Is it 'too bloody late'? : Older people's attitudes to physical activity and to the recommendations in the National Physical Activity Guidelines

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Is it "too bloody late"? Older people's attitudes to physical activity and to the recommendations in the National Physical Activity Guidelines

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Prepared in partial fulfilment for a Master of Business (Marketing)

Faculty of Business and Public Management

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Refereed conference paper generated by this study

Abstract

Participation in physical activity confers many health benefits by reducing the risk factor for a number of lifestyle related diseases such as diabetes, colon cancer, and heart disease. Other benefits include improved mental and physical well-being. For older people the benefits are even more important; engagement in physical activity extends to such health benefits as reduction in the risk of falls and related potential injuries. However the most significant benefit to older people is that physical activity enables older people to live independently for longer and with a greater sense of well-being.

This study explores, through qualitative research, older people’s attitudes to physical activity in general and to the recommendations in the National Physical Activity Guidelines (NPAGs) in particular with the aim of developing recommendations for social marketing practitioners when designing messages about physical activity targeted at older people. Eight focus groups were conducted with male and female, blue and white collar, ‘healthy’ and ‘unhealthy’ older people, 65-85 years of age.

Ajzen and Fishbein’s (1980) Theory of Reasoned Action was the theoretical framework for the study. The study aimed to establish participants’ affective, cognitive, and behavioural responses to the recommendations contained in the NPAGs. This theory distinguishes between the person’s beliefs relating to the object or issue and the person’s perceptions of how they believe other people will react to the same object or issue. That is, social norms influence attitudes and behaviour.

There were four major findings from this study. Firstly, it emerged that many of the participants thought that engagement in physical activity meant doing something ‘extra’ to a normally physically active day; thus the message that incidental activity is beneficial to health needs to be effectively disseminated amongst older people. Secondly, the message relating to the accumulation of short bouts of moderate-intensity physical activity throughout the day had not reached all participants, also suggesting that effective dissemination of this message is
warranted. Thirdly, some participants stated that by engaging in physical activity they enjoyed a better night's sleep. Lastly, it emerged that source credibility was an issue for some participants. There was a specific concern that someone 'young' was telling them what to do.

Social marketing practitioners could incorporate these findings into a physical activity campaign directed at older people. In addition, it is suggested that an appropriate marketing 'place' strategy would be the use of shopping centres as this would reduce perceived effort and inconvenience as well as reducing psychological costs related to fear of falling, fear of uncontrolled dogs, and fear of crime.
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

Signed by the candidate

Joan Jackson B. Bus.

[Signature]

[Date]
Acknowledgments

This research acknowledges the generous support of a Studentship from Edith Cowan University Centre for Health and Ageing.

This thesis has come to fruition due to the efforts of my supervisor, Associate Professor Nadine Henley. She rekindled the light at the end of the tunnel when it went out and she kept it burning until the end. She encouraged and inspired me, but most of all she kept faith in me and generously shared her knowledge to teach me so much. Thank you so very much Nadine.

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### Screening Questionnaire

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## APPENDIX THREE

### Focus Group Questionnaire

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Participation in physical activity confers many health benefits. It can reduce the risk factors for a number of lifestyle related diseases. For example, the risk of developing diseases such as diabetes, colon cancer and heart disease is significantly reduced through engagement in physical activity. In addition, engagement in physical activity confers a protective role in the prevention of heart disease for those people who are overweight or have high cholesterol levels; this protection is independent of these two risk factors (Commonwealth Department of Health and Family Services, 1998). Other benefits include improved mental and physical well-being. For older people the benefits are significantly more important; engagement in physical activity extends to such health benefits as reduction in the risk of falls and resulting injuries (Commonwealth Department of Health and Aged Care, 2001). The most crucial benefit to older people is that physical activity gives older people the ability to live independently for longer and with a greater sense of well-being (Shephard, 1993).

The National Physical Activity Guidelines (NPAGs) are the evidence-based recommendations on physical activity for all Australians. This study examines the attitudes of older people to physical activity in general and their attitudes to the NPAGs in particular with the aim of developing recommendations for social marketing practitioners when designing messages about physical activity targeted at older people.

This chapter will firstly define and discuss social marketing. Secondly, the significance of the study will be explained. Thirdly, the purpose of the study and the study’s research questions will be presented.
1.1 Social marketing

This section firstly defines social marketing. Secondly, the definition of social marketing is further discussed in relation to the defining difference between social marketing and marketing aimed at making a profit. Thirdly, the importance of ethics in social marketing is stated.

