedicated</td>
<td></td>
</tr>
<tr>
<td>Have more common sense</td>
<td></td>
</tr>
<tr>
<td>More reliable</td>
<td></td>
</tr>
<tr>
<td>More loyal</td>
<td></td>
</tr>
<tr>
<td>More dependable</td>
<td></td>
</tr>
<tr>
<td>More organised</td>
<td></td>
</tr>
<tr>
<td>More patient</td>
<td></td>
</tr>
<tr>
<td>Better know what they want</td>
<td></td>
</tr>
<tr>
<td>Are intrinsically motivated</td>
<td></td>
</tr>
<tr>
<td>More genuine</td>
<td></td>
</tr>
<tr>
<td>More stable</td>
<td></td>
</tr>
<tr>
<td>More mature</td>
<td></td>
</tr>
<tr>
<td>Wiser</td>
<td></td>
</tr>
</tbody>
</table>
Undergraduates' fact sheet group. Attributes for which older workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>More likely to stay in the job</td>
<td>Not up to date with new technology</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Set in their ways</td>
</tr>
<tr>
<td>More knowledgeable</td>
<td>Do not fit in with younger workers</td>
</tr>
<tr>
<td>Better without supervision</td>
<td>Slower</td>
</tr>
<tr>
<td>More willing to learn</td>
<td>Less healthy</td>
</tr>
<tr>
<td>More disciplined</td>
<td></td>
</tr>
<tr>
<td>Willing to do menial tasks</td>
<td></td>
</tr>
<tr>
<td>Better problem solvers</td>
<td></td>
</tr>
<tr>
<td>Willing to go the extra mile</td>
<td></td>
</tr>
<tr>
<td>More thorough</td>
<td></td>
</tr>
<tr>
<td>More supportive</td>
<td></td>
</tr>
<tr>
<td>More adaptable</td>
<td></td>
</tr>
<tr>
<td>More reliable</td>
<td></td>
</tr>
<tr>
<td>More loyal</td>
<td></td>
</tr>
<tr>
<td>More dependable</td>
<td></td>
</tr>
<tr>
<td>More patient</td>
<td></td>
</tr>
<tr>
<td>Better know what they want</td>
<td></td>
</tr>
<tr>
<td>Are intrinsically motivated</td>
<td></td>
</tr>
<tr>
<td>More genuine</td>
<td></td>
</tr>
<tr>
<td>Have more life experience</td>
<td></td>
</tr>
<tr>
<td>More mature</td>
<td></td>
</tr>
<tr>
<td>Wiser</td>
<td></td>
</tr>
<tr>
<td>Better than younger</td>
<td>Worse than younger</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>More likely to stay in the job</td>
<td>Not up to date with new technology</td>
</tr>
<tr>
<td>More appreciative of the job</td>
<td>Set in their ways</td>
</tr>
<tr>
<td>More experienced</td>
<td>Are harder to train</td>
</tr>
<tr>
<td>More focused on the job</td>
<td>Might not stay long in the job</td>
</tr>
<tr>
<td>More committed</td>
<td>More argumentative</td>
</tr>
<tr>
<td>Better at relating to clients</td>
<td>Less patient</td>
</tr>
<tr>
<td>Have more common sense</td>
<td>Not critical enough</td>
</tr>
<tr>
<td>Better team workers</td>
<td>Less ambitious</td>
</tr>
<tr>
<td>Take less risks</td>
<td>Weaker</td>
</tr>
<tr>
<td>Better mentors</td>
<td>Less healthy</td>
</tr>
<tr>
<td>More accommodating</td>
<td></td>
</tr>
<tr>
<td>More conscientious</td>
<td></td>
</tr>
<tr>
<td>More reliable</td>
<td></td>
</tr>
<tr>
<td>More loyal</td>
<td></td>
</tr>
<tr>
<td>More dependable</td>
<td></td>
</tr>
<tr>
<td>More patient</td>
<td></td>
</tr>
<tr>
<td>More stable</td>
<td></td>
</tr>
<tr>
<td>Are intrinsically motivated</td>
<td></td>
</tr>
<tr>
<td>Have more life experience</td>
<td></td>
</tr>
<tr>
<td>Wiser</td>
<td></td>
</tr>
<tr>
<td>More settled in themselves</td>
<td></td>
</tr>
</tbody>
</table>
Table 25

Undergraduates' control group. Attributes for which older workers were viewed as better or worse compared with younger workers

<table>
<thead>
<tr>
<th>Better than younger</th>
<th>Worse than younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have better work ethics</td>
<td>Have difficulties with new technology</td>
</tr>
<tr>
<td>More likely to stay in the job</td>
<td>Set in their ways</td>
</tr>
<tr>
<td>More experienced</td>
<td>Are harder to train</td>
</tr>
<tr>
<td>More focused on the job</td>
<td>Do not fit in with younger workers</td>
</tr>
<tr>
<td>More proud of their work</td>
<td>More judgemental</td>
</tr>
<tr>
<td>Better decision-makers</td>
<td>Less adaptable</td>
</tr>
<tr>
<td>Better problem solvers</td>
<td>Have lesser memory</td>
</tr>
<tr>
<td>Take less sick days</td>
<td>Have impaired cognitive abilities</td>
</tr>
<tr>
<td>More dedicated</td>
<td>Weaker</td>
</tr>
<tr>
<td>Better mentors</td>
<td>Less healthy</td>
</tr>
<tr>
<td>More punctual</td>
<td></td>
</tr>
<tr>
<td>More motivated</td>
<td></td>
</tr>
<tr>
<td>More reliable</td>
<td></td>
</tr>
<tr>
<td>More loyal</td>
<td></td>
</tr>
<tr>
<td>More honest</td>
<td></td>
</tr>
<tr>
<td>More patient</td>
<td></td>
</tr>
<tr>
<td>More accepting</td>
<td></td>
</tr>
<tr>
<td>Have more life experience</td>
<td></td>
</tr>
</tbody>
</table>

Discussion

The first hypothesis examined in Study Two predicted that the FS condition would have the least effect on the respondents. This hypothesis was supported by the results. The FS condition's results were not significantly different to the control condition on any of the DVs across both employers and undergraduate samples.

The second hypothesis examined in this study predicted that respondents in the CD condition would show significantly greater effects compared to those in both FS and control conditions. This hypothesis was not supported by the results. The CD
condition did not yield significantly greater effects on any of the four DVs compared with the FS and control conditions in both the employers and undergraduate samples. Whilst no significantly different results were observed in the CD intervention, it enhanced respondents' scores to a greater degree than did the FS intervention. This can be seen in the MANOVA in which both employers and undergraduate samples were included. This MANOVA showed that the combined DVs were significantly affected by sample (employers and undergraduates) and CD but not by FS. Power calculations that were conducted between controls and CD, and controls and FS for this MANOVA showed that the CD intervention condition yielded a greater effect size on two of the three DVs. The FS showed minute effect sizes of .07 for the DV of age preference in hiring and .02 for the 'age relevant' DV, whilst the CD produced an effect size of .2 for both DVs. This is in accord with both Thibodeau, Aronson, and Miller (1992) and Taylor (2001) who suggested that information-based interventions alone are unlikely to produce attitude change and with Monteith (1993), Macrae and Bodenhouse (2000), and Wood (2000) who have all proposed that cognitive dissonance-based interventions are more likely to succeed.

As for the research question that asked whether the CDFS combination would enhance the intervention's effectiveness, the results suggest that it did, but only in the employers' sample. Possible reasons for these differences in the results across the two samples will be discussed in detail later. Employers in the CDFS condition showed significantly greater preference for hiring older workers compared to those in the FS and control conditions as measured on the hiring preference question. There was no significant difference between the CDFS and CD conditions on this DV. Employers in the CDFS condition presented significantly more favourable attitudes toward older workers overall, as measured by the DV 'sum of scale', compared to any other
condition. The CDFS was the only condition where employers mean 'likely to hire' score was greater than 4, although there was no statistically significant difference on this DV. This is important because yielding a mean rating greater than 4 means that employers in the CDFS condition indicated that they were more than likely to hire older workers compared to all other groups that were less than likely to do so. No statistically significant differences were detected for the 'age relevance' DV. All four conditions indicated that age was relevant in making hiring decisions as the mean scores were all between 3.07 and 3.30. Thus, in the employers' sample, the CDFS combination condition resulted in significantly more favourable attitudes toward older workers overall and a significantly greater preference for hiring older workers compared with all other conditions. Further, employers in the CDFS conditions were more than likely to hire older workers whilst all other conditions were less than likely to do so.

As can be seen in Table 11, the CDFS was the only condition where respondents viewed older workers as superior compared to younger workers on characteristics where controls viewed them as inferior. Older workers were viewed in the CDFS group to be more trainable and more flexible compared to younger workers. This is important because these characteristics were identified in Study One to be important in making hiring decisions. Thus, the CDFS condition showed positive attitude shifts toward older workers that are relevant to hiring decision making. This is different to the CD and FS conditions where, although positive attitude shifts can be seen, the overall stereotypical view of older workers that was identified in Study One remained. That is, in both CD and FS conditions older workers were still viewed to be inferior and superior on the same characteristics as controls. As can also be seen in
Table 11, the CDFS condition had higher mean ratings on all but four individual items compared to any other group.

The results of the current study suggest that combining the CD and FS conditions was complementary. As explained in Chapter Five, stereotyping is natural and stereotypes play a survival role, are instrumental in making sense of reality, and direct behaviour. Hence, whilst stereotypes are knowledge structures, updating or amending the information they contain requires strong motivation. The FS condition provided information alone and although this was relevant to the stereotypical views of the targets it provided no motivation for respondents to embrace this information or to allow it to replace existing stereotypical information. The CD condition placed hiring discrimination at odds with respondents' self concept but provided them with no new information that challenged their existing stereotypes of older workers. As can be seen in Tables 13 and 14, the mean score of the FS condition was higher (116.48) than that of the CD condition (115.23) on the measure of 'sum of scale' and the mean score of the CD condition was higher on the measures of 'age preference' (CD =3.83, FS = 3.74). Thus, respondents in the FS condition achieved a higher mean score in respect to information and respondents in the CD condition showed greater favouritism of older workers in terms of behavioural intentions, which is likely to have resulted from feeling uncomfortable about hiring discrimination. The CDFS condition combined both cognitive dissonance induction and relevant information. The significant effects in the CDFS condition suggest that the need to reduce cognitive dissonance provided the motivation for attitude change and stereotype amendment, which facilitated greater acceptance of the counter-stereotypic information provided in the fact sheet. Further, the counter-stereotypic information provided by the fact sheet in the CDFS condition may have exacerbated the
experience of cognitive dissonance and have thus contributed to the motivation for attitude change. Finally, as testing questionnaires were posted four weeks after intervention the effects appear to be relatively long lasting.