1.1.1 Defining social marketing

In a broad sense social marketing has been around since the time when ancient Greeks and Romans campaigned to free slaves (Fox & Kotler, 1980; Kotler & Roberto, 1989). However, it was during the 1970s that the application of marketing concepts expanded to include social causes. In 1971, Kotler and Zaltman first coined the term "social marketing" and defined it as "the design, implementation, and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communications and marketing research" (Fox & Kotler, 1980, p. 25). Thus, marketing activities were extended to encompass social rather than profit-related goals. In 1985, Marketing News (cited in Fine, 1990, p. 1) announced that the American Marketing Association had revised their definition of marketing as follows to include 'ideas': "marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives". Hence social marketing was established as a distinct subsection of marketing.

There are now many definitions of social marketing but the key distinction between social marketing and commercial marketing is that social marketing does not have profit-making as a central aim (Kotler & Roberto, 1989).

There is discussion in the literature of many aspects of social marketing. For example, Andreasen (2002, p. 4; 1996, p. 389) suggested that social marketing had progressed and was concerned not only with the "promotion of ideas" but also with "influencing behaviour". Social marketing was aiming to encourage the adoption of behaviours that would, on an individual level, improve people's lives and consequently that of society. Further, Williamson (1994, p. 166) defined social marketing as "marketing applied to ideas, causes, or practices" and stated that both marketing and social marketing "try to change people's habits". However, in social marketing the aim is to rectify social problems (Andreasen,
Not a primary aim of commercial marketing. Although social marketers use the traditional concepts and tools of commercial marketing to achieve their aim, in fulfilling the marketing concept of a satisfying exchange between the parties, profit is not the aim of the exchange.

Furthermore, when considering social marketing as a part of health promotion there is a basic distinction between commercial marketing campaigns and social marketing health promotion campaigns. Commercial marketing campaigns are based on needs experienced by consumers while social marketing campaigns are based on needs identified by health experts or government health departments (Sirgy, Morris, & Samli, 1985).

Moreover, as in commercial marketing, it is crucial to identify the target market in health promotion campaigns. The population, that is the individual or group or entire population targeted by the social marketer – the target adopter, needs to be identified. Target adopter groups can be segmented based on their individual beliefs, attitudes and values so that social marketers can build campaigns tailored to these needs (Kotler & Roberto, 1989). Plus, it is important to 'get the right message' and to 'get the message right' (Egger, Spark, Lawson, & Donovan, 1999).

“Getting the right message” (Egger et al., 1999, p. 81) means determining the objectives of the communication. Having determined the target audience the specific and the overall objective of the campaign needs to be established. The methods for determining the message also need to be established. That is, the use of qualitative and quantitative research methods to determine the right message tailored to the targeted audience’s needs via the most appropriate communication medium (Egger et al., 1999). Egger et al., (1999) state there are three broad communication objectives; information, motivation and advocacy. Therefore, as an example, the information objective of the communication could be that physical activity is beneficial to health. The motivation objectives could be to motivate sedentary older people to engage in physical activity and the advocacy-related objective could be to create awareness of the benefits related to falls prevention.

“Getting the message right” (Egger et al., 1999, p. 89) means that having determined what the “right message” is, this message has to be communicated to
the target audience via communication materials that are well constructed. For example, if the target audience is older people and the communication medium is print then any printed material should be in large size font; also glossy paper and some colours should be avoided as older people find these difficult to read (Henley & Pettigrew, 2002). Further the “language, style and tone” should be suitable for the targeted audience and consistent with the determined message objectives so that the audience understand, accept and find the message motivating (Egger et al., 1999, p. 89).

In essence social marketing is defined by its goals and the methods used in achieving those goals. Should any of these defining characteristics be missing then the entity that is social marketing is absent (Brenkert, 2001). Obviously, unless the defining characteristics of social marketing are fully applied social marketing will fail. When poor marketing techniques are applied for commercial purposes, commercial marketing fails; this is also true for social causes (Donovan & Henley, 2003). Kotler and Roberto (1989) suggested that many social marketing campaigns aimed at social change failed miserably. However, they also state that “it is eminently possible to change behaviors if the social change campaign is planned and implemented effectively” (Kotler & Roberto, 1989, p. 10). They cited the Stanford Heart Disease Prevention Program as one such case. This social marketing campaign tested the power of the mass media; the results showed that mass media appeals could inform, motivate and change negative behaviour (Kotler & Roberto, 1989).