Out of the 300 potential respondents who were sent intervention materials in each condition, 28 completed questionnaires were returned in the CDFS condition at the testing stage, 30 in the CD condition, 91 in the FS condition, and 118 completed questionnaires were returned at the testing stage by controls. Considering the relatively lower response rate in the CDFS condition compared to that in the FS and control conditions, it could be suggested that the significant results in the CDFS condition were due to self-selection bias. That is, employers who responded to this condition already felt significantly more favourable toward older workers prior to the intervention. A consideration of the results and the different demands made on respondents across conditions, however, suggests this was not the case. The response rate in the CD condition \((n = 30)\) is almost identical to that in the CDFS \((n = 28)\). Had self-selection bias been the main reason for these response rates, there should have been no significant differences between the CD and CDFS conditions as respondents would have been favourable of older workers regardless of the interventions. This, however, was not the case and respondents in the CDFS condition were significantly more favourable of older workers compared with those in the CD condition. It, therefore, stands to reason that the relatively lower response rates achieved by the CD and CDFS conditions are due to different demands made on respondents in these conditions and not because of a self selection bias. As was explained in the method section, it was expected that both the CD and CDFS conditions would yield lower response rates than would either FS or controls. Respondents in the FS condition were asked to place a slip that had an identifying number on it into a reply paid
envelope and post it back so that the researcher would know that they received and read the fact sheet. Respondents in the CD and CDFS conditions were asked to provide their names on a slip and post it back. Further, in providing their name, each respondent in the CD and CDFS conditions was committed to refrain from hiring discrimination in the future and was made aware that the names of those who did so would be published. Hence the level of personal involvement and accountability in the CD and CDFS conditions, which were far greater than in the FS and control conditions, were more likely reasons for the smaller response rates in the CD and CDFS conditions than a self selection bias. Thus, it is unlikely that the significant results in the CDFS condition could be accounted for by self-selection bias and are more likely to have been caused by the CDFS intervention.

Whilst the smaller number of responses in the CD and CDFS conditions could hinder the power of the current study, power calculations show that the effects that were detected in the current study are not likely to have been found by chance. Power calculations showed that the effect size for the 'age preference' DV between the scores of the FS and CDFS for two tailed tests with an alpha of .05 was .7. Considering that the smallest cell in the employers' sample of the current study had \( n = 28 \), the power for this variable was greater than .9. Power calculations that were conducted for the DV 'sum of scale' calculated between the scores of the FS and the CDFS conditions showed an effect size of .6, which yielded power greater than .9. Thus, the statistically significant results found in the current study were of a reasonable magnitude, despite the comparatively modest sample sizes for the final survey results. It is important to note that the strong effects observed in the CDFS intervention comes at a cost of relatively low response rates. Future studies wishing to use CDFS interventions should take this into consideration in determining their sample size.
As can be seen by comparing Table 11 of the current study with Table 2 of Study One, the mean ratings of the employers' control group in the current study are virtually identical to employers' mean ratings in Study One on all the variables of the stereotype scale. This indicates that, at least in the samples measured, no differences in employers' stereotyping of older workers occurred in the time period between the two studies, a matter of approximately eight months. This is interesting because the issues of population ageing and hiring discrimination against older adults were popular in the mass media during that period. This suggests that the results of the current study were due to the effects of the interventions and not due to a general shift in attitudes that were caused by other sources.

Whilst the CDFS condition showed the most effect on three of the four DV's in the employers sample, the lack of such an effect in the undergraduate sample warrants an explanation. As can be seen in Table 13, mean scores of undergraduates in the CDFS condition were the highest on 'age preference' and second to the CD condition on 'sum of scale'. Further, the mean score in the CDFS condition was also the highest on the DV 'likely to hire' (CDFS = 4.65, FS = 4.38, CD = 4.42, and control = 4.44). Thus, although no statistically significant differences were found, the trend of intervention effects was similar in this sample as it was in the employers' sample. There are several possible reasons for the differences in the observed magnitude of intervention effects between the employers and undergraduates. Differences in sample size may have produced different effects. The employers sample included 267 hiring decision-makers whilst there were only 97 undergraduates. Power calculation that were conducted on the undergraduate sample results showed that the effect size for the 'age preference' DV between the scores of the control and CDFS conditions for two tailed tests with an alpha of .05 was .4. Considering that the undergraduate CDFS
condition had \( n = 20 \), the power for this variable was about .45. A sample of about 45 cases in each cell would have produced a power of .8, which would have significantly increased the chance of detecting the CDFS manipulation effect. Power calculations that were conducted for the DV 'likely to hire' calculated between the scores of the control and CDFS conditions showed an effect size of .1, which yielded power less than .1. It would have taken more than 700 undergraduate respondents in each cell in order to obtain a power of .8 with such a small effect size greater than .9. Having a larger sample of undergraduates would have thus increased power and could have reflected greater intervention effects.

Another reason for the smaller intervention effects observed in the undergraduate sample, and probably the most important, is the relevance and importance the whole issue of hiring older adults holds for undergraduate students. One of the most important factors for the effectiveness of CD manipulations is the importance and relevance of the issue to the participants. The issue is clearly relevant to employers but this is not necessarily the case for undergraduates. Hence, placing hiring discrimination at odds with the principle of 'fair go' might have been more effective in threatening the self-concept of employers and less effective at doing so with undergraduate students. The differences in relevance of the issue of hiring older adults across the two samples may be further reflected in how important employers view age to be in making hiring decisions compared to undergraduates. As can be seen in Table 13 all employers conditions showed 'age relevant' mean scores greater than 3 whilst all but the FS condition in the undergraduate sample showed mean scores less than 3. This indicates that employers view age as more relevant in making hiring decisions than do undergraduates. Being more sensitive to applicants' age, it is likely that following the CD and CDFS interventions employers' sense of cognitive
dissonance was greater than that of undergraduates. The greater discomfort experienced by employers could have facilitated greater motivation for attitude change among them, which yielded larger manipulation effects compared with undergraduates. The fact that both samples show similar trends suggests that effective awareness campaigns targeting the undergraduate population could enhance relevance and importance, which could, in turn, facilitate significant attitude shifts following CDFS interventions. If the progressive learning paradigm proposed by Monteith (1993) following CD manipulation is correct, then this may be a worthy path to explore because it could mean that those undergraduates who will become employers in the future will have less discriminatory attitudes toward older workers.

Another reason for the smaller effects that were observed in the undergraduate sample could be that there was a general positive shift in attitudes toward older workers in the undergraduate population. Indeed as can be seen by comparing Table 12 of the current study with Table 2 of Study One, the mean ratings of the undergraduate control group of the current study are more favourable towards older adults, which may have reduced the size of the effects of the interventions. The undergraduates may have viewed themselves as being positive enough toward older workers and were thus less malleable to change as a result of the interventions. This may have produced an artificial ceiling effect. Media releases and attention given to the area of age discrimination in the period between the two studies may have contributed to the shift in the undergraduates' views of older workers.

The difference in undergraduate responses across the two studies may have been due to differences in the distribution of sex within the samples. Whilst there were large differences in sex distribution in the undergraduate sample between Study One and the current study, no such sampling differences occurred in the employers
The undergraduate sample in Study One consisted of 38.5% males and 61.5% females. The undergraduate sample of the current study had 15.6% males and 84.4% females. Females' responses compared to males' responses in both studies were more favourable of older workers. Males, however, showed greater shifts in favour of older workers overall following interventions. Thus, the more favourable attitudes toward older workers observed in the control group of the undergraduate sample in the current study compared to the undergraduates in Study One is likely to have been due to the greater proportion of females in the current study.

Differences in the distribution of sex between the employer and undergraduate samples may have also contributed to the smaller effects observed in the undergraduate sample. The gender distribution of respondents is very different across the two samples. The sample of employers had 76% males whereas the undergraduate sample had 17.5% males. Greater differences in favour of older workers in mean 'sum of scale' scores were observed in males then in females compared to controls following interventions. In the control group of the undergraduate sample, the mean 'sum of scale' score was 105.00 for males and 112.81 for females and in the CDFS group it was 111.00 for males and 114.10 for females. The mean 'sum of scale' score in the control group of the employers sample was 114.53 for males and 116.17 for females, whilst for the CDFS group in this sample it was 125.58 for male and 122.11 for females. The employers' sample being predominantly male demonstrated greater intervention effects than did the undergraduate sample.

Another reason that might account for the smaller effects that were observed in the undergraduate sample in the current study is that the current study's sample was from the registrar of students who expressed interest in research participation and
most were psychology students. They may have communicated with one another and shared information which resulted in smaller differences across interventions. Further, this sample may have had more favourable attitudes toward older workers compared with the undergraduate sample of Study One, which was a cross-disciplinary sample.

Another factor that may have hindered the intervention effects among undergraduates is the fact that the interventions were sent close to the end of the year examination period. This meant that the undergraduate sample had much more on their minds than they otherwise might have, which may have confounded their responses and hindered the intervention effects due to lack of cognitive resources. This is in accord with Scott et al. (1998), described in Chapter Five, who conducted an educational intervention program on the attitudes toward older adults among 17 and 18 year olds around the time of the end of the year examinations and failed to find significant effects for their intervention.

One last issue to consider in accounting for the different intervention effects across samples in the current study may be the issue of in-group versus out-group based discrimination. Study One, as well as previous studies, found that younger participants reported more negative attitudes toward older workers and were more likely to discriminate against them in hiring than older participants. It therefore stands to reason that older participants are more sensitive to psychological manipulations, such as cognitive dissonance-based interventions, relating to ageing issues. The mean age of the undergraduate sample in the current study was between 20 and 25 and that of the employers' sample was between 45 and 50. Considering the media attention given to issues related to the ageing work force and the mean age of
the employers' sample, it is likely that the employers were more sensitive to the interventions than the undergraduates.

Given the fact that the CDFS produced the strongest effects in both the undergraduate and employers samples, it is suggested that repeating the study with undergraduate students, whilst paying attention to two issues, could produce significant intervention effects as found with the employers. First, the interventions and testing should employ random samples of students across disciplines so that the information provided in the fact sheets would better fit the stereotypic views of respondents. The current study could not do that due to difficulties with obtaining permission from the student administration of Edith Cowan University. Second, intervention and testing should not be done around examination time when students are preoccupied. The time constraints of the current study made it impossible to perform the interventions and testing at any other time.

Demographic analyses that were conducted on the control groups of both samples found that age and sex of respondents were significant factors in the employers' sample and that age was significant in the undergraduate sample. Older respondents in both samples showed more favourable attitudes toward older workers overall and had greater preference for hiring older workers compared to younger respondents. This is in accord with Study One where similar effects were found in the undergraduate sample and with previous research, such as Smith (2001) that found older respondents to be more favourable toward older workers compared to younger respondents. This indicates that a strong sense of in-group versus out-group bias based on age differences, which has been reliably detected across research sites, is an important factor in hiring discrimination against older adults. The attitudinal change in favour of older adults that occurs with advancing age also points to the uniqueness
of ageism compared to sexism and racism. Whilst people's race and sex do not
naturally change over the life span all people grow older. It is therefore likely that as
people advance in age, their sense of in-group versus out-group in relation to older
adults subsides and hence their attitudes change accordingly. This may suggest that
as the Australian population age and the number of older employers increases, hiring
prospects of older adult job seekers will improve due to more favourable attitudes
toward them. The results of the current study, however, suggest otherwise. As can be
seen in Table 16 the mean rating of employers in the 55 years and older group on the
DV 'likely to hire' was lower than 4, which indicates that the older employers were
less than likely to hire older workers. Thus, interventions aimed at combating hiring
discrimination against older workers are needed among employers of all ages.

The mean score on the DV of 'age relevance' in the employers' control
condition was significantly higher for male respondents than for females. Thus, male
employers indicated that they view age to be more important in making hiring
decisions than did female employers. This is interesting because considering this
significant difference together with the non-significant differences on the DVs of
'likely to hire' and 'sum of scale' suggest that female employers are more favourable of
older workers overall compared to male employers. As can be seen in Table 15, the
'sum of scale' mean score was 116.17 for female employers and 114.53 for male
employers and the 'likely to hire' mean score was 4.03 for females and 3.64 for males.
Thus, with the exception of 'age preference' mean score, that was 3.72 for males and
3.63 for females, female employers were more favourable of older workers than were
male employers. This is in accord with Smith (2001) who found female respondents
viewed older workers overall more favourably than did male respondents. The
observed gender differences are important particularly in light of the fact that they
were conducted on the control group data. As reflected by the mean score of 'likely to hire', female employers indicated that they were more than likely to hire older workers whilst male employers were less than likely to do so. This suggests that male employers discriminate against older adult job seekers to a greater degree than do female employers.

Section C of the questionnaire invited respondents to provide further information on differences between older and younger workers. Similar to Study One, the majority of respondents in the current study commented that there were no additional issues and that the questionnaire was comprehensive. Some qualitative differences were found across intervention groups, but these were different across samples. There were no indications of negative affect toward older workers among either employers or undergraduates. Whilst respondents in the CD, FS, and control conditions in the employers' sample all produced about twice as many positive attributes related to older workers compared to negative ones, respondents in the CDFS condition produced eight times as many positive attributes than negative ones. Further, the CDFS condition presented with the largest number of positive attributes and the smallest number of negative attributes compared with any other condition. This indicates that respondents in the CDFS condition were significantly more likely to think positively about older workers than any other group. Thus, as identified in the results of the quantitative analyses, positive attitude shifts toward older workers were found qualitatively in the CDFS condition of the employers sample in the responsee to section C.

In the undergraduate sample, the CD, CDFS, and control conditions all had about twice as many positive attributes related to older workers compared to negative ones. Undergraduate respondents in the FS condition, however, had four times more
positive attributes compared to negative ones and the least number of negative attributes compared with any other group. Although the quantitative analyses found similar trends of results across samples, this pattern is distinctly different to the findings of the employers sample. As explained earlier, the current study took place during the examination period. It is therefore likely that as the cognitive resources of undergraduate respondents were taxed, it was easier for them to accept that their views of older workers were inaccurate and adapt a more positive stance toward them. This would be easier than to undergo cognitive dissonance for which attention and effortful considerations of the issue were required. This possibility stands that the stereotypical views of older workers are less relevant to undergraduates than they are to employers in facilitating the perception of reality and guidance of appropriate behaviour and hence undergraduates my feel less committed to these views. The responses to section C of the questionnaire are summarised in Tables 18 through 25 for each of the eight groups.

The current study and its findings are valid and important both practically and theoretically. Having been conducted under stringent budgetary and time constraints, meant that several compromises had to be made. These compromises resulted in the current study having six main limitations. First, the results can only be generalised to the population of Australian companies with 10 to 50 employees that are registered with the Kompass electronic database and to undergraduate research volunteers from Edith Cowan University. Second, having used postal delivery for sending the intervention and testing materials and for receipt of responses makes it difficult to be certain of respondents' identity. Third, there was no measure of actual hiring behaviour following interventions. The most realistic measure of such behaviour would have been responding to vacant positions. Attempting to do so would have
meant following companies for long periods of time. This could have compromised measurement in cases where hiring decision-makers change and measuring different respondents at different times could confound measurements. Fourth, due to the source that was used for sampling, the data could not be analysed in relation to type of industry. The use of sources that would ensure that, such as the ABS, was beyond the financial means of the current study. Nevertheless, being able to analyse responses as a function of type of industry could deepen analyses and point to possibly important differences. Fifth, the current study was conducted around the same time as the end of the year examinations, which might have compromised the effectiveness of the interventions among undergraduate students. Finally, the fact that Study One used a random sample of undergraduates across disciplines and the current study used the undergraduate research volunteer pool may have compromised the effectiveness of the interventions. This is because the stereotypes that were included in the fact sheet may not have been representative of the stereotypic views of older workers among research volunteers and, a stronger sense of social desirability may have operated in the pool of research volunteers than in a cross disciplinary random sample.

Given significantly greater financial and time resources than those that were of the current study, future research could do the following. Use larger and more representative samples of both employers and undergraduates. Personally addressed questionnaires could be used in order to increase the probability of getting a specific person to respond. In order to obtain post-intervention measures of actual hiring, future research could sample companies from the pool of those who advertised vacant positions. After interventions were posted and returned, actors and resumes could be used to test their effects by assessing hiring behaviour as a function of applicants' age. Future research could use sampling sources that allow analyses as a function of type
of industry in order to deepen analyses and observe cross-industrial differences. As differences in hiring discrimination across industries have been identified, (House of Representatives Standing Committee on Employment, 2000), assessing such differences could facilitate accurate interventions. Future research could be conducted around the beginning of semester so that undergraduate respondents' cognitive resources are least taxed. Employing random cross-disciplinary samples of undergraduates may reduce biases and result in more representative results in the future. The effectiveness of presenting hiring discrimination against older adults at odds with the notion of a 'fair go' to threaten respondents' self concept regardless of their level of prejudice against older workers could not be measured by the current study as these levels of prejudice were not identified in advance. Future research could first assess prejudice levels and then measure the effectiveness of employing a value that is common to high and low prejudiced people in threatening their self concept.

There are several strengths to the current study. First, a national sample of employers across industries was employed. Second, the questionnaire, which was tested in Study One, was collapsed across gender and used as a measure for the effectiveness of the interventions in the current study. The information-based intervention that was developed and used in the current study gathered its information from the same population of employers on which it was later tested and hence the effectiveness of such interventions with relevant targets was measured. The cognitive dissonance inducing intervention that was developed and used in the current study is novel and unique as it draws on significant factors that were identified across several studies in the area of cognitive dissonance-based interventions. The CDFS combination is novel and unique and showed promising results in the area of hiring
discrimination against older adults. Employers who underwent this intervention were significantly more favourable of older workers overall, were more than likely to hire older workers, and showed a significantly greater preference for hiring older workers compared to controls. Further, employers in the CDFS condition showed evidence of positive attitude shifts toward older workers in areas that were identified in Study One to be important in making hiring decisions. Specifically, employers in this condition viewed older workers as more flexible and more trainable than younger workers. The CDFS results of the employers' sample suggest that combining cognitive dissonance-based and information-based interventions is complementary and that the motivation to reduce cognitive dissonance can facilitate acceptance of new counter stereotypical information. Power calculations showed that the CDFS manipulations produced moderate to large effects in the employers sample and that the power of analyses was greater than .9. As this suggests that significant effects would be reliably detected nine times out of 10 the significant results observed in the current study can be accepted with reasonable confidence. Further, given the fact that the responses of controls in the current study are virtually identical to those obtained in Study One some eight months earlier, means that employers' attitudes remained unchanged during that period. This suggests that the significant effects observed in the current study can be attributed to the interventions and not other external influences.

Measuring the effects of the intervention on actual hiring behaviour would have required the monitoring of participating companies and applying to vacant positions that they advertise. As this would have been a long and costly process, it was beyond the means and time constraints of the current study. Short of measuring actual hiring behaviour, the measures employed in the current study are valid and informative. The DV 'sum of scale' measured respondents' overall attitudes toward
older workers at stereotype level. The likelihood of respondents hiring older workers was assessed, which provided a measure of discriminatory intentions. The importance of age in making hiring decisions was measured, which allowed the assessment of the weight given to the stereotypes that are held about older workers in hiring. A general measure of respondents' age preference in hiring was obtained, which allowed the assessment of respondents' favouritism of employees' age regardless of specific jobs. This was important because the stereotypical view of jobs could mask employers' attitudes toward hiring older workers. Each one of these measures was compared across conditions. This provided measures of changes in both prejudice and potential discrimination as a function of intervention. Finally, respondents were also invited to provide additional relevant information so that issues that were not addressed in the questionnaire could be identified. This last measure proved effective as it complemented the quantitative measures and deepened analyses. Thus, although the effects of the interventions on actual hiring were not assessed the measures employed in the current study were able to clearly assess prejudice and potential discrimination.

In conclusion, the results of the employers sample make a case for combining cognitive dissonance-based and information-based interventions in combating hiring discrimination against older adults. Both quantitative and qualitative measures found respondents in the CDFS condition were significantly more favourable toward older workers. The results of the current study suggest that CDFS combinations may promote positive attitudinal and behavioural changes toward older workers among employers. As testing was done four weeks after intervention, the effects appear to be relatively long lasting. The results of the current study further suggest that the combination of cognitive dissonance-based interventions with the provision of relevant information could be used to promote individuals' compliance with
legislation. Having used the moral basis of the Equal Opportunity Act - the principle of 'a fair go' - to induce cognitive dissonance and having provided relevant information produced promising results in the current study. Significant positive attitude shifts were found among employers in the CDFS condition and they expressed their willingness to hire older workers. Using morals that are fundamental to specific legislation in cognitive dissonance-based interventions may facilitate compliance in other areas as well. This is in accord with Aronson (1999) who argued that the motivation to change one’s own behaviour as a result of cognitive dissonance is internal, which is the opposite of laws, regulations, and policies that are external sources that dictate one’s behaviour.

The next chapter brings Study One and the current study together and highlights their merits as well as their weaknesses. A model intervention for changing attitudes and stereotype-based behaviours will be outlined and ways to validate further the findings of both studies as well as ways to implement them in combating hiring discrimination against older adults as a part of a broader strategy are discussed.
CHAPTER 7

Overall Discussion

This chapter provides a summary and an overall discussion of the current thesis. It restates the issues that initiated the project and provides an overview of the whole project leading to the final findings. It ties the two studies together and places the project in the context of the current situation and the future. It explains the merits and applicability of the findings and points to the uniqueness and novelty of the current thesis. Based on the project's findings, a model for assessing and changing attitudes and stereotype-based behaviours is suggested. It explores strengths and weaknesses of the project in terms of scope and methodology and ends with suggestions for future research.

Two related issues of growing interest fuelled the initiation of the current project. The first was the predicted ramifications of the inevitable ageing of the Australian population and the second was hiring discrimination against older adults. The ageing of the Australian population, with significantly greater numbers of older adults, is inevitable. As this will tax public and private resources and may create intergenerational disharmony, the Australian federal government has suggested keeping older adults in paid employment longer. The rationale behind this suggestion is that it would increase the tax base and would alleviate the burden that would otherwise fall solely on younger taxpayers. Whilst refraining from firing older workers would be a valid approach in order to keep older adults employed, the current project focused on reducing hiring discrimination against older adults, which is one way to promote increased numbers of older workers. Relevant research literature indicated that older adults overall were willing and able to work and that their work
performance was satisfactory. This suggested that the proposition to retain older adults in paid employment longer is realistic. Whilst this solution is practical and logical its success is mediated by employers' interest in hiring older workers. Both research and employment statistics show that employers have minimal interest in hiring and employing older adults. Indeed, the average age of retirement from full-time work has been dropping with the increased rate of retrenchment of older workers. Thus, the reasons for this lack of interest in employing older adult workers required identification and countering in order for the government's suggested solution to show promise.