1.1.2 Ethics

When planning and implementing effective social marketing campaigns ethical issues must always be considered. Murphy and Bloom (1990, p. 69) concluded that as social marketers promote the social good they “should be held to a higher ethical standard”. Brenket (2002) stated that social marketers should be transparent in relation to their aims and their funding; they should also make transparent the evidence which links the desired outcome to the target adopters’ benefit. For the purposes of this thesis, the key elements of social marketing are: 1) that it attempts to influence the behaviour (increase physical activity) 2) of a specific target market (older people) 3) with carefully constructed messages (The National Physical Activity Guidelines) that are adjusted to be appropriate for the target audience (the objective of this research).
1.2 Significance of the study

This study is important because it focuses on older people's attitudes to physical activity in general and the National Physical Activity Guidelines in particular. Engagement in physical activity can positively impact on the health status of the individual and ultimately society as a whole. For older people there is added significance as physical activity facilitates independent living for a longer period. Also, as the population is ageing and significantly more people are living longer it is important that social marketing practitioners have some perspective of both the increase in size of this sector of the population and knowledge of this sector's attitudes towards physical activity.

1.2.1 Physical activity and health

Over the last three decades research has emerged which indicates that participation in appropriate levels of moderate-intensity physical activity will result in increased benefits to an individual of any age and to the community as a whole (United States Surgeon General, 1996). Engagement in physical activity reduces the risk factor for a number of lifestyle related diseases resulting in participants gaining health benefits and a sense of well-being (O'Brien Cousins, 1998; Shephard, 1997). A healthier community will result in economic gains from health budget savings (Stephenson, Bauman, Armstrong, Smith, & Bellew, 2000). In Australia it is estimated that an increase of 1% in the proportion of participants who engage in physical activity could translate to an annual saving of $3.6 million in health care costs related to colon cancer, heart disease and diabetes (Stephenson et al., 2000).

Older people also gain these same health benefits from engagement in physical activity. In addition, the risk from falls and resulting injuries is reduced, which is of significant importance to older people (Bull, Milligan, Rosenberg, & MacGowan, 2000). Also, of vital importance to older people is the ability to maintain their independent living for a significantly longer period of their life. This is achieved by adopting or maintaining some form of moderate-intensity physical activity appropriate to their ability (Shephard, 1993; United States Surgeon General, 1996).
1.2.2 Demographics of an ageing population

The world's population is ageing, the population over age 65 years is increasing by 2.5% per year (World Health Organization, 1998a). Australia's population is also ageing, in the 12 months to June 2002, the number of persons aged 65 years and over increased by 2.2%, to just under 2.5 million. This increase in life expectancy in Australia is due to rising standards of living and the eradication of infectious diseases. Lifestyle diseases are more likely to be a threat to people's health, (Australian Institute of Health and Welfare, 2000; Commonwealth Department of Health and Family Services, 1998; Stephenson et al., 2000; World Health Organization, 1998b). The evidence supports moderate-intensity regular physical activity as a means of minimising these effects and thus, contributing to healthy life expectancy (National Health and Medical Research Council, 1994; Shephard, 1997; United States Surgeon General, 1996). It is important that older people, as well as the total population, understand the importance of physical activity to one's health.

The importance of the dissemination of this message cannot be overemphasised as 44% of the Australian population is estimated to be inactive (Stephenson et al., 2000). Also, less than 20% exercise at a level which produces cardiovascular benefits (National Health and Medical Research Council, 1994). In Western Australia only 58% of the adult population are estimated to be active enough to gain health benefits (Bull et al., 2000). The challenge is to try to minimise the effects of lifestyle diseases, which can affect the quality of life in older age (World Health Organization, 1999b).

1.2.3 The National Physical Activity Guidelines

The Australian Government has developed National Physical Activity Guidelines to address the need to encourage Australians to adopt a physically active lifestyle. These guidelines are aimed at the population in general and are not specific to older people. During the development of the guidelines separate guidelines for older people were considered, but feedback indicated this would be superfluous given the hierarchical nature and universality of the guidelines (Egger, Donovan, Giles-Corti, Bull, & Swinburn, 2001).