Gringart and Helmes (2001) used correspondence testing to investigate actual hiring discrimination against older adults in Western Australia. In correspondence testing, pairs of unsolicited fictitious resumes are simultaneously mailed to companies across industries. Resumes were similar in all job relevant information except for the applicant's age, which was either 32 or 57, and gender. Hence, any differences in employers' responses could be attributed to the manipulated variables, namely age and gender. The results showed clear evidence of age and gender discrimination with older females being discriminated against most. These findings coupled with other research suggested that, as it could not have been differences in job-related merits, the most likely reason for hiring discrimination against older adults is negative stereotyping of older workers by employers. It was thus the contention of the current researcher that what was needed in order to better the chances of older adults gaining employment was a psychological intervention aimed at amending employers' attitudes toward older workers.

In order to improve the hiring chances of older adult job seekers, knowledge of the actual stereotypes that are held about them by employers and ways to amend
negative attitudes toward older workers are needed. Research findings suggest that Australian undergraduates view older workers as stereotypically inferior and as having poorer job prospects compared to younger workers. As undergraduate students are likely to become future employers, it was of interest to assess their attitudes toward older workers and to investigate the possibility of countering these attitudes within the educational system.

Having established that older adults were willing and able to work suggested that the proposition made by the Australian government to keep them in employment longer was indeed valid. Having identified negative stereotyping as the most likely reason for hiring discrimination against older adults, a two-stage research project was designed. Study One was designed to validate, assess, and explore stereotypical views about older workers among employers and undergraduate students and Study Two was designed to test interventions aimed at promoting positive attitude changes toward older workers and increasing the likelihood of hiring older adults.

As there was no validated tool of measurement with which to gather and assess attitudes toward older workers, a questionnaire was developed. The questionnaire was pilot tested and used in Study One to validate previous findings, assess, and explore attitudes toward older male and female workers in a national random sample of employers across industries and a cross-disciplinary random sample of undergraduate students from Edith Cowan University.

The results of Study One indicated that employers and undergraduate students systematically stereotyped older workers of both genders in similar ways. These stereotypes were misconceptions that were contradictory to empirical data about older workers' abilities and performance. The questionnaire that was designed to measure stereotyping of older workers showed promising evidence of reliability and validity.
The characteristics on which older workers were seen as inferior compared to younger workers were identified. These characteristics formed the focus of an information-based intervention that was developed to promote positive attitude change toward older workers and increase the likelihood of their hiring.

Three interventions aimed at promoting a positive attitude shift toward older workers and increase the likelihood of hiring older adults were developed and tested in Study Two. This was done with a national random sample of employers across industries and the pool of psychology research volunteers from Edith Cowan University. One intervention was information-based and took the form of a fact sheet that listed the misconceptions that were identified in Study One and explained their inaccuracy in light of empirical data. Whilst fact sheets are in common use by Australian government agencies previous research suggested that this type of intervention was not effective in changing attitudes. One reason for this observed lack of effectiveness could have been that the facts that were presented in those fact sheets did not match the attitudes of their targets. It was therefore of interest to assess the effectiveness of an information-based intervention in promoting positive attitude changes with targets that are from the same populations from which the information was gathered. Literature reviews in the area of attitudes suggested that interventions that were based on the induction of cognitive dissonance showed promise in changing attitudes and stereotype-based behaviours. A number of studies that used cognitive dissonance-based manipulations were found in the literature and each highlighted a salient factor that could enhance the effectiveness of interventions. These factors are: choice, knowledge of inappropriate past behaviour, publicity, commitment to appropriate behaviour in the future, preaching to others, and threatening the self-concept. These factors were combined in a unique and novel way to develop the
second intervention that was tested in Study Two. This second intervention was based on the induction of cognitive dissonance and placed hiring discrimination against older adults at odds with the respondents' self-concept. The third intervention was a combination of both the information-based and cognitive dissonance-based interventions.

Using a modified version of the questionnaire that was used in Study One with an added question about age preference in hiring, the effectiveness of the interventions was measured among the three intervention groups and an additional control group in each sample in a simple 2 x 2 factorial design. The results showed no significant effects among undergraduate students. Among the employers' sample, however, the cognitive dissonance and fact sheet combination showed significant effects of large magnitude. Employers in this combination condition were significantly more favourable of older workers overall compared with any other group. Employers showed a significantly greater preference for hiring older workers compared with controls and the fact sheet group. Furthermore, respondents in the combination condition were the only group that indicated they were more than likely to hire older workers whilst all other groups were less than likely to do so. Thus, Study Two identified the combination of cognitive dissonance-based and information-based intervention as effective in promoting significant positive attitude changes toward older workers and increasing the likelihood of hiring older adults in a national random sample of employers across industries in Australia.
Relevance of the Findings of the Project

The findings of this project are currently relevant as they propose an effective intervention to promote positive attitude changes toward older workers among Australian employers, which could be used to combat hiring discrimination against older job seekers. These findings are also important as they could be used to promote positive attitudes toward older workers in preparation for the predicted growing numbers of older adult job seeker. The findings make clear that there is currently systematic stereotyping of older workers among Australian employers and undergraduate students. The findings also provide empirically gathered information about the actual stereotypes that are held about older workers, which were suggested to be the main reason for hiring discrimination. The findings of the current project suggest that combining cognitive dissonance-based interventions with relevant information could facilitate a positive attitudinal shift toward older workers and increase their chances of gaining employment. As for the future, the findings of the current project are most important because the relevance of ways with which to increase the likelihood of hiring older adults will grow at least until the middle of this century paralleling trends of population ageing.

It is important to acknowledge that government undertakings aimed at combating hiring discrimination against older adults, such as legislation, policies, and efforts to improve the skills of older adult job seekers are all relevant and worthy. Improving the skills of older adult job seekers is important for two reasons. First, it keeps older job seekers up to date with modern technology and current employment requirements. Second, it engages older adults in actively improving their chances to gain employment and may facilitate an enhanced sense of job seeking self-efficacy. Legislation and policies are important because they make a social statement of what is
acceptable and what is not acceptable in society. This provides an anchor for social morals. Nevertheless, neither legislation nor training of older job seekers is likely to change employers' attitudes toward older workers.

Hiring discrimination against older adults in Australia persists despite anti-discrimination legislation and policies of equal opportunity in employment. It is likely that such legislation and policies meet with resistance because they contradict existing attitudes. Specifically, employers who view older workers as inferior compared to younger workers are likely to resist legislation and policies that instruct them to give all ages an equal chance. The findings of the current project suggest that what is needed in order to promote positive attitude changes toward older workers and increase the likelihood of their hiring are psychological interventions.

The fact that the cognitive dissonance and fact sheet combination produced such significant effects among employers is interesting and promising. Harnessing people's drive to reduce cognitive dissonance to change stereotype-based behaviour has particular appeal. Providing information that counters stereotypic attitudes along with the cognitive dissonance manipulation seemed to facilitate stereotype amendment. When hiring discrimination is viewed to be at odds with their self-concept, employers become internally motivated to give older job seekers a better chance. Thus, the contradiction between what is dictated by legislation and equal opportunity policies and employers' own attitudes toward older workers is minimised.

Validation of Findings and Prospective Implementation

Whilst the findings of the current project suggest the combination of cognitive dissonance-based interventions with relevant information to be a step in the right direction, several steps would be recommended in order to validate the findings.
First, repeating the study with a random cross-disciplinary sample of undergraduates at the beginning of semester might show stronger intervention effects. This is important because finding ways to address the issue of attitudes toward older workers within the educational system could facilitate more favourable attitudes toward them in the future. As was explained earlier, the issue of hiring decision-making is not directly relevant to undergraduate students. Presenting hiring discrimination to be at odds with their self-concept has thus probably failed to induce a strong sense of cognitive dissonance in the undergraduate sample resulting in the small intervention effects that were observed in Study Two. This suggests that the intervention should be tailored so that it would be more appropriate to undergraduate students. This may be done with the use of an awareness campaign that would precede interventions and would emphasise issues of population ageing and explain to undergraduates that as they are potential future employers, their attitudes toward older workers are most important.

As the extent of hiring discrimination against older workers was found to vary across industries (House of Representatives Standing Committee on Employment, 2000), the second step that could be taken in order to validate the findings of the current project is to assess and measure the stereotypes that are held about older workers in different industries. This could facilitate accuracy in providing relevant counter-stereotypical information with interventions.

The third step in validating the findings of the current project could be to assess the effects of the cognitive dissonance-based and information-based combination on actual hiring behaviour. This is important because although the measures employed by the current project were relevant and informative, they did not measure actual hiring behaviour. Thus, once industry specific information about the
attitudes of employers toward older workers is gathered and the effects of interventions on actual hiring behaviours are assessed the combination of cognitive dissonance-based and information-based intervention could be used by the government. Both the cognitive dissonance-based and the cognitive dissonance and fact sheet combination interventions yielded relatively small response rates. This indicates that a small percentage of potential respondents were willing to volunteer their names and commit to non-discriminatory behaviour. It seems that the effects of the combination of cognitive dissonance-based and information-based intervention come at a cost of low response rates. The government could make use of mass media to advertise the names of those employers and companies that chose to participate. This may start a snowball effect, as a successively increasing number of employers would want to be included in the list of participating companies and be considered as non-discriminatory and fair. Government agencies, such as the Equal Opportunity Commission, could use correspondence testing with advertised vacant positions to monitor the effectiveness of interventions on actual hiring behaviour and periodic surveys could be used to monitor employers' attitudes toward older adults. Once the cognitive dissonance and fact sheet combination intervention effects on actual hiring behaviour and the need for industry-specific information have both been assessed this intervention strategy could be used by the government to combat hiring discrimination against older workers and its effectiveness could be monitored regularly using correspondence testing.

The cognitive dissonance and fact sheet combination intervention could be used as part of a broad strategy the government employs in order to combat employment discrimination against older adults that includes anti-discrimination legislation, equal opportunity policies, and efforts to improve the skills of older adult
Hiring discrimination

job seekers. It is easy to implement and administer on a large scale and seems to produce long lasting effects. Thus, the cognitive dissonance-based and fact sheet combination intervention complements the government's undertakings in combating discrimination in employment against older adults.

A Model for Changing Attitudes and Stereotype-Based Behaviours

Based on the findings of the current project, a five-stage model for assessing and changing attitudes and stereotype-based behaviours can be suggested. These stages are (I) assessment, (II) development of an information-based intervention, (III) development of cognitive dissonance-based intervention, (IV) combining both interventions and implementation with target population, and (V) testing. Once it is established that a particular behaviour is stereotype-based, knowledge of the actual stereotypes underlying that behaviour is needed. This is the assessment stage. This stage might involve the development of a specific measure and its piloting before gathering information. Once the information about the actual stereotypes has been gathered, it should be viewed in light of relevant empirical evidence. Once this has been done and misconceptions identified, an information-based intervention can be developed in a similar fashion to that done in Study Two. This is the second stage of the model. The third stage involves the development of a cognitive dissonance intervention. In order to minimise the difficulty encountered by people's different levels of prejudice, a value that is relevant to the behaviour and is likely to be endorsed by people regardless of their level of prejudice could be identified. Once such a value has been identified, a cognitive dissonance-based intervention could be developed using all the enhancing factors that were used in Study Two and presenting the identified shared value as being at odds with the undesired behaviour. In the
fourth stage, the two interventions could be combined and distributed among a sample of the target population. Finally, using the measure that was employed in the first stage, the fifth stage could assess the effectiveness of the intervention with those to whom it was distributed and an additional control group.

One example of an area that is relevant to this project where the above model could be used is to promote positive self-stereotyping among older adults. Previous research that was reviewed in Chapter Two indicated that negative self-stereotyping hindered the physiological and cognitive functioning of older adults whereas positive self-stereotyping enhanced older adults' performance in these areas significantly. Thus, promoting positive self-stereotyping among older adults could lead to significant improvements in their physiological and cognitive functioning, which is likely to produce an enhanced sense of self-efficacy, self-esteem, and well being.

**Strengths of the Current Project**

There are several strengths to the current project. First, both studies employed national samples of employers across industries and sampled undergraduate students across disciplines to gather information about their attitudes toward older workers. The second strength is related to the questionnaire that was developed in the current project, which showed promising evidence of validity and reliability. Using age ranges to define older and younger workers enhances clarity and facilitates accuracy in responding. It measures the extent to which stereotypes are held about older workers in relation to younger workers, which places the issue in a realistic frame where older job applicants are rejected and younger workers are favoured. Section C of the questionnaire allows for the identification of additional information as it asks respondents for any other relevant differences between older and younger workers.
Asking respondents to rate the importance of age in making hiring decisions and their likelihood of hiring older workers allows the observation of respondents' hiring intentions in relation to their stereotypical views of older workers, which is indicative of the importance these stereotypes play in selecting job applicants. Collapsing the questionnaire across gender in Study Two, and adding a general question about age preference in hiring, allowed for a measure of the interventions' effect on hiring that was independent of job description. This was important because the stereotypical view of any particular job as 'young' could have masked interventions' effects. The third strength of the project is that the data that were used for the development of the information-based intervention was gathered from the same population of employers on which the intervention was tested. Thus, the effectiveness of an information-based intervention with relevant targets was measured. Another point of merit of the current project is that the cognitive dissonance inducing intervention that was developed and used in it is novel and unique. It combines significant factors that were identified by several researchers in the area of cognitive dissonance-based interventions that have not been all combined before. The combination of the cognitive dissonance-based and information-based interventions is also novel and unique and produced significant positive attitude changes toward older workers among Australian employers. This was shown in the employers' sample as employers who responded to this intervention were most favourable of older workers overall and indicated that they were more than likely to hire older workers. These respondents also showed a significantly greater preference for hiring older workers compared to controls. Further, employers in the combination intervention condition demonstrated evidence of positive attitude shifts toward older workers in areas that were identified in Study One to be important in making hiring decisions as they viewed older workers as more flexible and more
trainable than younger workers. The results of the employers' sample in Study Two suggest that combining cognitive dissonance-based interventions with relevant information enhance interventions' effectiveness. The results also suggest that the drive to reduce cognitive dissonance can facilitate acceptance of new counter stereotypical information. Finally, power calculations showed that the significant combination intervention effects observed in Study Two can be accepted with reasonable confidence and suggest that these effects were produced by the interventions and were not due to other influences.

The project has practical and theoretical merits. From a practical viewpoint, a method to promote positive attitude shifts toward older workers and increase the likelihood of the hiring of older adults among Australian employers was identified and tested successfully. From a theoretical perspective, it suggests that the drive to reduce cognitive dissonance could facilitate acceptance of counter stereotypical information. This is interesting because it suggests that both prejudice and discrimination could be changed following a cognitive dissonance-based and information-based combination intervention and that this combination intervention approach could be used as a general model for changing attitudes. Another point of interest is the use of a value that is likely to be endorsed by people regardless of their level of prejudice toward a specific group in order to threaten the self-concept of participants in cognitive dissonance-based manipulations. In Study Two, the principle of 'a fair go' was presented to be at odds with hiring discrimination against older workers. As this principle is fundamental to hiring and is important for finding the best person for the job, it is likely to be endorsed by most employers regardless of their specific views of older workers. Using the principle of 'a fair go' as a mediator could thus make hiring discrimination against older workers threatening to employers'
Hiring discrimination 219

self-concept regardless of their level of prejudice against older adults. Identifying and testing the effectiveness of such common values as mediators in cognitive dissonance induction is of interest because the effectiveness of interventions was found to be affected by people's level of prejudice (for example, see Devine, 1989, and Monteith, 1993).

The findings of the current project suggest that the drive to reduce cognitive dissonance could be harnessed to promote compliance with legislation. Having used the moral basis of the Equal Opportunity Act, the principle of 'fair go', to induce cognitive dissonance and having provided relevant information produced promising results in Study Two showing significant positive attitude shifts among employers. Presenting morals that are fundamental to specific legislation to be at odds with undesired behaviour in cognitive dissonance-based interventions could be used to enhance compliance in other areas as well. Finally, the current project highlights the need for and potential contribution of psychological intervention in areas that are commonly addressed by social policies and legislation. It makes evident the importance of psychology in areas of human behaviour both for theoretical understanding and for the development of effective ways to promote attitude change and modify stereotype-based behaviours.

Limitations of the Current Project

There are a number of limitations to current project. First, the results of the project can only be generalised to the populations of Australian companies with 10 to 50 employees that are registered with the Kompass electronic database and to undergraduate students from Edith Cowan University. Using a national random sample of undergraduates across disciplines would be more representative of the
Australian undergraduate population. Employing a national random sample of employers across industries would be more representative of the Australian employers' population because those who are listed on the Kompass electronic database have chosen to do so and pay an annual fee for their registration with Kompass. Second, using mail correspondence throughout the project means that it is difficult to be certain of the identity of respondents. Thus, whilst addressing all communications to hiring decision-makers in the employers' sample and to specific individuals in the undergraduate sample, there was no way of knowing that they were the ones who actually responded. The third main limitation is that actual hiring behaviour was not measured after the interventions. The fourth main limitation is that the sampling source that was used for the project did not allow for clear and meaningful analysis of the effects of type of industry. Being able to analyse responses as a function of type of industry would have allowed the observation of possible differences in the stereotyping of older workers across industries, which could facilitate for greater accuracy in the information-based intervention. The fifth main limitation of the current project was that the intervention and testing stages of Study Two were conducted at a stressful time of the year when students were preparing for and taking the end of semester examinations. As the cognitive resources of undergraduates are likely to have been taxed during that period it might have hindered the effectiveness of the interventions in this sample. Finally, Study One used a cross-disciplinary random sample of undergraduates and Study Two used undergraduate psychology research volunteers. This may have compromised the effectiveness of the interventions for two reasons. First, the stereotypes that were gathered from the undergraduates in Study One may have not been representative of the stereotypic views of older workers among the undergraduate respondents of Study
Two. Second, a stronger sense of social desirability may have operated among psychology research volunteers compared with the cross-disciplinary random sample that was used in Study One. This was reflected in the more favourable views expressed by the undergraduates control group of Study Two compared with the control group of Study One. Further, although their overall view of older workers was less favourable than that of the employers controls the undergraduate controls of Study Two indicated that they were more than likely to hire older workers, which suggests a strong sense of social desirability.

Avenues for Future Research

The findings of the current project suggest several areas for future research. Larger and more representative samples of both employers and undergraduates could be used, as it would enhance the generalisability of results and test the validity of the questionnaire further. In order to assess concurrent validity, responses to the stereotype scale of the questionnaire could be compared to those generated by other instruments that measure attitudes toward older adults. Future research could ask respondents to complete the stereotype scale of the questionnaire on two separate occasions and correlate these responses in order to assess the questionnaire's test-retest reliability. In order to increase the likelihood of receiving responses from specific individuals, questionnaires could be personally addressed. Future research could also assess the relative importance of specific stereotypes in making hiring decisions, as it would provide accurate information of the most important misconceptions that need to be addressed. To facilitate measurement of actual hiring behaviour following interventions, future research could sample companies that advertised vacant positions. Actors as well as correspondence testing could later be
used to test the effects of interventions by assessing differences in hiring behaviour as a function of applicants' age. Sampling sources that allow analyses as a function of type of industry could be used in the future. This would allow the observation of possible differences in the stereotyping of older workers across industries. The timing of interventions and testing of undergraduate samples could be better planned in future research so that it would not coincide with examination periods. This way undergraduate respondents' cognitive resources would be least taxed and they will be better able to respond to interventions. No pre-intervention measures of prejudice levels against older workers were obtained in Study Two. Hence, the effectiveness of presenting hiring discrimination against older adults at odds with the notion of a 'fair go' to threaten respondents' self concept regardless of their level of prejudice against older workers could not be measured. Future research could do so by first assessing prejudice levels and then measuring the effectiveness of a value that is common to high and low prejudiced people to threaten their self concept. Another issue of interest for future research is to try and assess the partial influence of the factors that were used in the cognitive dissonance intervention in Study Two. This may be important as it could indicate which are the most influential factors of the intervention and if any could be abandoned. Whilst hiring decision-making may be expected to be primarily rational, it does not mean that the way employers feel toward older workers does not influence their hiring preferences. Future research could thus explore affect as a factor in employment discrimination against older adults. Finally, the applicability and effectiveness of the model for attitude change that was proposed above could be tested in various domains.
Summary

In summary, the ageing of the Australian population with significant growth in the proportion of older adults is inevitable. This increase is predicted to tax resources and the Australian federal government proposed response is that older adults remain in paid employment longer. In terms of the willingness and abilities of older adults this proposal is reasonable. Australian employers, however, discriminate against older workers and show minimal interest in their hiring and employment. Research indicates that the most likely reason for this discrimination is negative stereotyping. Previous research also found that Australian undergraduates, who are likely to be future employers, hold negative attitudes toward older workers. Study One of the current project found systematic stereotyping of older workers among both employers and undergraduates. Having developed and tested three interventions, the results of Study Two showed that a combination of cognitive dissonance-based and information-based intervention produced significant positive attitude shifts among employers and showed evidence of increasing the likelihood of the hiring of older adult job seekers. Thus, the current project had sought a promising intervention to promote positive attitude change toward older workers among employers and increase the likelihood of their hiring. This was achieved.

Both Study One and Study Two were based on previous research and each made a unique contribution to the body of knowledge on stereotyping. Study One validated previous findings about the stereotypes that are held about older workers. It expanded our knowledge of the actual stereotypes that are held about older workers and the extent to which they are held. Study One also clearly identified systematic stereotyping of older workers among both employers and undergraduate students. Study Two validated previous finding about the potential of cognitive dissonance-
based manipulations to change attitudes and lack of effectiveness of information-based interventions to do so. Study Two developed a novel and unique cognitive dissonance-based intervention that used a combination of factors that were identified by previous research to enhance the effectiveness of the interventions. Another unique feature of this intervention is that it used a value that is likely to be endorsed by people regardless of their level of prejudice as a mediator to threat respondents' self-concept. Study Two used a combination of the cognitive dissonance-based intervention and fact sheet and found that to be effective in reducing prejudice and potential discrimination.

Finally, the current project paves the path for both practical and theoretical future research projects. From a practical standpoint future research could use the questionnaire that was developed in the current project to measure stereotyping of older workers in various settings and within specific industries. The effects of the cognitive dissonance and fact sheet combination intervention on actual hiring could be assessed. An intervention program could be developed and integrated into the broader strategy taken by the Australian federal government in order to combat employment discrimination against older adults. From a theoretical viewpoint it is of most interest to assess the effectiveness of the five-stage model for assessing and changing attitudes and stereotype-based behaviours that was proposed earlier. Measuring the partial contribution of each of the factors that were used in the cognitive dissonance-based manipulation could be of interest, as it would allow accuracy and parsimony for future intervention. Testing the effectiveness of threatening peoples' self concept by using values that are likely to be endorsed by them regardless of their level of prejudice toward a stereotyped group is of interest. This is because previous research suggested that people's level of prejudice interfered
with interventions' effectiveness. Lastly, assessing the effectiveness of the cognitive dissonance-based and fact sheet combination intervention in changing stereotypes at the level of specific characteristics is both interesting and valuable. It is interesting because it would test the effectiveness of the drive to reduce cognitive dissonance as a means to reject previously held information and the endorsement of new counter-stereotypic information and it is valuable because it may suggest a path for changing stereotypes. This is most important because negative stereotyping has been suggested to be at the heart of prejudice, discrimination, and the maintenance of social conflict.
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Hiring discrimination


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Appendix A

Questionnaire Pilot Testing
Questionnaire Pilot Testing

Having obtained ethics approval to pilot test the questionnaire and gaining the cooperation of the unit coordinator, first year psychology students were approached toward the end of a lecture.

The two versions (male and female) of the questionnaire were pilot tested with a sample of 50 undergraduate students. There were 13 males and 37 females with a mean age between 25 – 30. This was done in order to obtain preliminary measures of internal consistency, item total correlations, and respondents’ feedback about the layout of the questionnaire, the phrasing of questions, the ease of understanding, and the length.

The following covering page was attached to each questionnaire in order to gain respondents’ consent:

Dear Sir/Madam

Your cooperation is kindly requested in pilot testing the following questionnaire.

The questionnaire was recently developed. It is a part of my ongoing Ph.D. research, which concerns employment in older adulthood.

Completing the questionnaire should take no more than 15 minutes. Participation in this pilot testing is voluntary and you may withdraw your participation at any stage.

At the back you will find a comment sheet. Please write your comments about the questionnaire’s length, clarity, ease of answering, or any other remarks you wish to make about specific items or in general.

Thank you for your help and cooperation.

Eyal Gringart
Ph.D. candidate.
Participants indicated that the layout of both versions of the questionnaire was clear and efficient, that the questions were well phrased, that the questionnaire was easy to understand, and that it was neither too long nor too short. The mean time for answering the questionnaire was 12 minutes, which seemed appropriate for use in a mail survey with both undergraduate and workforce populations.

The questionnaire’s initial calculation of internal consistency yielded Alpha levels of .83 for the male version and .85 for the female version with five items showing negative item total correlations. These items were:

1. How insubordinate are older (55-70) male/female workers to younger workers compared to younger (25-40) workers?
2. How accident prone are older (55-70) male/female workers compared to younger (25-40) workers?
3. How often are older (55-70) male/female workers absent from work compared to younger (25-40) workers?
4. How intelligent are older (55-70) female/male workers compared to younger (25-40) workers?
5. How ambitious are older (55-70) female/male workers compared to younger (25-40)?

Having deleted the five items increased Alpha to .87 for the female version and .89 for the male version. Hence, satisfactory levels of internal consistency were obtained for both versions of the questionnaire and it was ready for use in Study One.
Appendix B

Sampling and Randomization
Sampling and Randomization

The project randomly sampled from two populations. One was the Edith Cowan University undergraduate population and the second was the Australian employers' population from the largest five states.

The undergraduate sample was randomly selected across disciplines and provided by the university students' records system. Sampling of Australian employers was done using Kompass Australia electronic database of APN Business Information Group.

Companies with fewer than 10 and more than 50 employees were excluded. This was done in order to address companies that are unlikely to have more than one hiring decision-maker. Further, ABS data revealed that 51 per cent of Australian employees are employed by companies of 49 workers or less and that the number of such companies is significantly greater than that of larger companies (ABS, 1997). It is therefore reasonable to assume that job seekers overall apply to companies with less than 50 employees more often than to larger ones. Thus, addressing such companies was not only suitable for the proposed research, but was representative of the Australian workforce.

The sampling method places limitations on the generalisability of the results, as the employers' sample results are limited to those contained within the 'Kompass Australia population of companies of between 10 and 50 employees. Kompass is a database providing detailed information on thousands of companies in the Asia-Pacific region. Both the Australian Bureau of Statistics and the Chamber of Commerce recommended it as a sampling source for the current study. The database enables the identification of individual companies according to various criteria, such as number of employees or
yearly turnover. Listed companies have either approached the APN group or have been contacted by the APN group on their periodical updating of the database. Kompass Australia currently lists About 39,000 Australian companies.

It is suggested that having used ‘Kompass Australia’ as the sampling source was appropriate for three reasons. Firstly, it allowed addressing companies of designated size. Secondly, the ABS, the most comprehensive source, is prohibited from providing names and addresses of companies according to the number of employees. Thirdly, using other sampling sources, such as the Yellow Pages, could have resulted in a significant number of questionnaires and interventions being sent to companies that are either too large or too small.

As for generalisability of the results from the undergraduate sample, they are limited to the Edith Cowan University population. Nevertheless, this university may be particularly good for sampling for the current study because its student population covered a wider range of ages and socioeconomic status than is typical of universities with more traditional student bodies of primary young adults in their early 20s.

**Employers’ sampling procedure**

Fifty percent of companies plus 60 for Study One in each of the five largest states (Queensland, New South Wales, Victoria, South Australia, and Western Australia) were randomly sampled from the Kompass electronic database - using tables of random numbers. This procedure resulted in the following number of companies per state:

Queensland – 806; New South Wales - 2203; Victoria – 2307; South Australia – 459; Western Australia – 456.
**Study One**

The sample of Study One was randomly selected from each state using random number tables. Dividing Study One’s sample according to questionnaire versions was done using random number tables with odd numbers denoting the male questionnaire sample and even numbers denoting the female questionnaire sample. This procedure was replicated with the random sample of undergraduates. Thus, random samples of 300 companies, 60 in each state, and 300 undergraduates were generated with 150 companies and 150 undergraduate students randomly allocated to each of the two versions of the questionnaire.

**Study Two**

The original plan for Study Two was based upon a larger sample and different methodology. This had to be revised due to budgetary constraints. In addition, technical difficulties with the university students’ records system made it impossible to obtain another random sample of undergraduate students as was done in Study One. Hence, employers’ samples were targeted to be about 30 cases per cell for robust ANOVA analyses, taking into consideration Study One’s response rates. The undergraduate sample used the entire pool of students who expressed interest in participating in psychological research.

Based upon the observed response rates in Study One, it was expected that 35% of employers in the intervention stage would respond after an initial mail out and one follow up. A fifty per cent response rate was expected in the employers’ sample in the questionnaire (testing) stage after two follow-ups. The undergraduate sample was
expected to yield greater response rates because it addressed students who expressed
interest in participating in research.

Having excluded the cases used in the sample of Study One, Microsoft Excel was
used to produce lists of random numbers by which 1200 companies were randomly
sampled across states and randomly allocated to four groups for the 2 x 2 factorial design.
Two hundred and forty companies in each of the five states produced 60 potential
respondents in each group in each state. Hence, there were 300 companies in each of the
four groups across five states.

There were 196 undergraduate students in the research volunteer pool. Using lists
of random numbers produced by Microsoft Excel these were randomly allocated into the
four groups yielding 49 potential respondents per group.
Appendix C

Examples of Questionnaire Cover Letters and Follow-Ups that were Used in Study One
An example of Study One's first cover letter (employers sample)

The Hiring decision-maker

Dear Sir/Madam

The relative proportion of older adults in the Australian population is growing, so much so that the percentage of people over 65 is predicted to rise from about 13 percent in 2001 to over 19 percent by 2030. Further, the number of younger workers will decline and the number of older job applicants will increase over the coming years. This will result in greater numbers of older workers and older job applicants.

Consulting hiring decision-makers such as yourself will promote a better understanding of the work environment faced by older people. The attached questionnaire is aimed at finding out hiring decision-makers’ views regarding older female workers. Your company is one of a selected number being asked to respond, and it was drawn in a random sampling of companies in Australia. To be truly representative, it is crucial that the hiring decision-maker and no one else completes the questionnaire and that each questionnaire is returned. Filling out the questionnaire should take no more than 15 minutes. Please place the completed questionnaire in the reply paid return envelope supplied and post it to us within 5 working days.

We are interested only in your personal views. The identification number on the first page will be used simply to check whether we have received your questionnaire back. Your responses will also be kept confidential and at no stage will you or your company’s identity be revealed or placed on the returned questionnaire.

The results of the survey could be made available in published form. If you would like a summary of results for yourself, simply write ‘copy of results’ on the back of the envelope when returning the questionnaire and one will be sent to you in due course.

I would be happy to answer any questions you might have. Please write to the above address or call 08 – 9400 5631.

Thank you for your assistance.

Yours sincerely,

E. Gringart
Project Director
School of Psychology
Examples of Study One's first follow-up cards

Employers sample

Last week a questionnaire asking for the Hiring decision-maker’s views about older workers was mailed to you.

If the questionnaire has already been completed, please accept our sincere thanks. If not, could it please be returned today? Because it was sent to a small representative sample of companies it is most important that your Hiring decision-maker’s views are included in order for the study to be adequately representative.

If by some chance you did not receive the questionnaire or have mislaid it, please call me on 9400 5631 and I will send you another copy today.

Yours sincerely,

E. Gringart
Project Director

Undergraduate sample

Last week a questionnaire asking for your views about older workers was mailed to you.

If the questionnaire has already been completed, please accept our sincere thanks. If not, could it please be returned today? Because it was sent to a small representative sample of students it is most important that your views are included in the study if we are to adequately represent the views of current and potential hiring decision-makers.

If by some chance you did not receive the questionnaire or have mislaid it, please call me on 9400 5631 and I will send you another copy today.

Yours sincerely,

E. Gringart
Project Director
Dear Sir/Madam

I am sending you this letter as a follow-up to my previous correspondence of March 26 and April 2 as my records indicate that to date, we have not received your reply.

The relative proportion of older adults in the Australian population is growing. The percentage of people over 65 is predicted to rise from about 13 percent in 2001 to over 19 percent by 2030. Supporting such a large part of the population places significant strain the country's financial resources. The number of younger workers will decline and the number of older job applicants will increase over the coming years. This will result in greater numbers of older workers and older job applicants.

Consulting, current and future, potential hiring decision-makers such as yourself will facilitate better understanding of the work environment faced by older people. The attached questionnaire is aimed at finding out your views regarding older male workers. You are one of a selected number being asked to respond, and your name was drawn in a random sampling of ECU students. To be truly representative, it is crucial that each questionnaire is returned. Filling out the questionnaire should take no more than 15 minutes. Please place the completed questionnaire in the reply paid return envelope supplied and post it to us within 5 working days.

We are interested only in your personal views. The identification number on the first page will be used simply to check whether we have received your questionnaire back. Your responses will also be kept confidential and at no stage will you or your identity be revealed or placed on the returned questionnaire.

The results of the survey could be made available in published form. If you would like a summary of results for yourself, simply write 'copy of results' on the back of the questionnaire and one will be sent to you in due course.

I would be happy to answer any questions you might have. Please write to the above address or call 08 - 9400 5631.

Thank you for your assistance.

Yours sincerely,

E. Gringart
Project Director
School of psychology
An example of Study One's third follow-up cover letter (employers sample)

The Hiring decision-maker

Dear Sir/Madam

I am sending you this letter as a follow-up to my previous correspondences of March 26, April 2, and May 1 as my records indicate that to date, we have not received your reply.

The relative proportion of older adults in the Australian population is consistently growing. Because the number of younger workers will decline the number of older workers and older job applicants will increase. This will result in greater numbers of older workers and older job applicants.

Consulting hiring decision-makers such as yourself will facilitate better understanding of the work environment faced by older people. The attached questionnaire is aimed at finding out hiring decision-makers’ views regarding older male workers. Your company is one of a selected number being asked to respond. It was drawn in a random sampling of companies in Australia. To be truly representative, it is crucial that the hiring decision-maker and no one else completes the questionnaire and that each questionnaire is returned. Filling out the questionnaire should take no more than 15 minutes. Please place the completed questionnaire in the reply paid return envelope supplied and post it to us within 5 working days.

We are interested in only in your personal views. The identification number on the first page will be used simply to check whether we have received your questionnaire back. Your responses will also be kept confidential and at no stage will you or your company’s identity be revealed or placed on the returned questionnaire.

The results of the survey could be made available in published form. If you would like a summary of results for yourself, simply write ‘copy of results’ on the back of the envelope when returning the questionnaire and one will be sent to you in due course.

I would be happy to answer any questions you might have. Please write to the above address or call 08 – 9400 5631.

Thank you for your assistance.

Yours sincerely,

E. Gringart
Project Director
School of Psychology
Appendix D.

An example of the questionnaire that was Used in Study One
(employers sample male version)
Instructions

This questionnaire seeks the first answer that comes to your mind when considering each question. What is asked for are your personal views and not what may seem conventional or politically correct.

Section A

In the following questions you are asked to compare older male workers to younger workers of both sexes on various qualities. Please circle the first answer that comes to your mind. Circle ONE number only for each question.

1. How trainable are older (55-70) male workers compared to younger (25-40) workers?

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
---|---|---|---|---|---|---|---|
Far less | Less | Slightly less | No different | Slightly more | More | Far more |
Trainable

2. How willing to work are older (55-70) male workers compared to younger (25-40) workers?

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
---|---|---|---|---|---|---|---|
Far less | Less | Slightly less | No different | Slightly more | More | Far more |
Willing

3. How cautious are older (55-70) male workers compared to younger (25-40) workers?

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
---|---|---|---|---|---|---|---|
Far less | Less | Slightly less | No different | Slightly more | More | Far more |
Cautious

4. How productive are older (55-70) male workers compared to younger (25-40) workers?

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
---|---|---|---|---|---|---|---|
Far less | Less | Slightly less | No different | Slightly more | More | Far more |
Productive

5. How adaptable to new technology are older (55-70) male workers compared to younger (25-40) workers?

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
---|---|---|---|---|---|---|---|
Far less | Less | Slightly less | No different | Slightly more | More | Far more |
Adaptable
6. How reliable are older (55-70) male workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less  Less  Slightly less  No different  Slightly more  More  Far more
   Reliable

7. How physically strong are older (55-70) male workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less  Less  Slightly less  No different  Slightly more  More  Far more
   Strong

8. How interested in technological change are older (55-70) male workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less  Less  Slightly less  No different  Slightly more  More  Far more
   Interested

9. How flexible are older (55-70) male workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less  Less  Slightly less  No different  Slightly more  More  Far more
   Flexible

10. How likely are older (55-70) male workers to be promoted compared to younger (25-40) workers?

    1  2  3  4  5  6  7
    Far less  Less  Slightly less  No different  Slightly more  More  Far more
    Likely

11. How skilled are older (55-70) male workers compared to younger (25-40) workers?

    1  2  3  4  5  6  7
    Far less  Less  Slightly less  No different  Slightly more  More  Far more
    Skilled

12. How functional is the memory of older (55-70) male workers compared to younger (25-40) workers?

    1  2  3  4  5  6  7
    Far less  Less  Slightly less  No different  Slightly more  More  Far more
    Functional
13. How satisfactory is the performance of older (55-70) male workers compared to younger (25-40) workers?

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14. How creative are older (55-70) male workers compared to younger (25-40) workers?

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15. Considering the combination of sick days, accident related expenses, and wages, how cost effective are older (55-70) male workers cost compared to younger (25-40) workers?

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16. How likely are older (55-70) male workers to fit in compared to younger (25-40) workers?

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<td>Far less</td>
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<td>Likely</td>
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17. How healthy are older (55-70) male workers compared to younger (25-40) workers?

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<td>Far less</td>
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<td>Healthy</td>
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</table>

18. How competent at making decisions are older (55-70) male workers compared to younger (25-40) workers?

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<tr>
<td>Far less</td>
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<td>Slightly less</td>
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<td>Competent</td>
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19. How dependable are older (55-70) male workers compared to younger (25-40) workers?

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<tr>
<td>Far less</td>
<td>Less</td>
<td>Slightly less</td>
<td>No different</td>
<td>Slightly more</td>
<td>More</td>
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<tr>
<td>Dependable</td>
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</table>
20. How satisfactory is the job quality of older (55-70) male workers compared to younger (25-40) workers?

1 2 3 4 5 6 7
Far less Less Slightly less No different Slightly more More Far more Satisfactory

21. How cooperative are older (55-70) male workers compared to younger (25-40) workers?

1 2 3 4 5 6 7
Far less Less Slightly less No different Slightly more More Far more Cooperative

22. How hard working are older (55-70) male workers compared to younger (25-40) workers?

1 2 3 4 5 6 7
Far less Less Slightly less No different Slightly more More Far more Hard working

23. How mentally alert are older (55-70) male workers compared to younger (25-40) workers?

1 2 3 4 5 6 7
Far less Less Slightly less No different Slightly more More Far more Alert

24. How loyal are older (55-70) male workers compared to younger (25-40) workers?

1 2 3 4 5 6 7
Far less Less Slightly less No different Slightly more More Far more Loyal

25. How ambitious are older (55-70) male workers compared to younger (25-40) workers?

1 2 3 4 5 6 7
Far less Less Slightly less No different Slightly more More Far more Ambitious

26. How efficient are older (55-70) male workers compared to younger (25-40) workers?

1 2 3 4 5 6 7
Far less Less Slightly less No different Slightly more More Far more Efficient
27. How motivated are older (55-70) male workers compared to younger (25-40) workers?

<table>
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<tr>
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</thead>
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<tr>
<td>Far less Motivated</td>
<td>Less</td>
<td>Slightly less</td>
<td>No different</td>
<td>Slightly more</td>
<td>More</td>
<td>Far more Motivated</td>
<td></td>
</tr>
</tbody>
</table>

28. How energetic are older (55-70) male workers compared to younger (25-40) workers?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Far less Energetic</td>
<td>Less</td>
<td>Slightly less</td>
<td>No different</td>
<td>Slightly more</td>
<td>More</td>
<td>Far more Energetic</td>
<td></td>
</tr>
</tbody>
</table>
Hiring discrimination

Section B

Please circle ONE number only for each question.

1. In your personal view, how relevant is an applicant’s age when making hiring decisions?

   1  2  3  4  5  6  7
   Irrelevant  Slightly Some what Relevant Quite Very Most
   relevant   relevant relevant relevant relevant relevant

2. How likely are you to hire a male of the 55-70 age group?

   1  2  3  4  5  6  7
   Not Unlikely Remotely likely More Very likely Certainly
   at all likely likely than likely

Section C

Please answer the following question. You can write in point form or as text. If the designated space is not enough, please feel free to attach additional. Thank you.

What other characteristics of older male workers differentiate their performance from that of younger workers?
Section D

This section is for demographic purposes, Please tick the answers that correspond to you.

Age

☐ 20-25 ☐ 50-55

☐ 25-30 ☐ 55-60

☐ 30-35 ☐ 60-65

☐ 35-40 ☐ 65-70

☐ 40-45 ☐ Over 70

☐ 45-50

Sex

☐ Male ☐ Female

Education

Please tick your highest education level so far.

☐ Year 10 ☐ Year 11/12

☐ TAFE certificate ☐ TAFE Diploma

☐ University Degree ☐ Post graduate Degree ☐ Other: .............
Appendix E

An Example of a Fact Sheet produced by the Australian Government
Profit from Experience.

Mature age people getting back to work. For information call 13 13 43.

Some common myths about mature age employees.

Myth: Mature workers have high levels of absenteeism.

- Mature workers have lower rates of absence and workplace accidents than other workers. Research also shows that employers believe older workers are more dependable and can be counted on in a crisis.

Myth: It's not worth investing in older workers.

- Older workers have better attendance and fewer accidents and sick days. Their on-the-job knowledge helps them make wise decisions, solve complex problems, and train younger employees.

Myth: Older workers adapt less easily to new technology.

- Older workers are willing and able to learn new computer skills and are among the biggest users of the internet. Older people respond better to self-directed learning than other age groups. New computer skills will complement the accumulated skills, knowledge, and experience that mature workers have gained on the job.

Myth: Mature workers are less motivated and are just waiting to retire.

- Research shows that overall, mature workers are more satisfied with their jobs than younger workers. A recent survey found most employers disagreed that mature age workers are simply marking time until retirement.

Myth: Mature workers have memory problems and declining intelligence.

- There is no serious decline in memory or intelligence until people are very old.

Myth: Mature workers are less productive than younger workers.

- Research has shown that the level of productivity of mature workers compares favourably with other groups.
Appendix F

Examples of The Intervention Materials that were Used in Study Two
The Hiring decision-maker

Dear Sir/Madam

The relative proportion of older adults in the Australian population is growing, so much so that the percentage of people over 65 is predicted to rise from about 13 percent in 2001 to over 19 percent by 2030. Although the number of older job seekers is rising they are, nevertheless, discriminated against by Australian employers.

Older job seekers were found to be discriminated against even when there was no difference between them and their younger counterparts in any job related merits.

Age discrimination in hiring is counter-productive, especially in cases where the best person for the job happens to be older.

Discriminating against older job seekers is against the very principle of giving each individual a fair go, a principle that is so dear to us here in Australia.

James Cook University is in the process of producing a booklet with the names of hiring decision-makers that believe that age discrimination against older job seekers is not only unfair but immoral.

The booklet will show other employers and members of the larger community that hiring decision-makers, such as yourself, feel that each older job seeker should be given a fair go and that you are committed to that feeling and belief.

Whilst our list of names is growing, your company is one of a selected number being asked to respond, and it was drawn in a random sampling of companies in Australia. To be truly representative, it is crucial that the hiring decision-maker and no one else respond to this communication and that each card is returned. The identification number on the card will be used simply to check whether we have received your communication.

The booklet will be made available in published form. A copy of the list of participants’ names will be sent to all those on the list. If you choose to be included on the list please print your surname and given name/s on the card provided and post back to us in the reply paid envelope.

I would be happy to answer any questions you might have. Please write to the above address or call 07 – 4781 5159

Thank you for your cooperation.

Yours sincerely,

E. Helmes
Project Director
Hiring discrimination

An example of FS materials (employers sample)

To the Hiring decision maker

Dear Sir/Madam

Recent research showed that Australian employers view older workers as inferior compared to younger workers in several ways.

This fact sheet presents the most prominent misconceptions that were found and presents empirical data that corresponds to them.

<table>
<thead>
<tr>
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<tbody>
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<td>2. Older workers are interested in their career and in meeting new challenges.</td>
</tr>
<tr>
<td>3. Older workers are not trainable.</td>
<td>3. Older workers may need to be trained differently to younger workers but their subsequent performance is just as good.</td>
</tr>
<tr>
<td>4. Older workers are not as strong as younger workers.</td>
<td>4. Whilst physical strength does decline with advanced age, this is insignificant for the vast majority of jobs.</td>
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<td>5. Older workers are not ambitious.</td>
<td>5. Older workers are ambitious and wish to advance just as their younger counterparts.</td>
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<tr>
<td>6. Older workers are not energetic.</td>
<td>6. Energy levels are more related to physical fitness than to age. Fit older adults may be more energetic on the job than sedentary younger workers.</td>
</tr>
<tr>
<td>7. Older workers are not healthy.</td>
<td>7. On average, no significant declines in health are found prior to the mid to late 70s. The people that age who remain in the workforce are likely to be in very good health.</td>
</tr>
<tr>
<td>8. Older workers are forgetful.</td>
<td>8. No significant declines in memory performance are found prior to the mid to late 70s.</td>
</tr>
<tr>
<td>9. Older workers are not creative.</td>
<td>9. Creativity is related to the individual’s knowledge base and older workers usually have a larger knowledge base than do younger, less experienced, workers.</td>
</tr>
<tr>
<td>10. Older workers are not flexible.</td>
<td>10. Older workers were found to be just as flexible as younger workers when presented with well reasoned options.</td>
</tr>
<tr>
<td>11. Older workers are not mentally alert.</td>
<td>11. No significant job related declines in mental alertness have been found between younger and older workers.</td>
</tr>
<tr>
<td>12. Older workers do not fit in.</td>
<td>12. Reports of employers who took on older workers suggest that older workers fit in with younger workers in a beneficial and productive manner.</td>
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In order for us to know that you have received and read this fact sheet, please place the card included in the reply paid envelope provided and post back to us. Your company is one of a selected number being asked to respond. It is very important for us that the hiring decision-maker and no one else respond to this communication and that each card is returned. The identification number on the card will be used simply to check whether we have received your communication.

I would be happy to answer any questions you might have. Please write to the above address or call 07 – 4781 5159.

Thank you for your cooperation.

Yours sincerely,

Helmes
Project Director
An example of CDFS materials (employers sample)

The Hiring decision-maker

Dear Sir/Madam

The relative proportion of older adults in the Australian population is growing, so much so that the percentage of people over 65 is predicted to rise from about 13 percent in 2001 to over 19 percent by 2030. Although the number of older job seekers is rising they are, nevertheless, discriminated against by Australian employers.

Older job seekers were found to be discriminated against even when there was no difference between them and their younger counterparts in any job related merits.

Age discrimination in hiring is counter-productive, especially in cases where the best person for the job happens to be older.

Discriminating against older job seekers is against the very principle of giving each individual a fair go, a principle that is so dear to us here in Australia.

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Thank you for your cooperation.

Yours sincerely,

E. Helmes
Project Director
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I would be happy to answer any questions you might have. Please write to the above address or call 07 – 4781 5159.

Thank you for your cooperation.

Yours sincerely,

E. Helmes
Project Director
Appendix G

Examples of Questionnaire Cover Letters and Follow-Ups that were Used in Study

Two at the Testing Stage.
An example of Study Two's questionnaire cover letter (undergraduate sample)

Dear Sir/Madam

The number of younger workers will decline and the number of older job applicants will increase over the coming years. This will result in greater numbers of older workers and older job applicants.

Consulting current and future potential hiring decision-makers such as yourself will facilitate better understanding of the work environment faced by older people. The attached questionnaire is aimed at finding out your views regarding older workers. You are one of a selected number being asked to respond and it is crucial that each questionnaire is returned. Filling out the questionnaire should take no more than 15 minutes. Please place the completed questionnaire in the reply paid return envelope supplied and post it to us within 5 working days.

We are interested only in your personal views. The identification number on the first page will be used simply to check whether we have received your questionnaire back. Your responses will also be kept confidential and at no stage will you or your identity be revealed or placed on the returned questionnaire.

If you would like a summary of results for yourself, simply write 'copy of results' on the back of the questionnaire and one will be sent to you in due course.

Thank you for your assistance.

Yours sincerely,

E. Gringart
Project Director
Tel - 08 – 9400 5631
Examples of Study Two's first follow-up cards

Undergraduate sample

Last week a questionnaire asking for your views about older workers was mailed to you.

If the questionnaire has already been completed, please accept our sincere thanks. If not, could it please be returned today? Because it was sent to a small representative sample of students it is most important that your views are included in the study if we are to adequately represent the views of current and potential hiring decision-makers.

If by some chance you did not receive the questionnaire or have mislaid it, please call me on 9400 5631 and I will send you another copy today.

Yours sincerely,

E. Gringart
Project Director

Employers sample

Last week a questionnaire asking for the hiring decision-maker’s views about older workers was mailed to you.

If the questionnaire has already been completed, please accept our sincere thanks. If not, could it please be returned today? Because it was sent to a small representative sample of companies it is most important that your hiring decision-maker’s views are included in order for the study to be adequately representative.

If by some chance you did not receive the questionnaire or have mislaid it, please call me on 9400 5631 and I will send you another copy today.

Yours sincerely,

E. Gringart
Project Director
An example of Study Two's second follow-up cover letter (employers sample)

The Hiring decision-maker

Dear Sir/Madam

I am sending you this letter as a follow-up to my previous correspondence of November 7 and November 14 as my records indicate that to date, we have not received your reply.

The number of younger workers will decline and the number of older job applicants will increase over the coming years. This will result in greater numbers of older workers and older job applicants.

Consulting hiring decision-makers such as yourself will promote a better understanding of the work environment faced by older people. The attached questionnaire is aimed at finding out hiring decision-makers' views regarding older workers. Your company is one of a selected number being asked to respond, and it was drawn in a random sampling of companies in Australia. **To be truly representative, it is crucial that the hiring decision-maker and no one else completes the questionnaire and that each questionnaire is returned.** Filling out the questionnaire should take no more than 15 minutes. Please place the completed questionnaire in the reply paid return envelope supplied and post it to us within 5 working days.

**We are interested only in your personal views.** The identification number on the first page will be used simply to check whether we have received your questionnaire back. Your responses will also be kept confidential and at no stage will you or your company's identity be revealed or placed on the returned questionnaire.

The results of the survey could be made available in published form. If you would like a summary of results for yourself, simply write 'copy of results' on the back of the envelope when returning the questionnaire and one will be sent to you in due course.

I would be happy to answer any questions you might have. Please write to the above address or call 08 – 9400 5631.

Thank you for your assistance.

Yours sincerely,

E. Gringart
Project Director
School of Psychology
Appendix H

Examples of the Age Preference Question and the Questionnaire that were Used in Study Two
An example of Study Two's age preference question (employers sample)

This page and the following questionnaire should be completed by the hiring decision-maker

Before proceeding past this page I ask that you indicate your general (not job specific) preference of hiring older (55-70) workers or younger (25-40) workers. I simply ask for your personal view and not what may seem conventional or politically correct.

Please circle ONE option only.

I strongly prefer to hire younger workers
I prefer to hire younger workers
I slightly prefer to hire younger workers
No difference in hiring preference
I slightly prefer to hire older workers
I prefer to hire older workers
I strongly prefer to hire older workers
An example of Study Two's questionnaire
(employers sample)
Instructions

This questionnaire seeks the first answer that comes to your mind when considering each question. What is asked for are your personal views and not what may seem conventional or politically correct.

Section A

In the following questions you are asked to compare older workers to younger workers on various qualities. Please circle the first answer that comes to your mind. Circle ONE number only for each question.

1. How trainable are older (55-70) workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less Less Slightly less No different Slightly more More Far more
   Trainable

2. How willing to work are older (55-70) workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less Less Slightly less No different Slightly more More Far more
   Willing

3. How cautious are older (55-70) workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less Less Slightly less No different Slightly more More Far more
   Cautious

4. How productive are older (55-70) workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less Less Slightly less No different Slightly more More Far more
   Productive

5. How adaptable to new technology are older (55-70) workers compared to younger (25-40) workers?

   1  2  3  4  5  6  7
   Far less Less Slightly less No different Slightly more More Far more
   Adaptable
6. **How reliable are older (55-70) workers compared to younger (25-40) workers?**

<table>
<thead>
<tr>
<th>Far less</th>
<th>Less</th>
<th>Slightly less</th>
<th>No different</th>
<th>Slightly more</th>
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7. **How physically strong are older (55-70) workers compared to younger (25-40) workers?**

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8. **How interested in technological change are older (55-70) workers compared to younger (25-40) workers?**

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9. **How flexible are older (55-70) workers compared to younger (25-40) workers?**

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10. **How likely are older (55-70) workers to be promoted compared to younger (25-40) workers?**

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11. **How skilled are older (55-70) workers compared to younger (25-40) workers?**

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12. **How functional is the memory of older (55-70) workers compared to younger (25-40) workers?**

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13. How satisfactory is the performance of older (55-70) workers compared to younger (25-40) workers?

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14. How creative are older (55-70) workers compared to younger (25-40) workers?

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15. Considering the combination of sick days, accident related expenses, and wages, how cost effective are older (55-70) workers compared to younger (25-40) workers?

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16. How likely are older (55-70) workers to fit in compared to younger (25-40) workers?

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17. How healthy are older (55-70) workers compared to younger (25-40) workers?

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18. How competent at making decisions are older (55-70) workers compared to younger (25-40) workers?

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19. How dependable are older (55-70) workers compared to younger (25-40) workers?

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20. How satisfactory is the job quality of older (55-70) workers compared to younger (25-40) workers?

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Satisfactory

21. How cooperative are older (55-70) workers compared to younger (25-40) workers?

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Cooperative

22. How hard working are older (55-70) workers compared to younger (25-40) workers?

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Hard working

23. How mentally alert are older (55-70) workers compared to younger (25-40) workers?

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Alert

24. How loyal are older (55-70) workers compared to younger (25-40) workers?

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Loyal

25. How ambitious are older (55-70) workers compared to younger (25-40) workers?

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Ambitious

26. How efficient are older (55-70) workers compared to younger (25-40) workers?

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Efficient
27. How motivated are older (55-70) workers compared to younger (25-40) workers?

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Motivated

28. How energetic are older (55-70) workers compared to younger (25-40) workers?

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Energetic
Section B

Please circle ONE number only for each question.

1. In your personal view, how relevant is an applicant’s age when making hiring decisions?

   1  2  3  4  5  6  7
   Irrelevant Slightly Some what Relevant Quite Very Most relevant
   Relevant relevant relevant relevant relevant

2. How likely are you to hire a worker of the 55-70 age group?

   1  2  3  4  5  6  7
   Not Unlikely Remotely likely More Very likely Certainly at all likely than likely

Section C

Please answer the following question. You can write in point form or as text. If the designated space is not enough, please feel free to attach additional. Thank you.

What other characteristics of older workers differentiate their performance from that of younger workers?
Section D

This section is for demographic purposes, Please tick the answers that correspond to you.

Age

☐ 20-25  ☐ 50-55

☐ 25-30  ☐ 55-60

☐ 30-35  ☐ 60-65

☐ 35-40  ☐ 65-70

☐ 40-45  ☐ Over 70

☐ 45-50

Sex

☐ Male  ☐ Female

Education

Please tick your highest education level so far.

☐ Year 10  ☐ Year 11/12

☐ TAFE certificate  ☐ TAFE Diploma

☐ University Degree  ☐ Post graduate Degree  ☐ Other: .......