However, the behavioural response of the general population to a health promotion message is not always homogeneous. Knowledge of the health benefits
of adopting a particular behaviour is not enough to motivate action in the total target audience (Egger et al., 1999). Many in the target audience perceive barriers to the message's adoption outweighing the perceived benefits (Kotler & Roberto, 1989). In the older age group the perceived barriers to adoption of physical activity are significant (O'Brien Cousins, 1998). That is why outcome research is a crucial part of any health promotion strategy; this is where the behavioural response of individual target groups is established and amendments or fine-tuning can be made (Egger, Donovan & Spark, 1993; Kotler & Roberto, 1989).

To our knowledge there has not been any previous research in Australia to evaluate the older person's response to the NPAGs or to explore how they could be best promoted to older people in a social marketing campaign.

### 1.3 Purpose of the study

The purpose of this study was to determine how the 65-85 year old age group would respond to recommendations in the National Physical Activity Guidelines and to determine if there was any discernible difference in the response between healthy and unhealthy older people. Specifically, the study aimed to establish this age group's affective, cognitive and behavioural responses to the recommendations contain in the NPAGs and their knowledge of the benefits that could be obtained by adopting the NPAGs.

This study aimed to understand and explain older people's attitudes towards the recommendations in the NPAGs using Ajzen and Fishbein's (1980) Theory of Reasoned Action (see Theoretical Framework section). According to this theory it is reasonable to expect that, knowing the health outcome of physical activity, people would have positive attitudes towards physical activity, leading to greater intentions to comply with the recommendations of the guidelines thus, resulting in the desired behaviour.

The Theory of Reasoned Action also recognises that attitudes are formed by not only taking account of one's own beliefs but also, one's perceptions of the beliefs other people hold. For example, if people believe that their family group, peer group, or even strangers, will think they look silly participating in physical activity, this may cause embarrassment and will result in a negative attitude forming a barrier towards the behaviour (see section on barriers). On the other
hand, encouragement from others will help reinforce the positive attitude. Thus
the purpose of this study is to understand and explain older people's attitudes
towards the recommendations in the NPAGs within the framework of the Theory
of Reasoned Action.

Ultimately, the purpose of this research is to make recommendations, which can
be useful to social marketing practitioners when designing physical activity
campaigns targeting older people.

1.3.1 Research question

What is the attitude of healthy and non-healthy people, aged 65-85 years, to the
recommendations in the National Physical Activity Guidelines?

How do they feel towards the recommendations in NPAGs? Does it differ
between healthy and unhealthy older people?

What do they think about the recommendations in NPAGs? Does it differ
between healthy and unhealthy older people?

What is their intentional behaviour having seen the NPAGs’
recommendations and does it differ between healthy and unhealthy older
people?

Are healthy older people more likely to participate in physical activity?

Will older people's perception of the beliefs other people hold influence their
intentions to participate in physical activity?

In this chapter the need for research into older people's attitudes to the
recommendations in the National Physical Activity Guidelines was outlined. The
importance of physical activity to health was explained and specifically in relation
to older people. The significance and purpose of the study was then highlighted.

Chapter 2 covers the literature related to physical activity and the resulting health
benefits gained from engagement in physical activity and how this relates to older
people. Chapter 3 presents the theoretical framework. Chapter 4 discusses the
study's methodology and chapter 5 presents the data analysis. The last chapter,
Chapter 6, discusses the major findings as well as the limitations and the implications for social marketing practitioners and academic researchers.
Chapter 2 LITERATURE REVIEW

In this chapter firstly, the literature on physical activity and health is examined and both health and physical activity are defined. Specifically, the past 30 years' epidemiological evidence linking physical activity to health benefits is examined. Secondly, physical activity and its relevance to older people are discussed. Thirdly, the role of health promotion is examined. Lastly, the development and introduction of the National Physical Activity Guidelines is presented.

2.1 Physical activity and health

In this section, the literature on physical activity and health is examined in relation to the epidemiological evidence, which has emerged over the last three decades. Firstly, health is defined as including a person's physical and mental and social well-being. Next, achieving a state of health is discussed in relation to the inclusion of physical activity as part of a person's lifestyle. The discussion then moves on to the research in support of participation in physical activity and the resulting health benefits; this includes the research relating to Australia and the conclusions drawn from the research. Next, the deleterious effect of labour saving technology is highlighted. Lastly, physical activity and particularly moderate-intensity physical activity is defined. There is further discussion relating to the benefits of physical activity, concluding with some discussion of the cost benefits to the community when members of the community participate in physical activity.
2.1.1 Health defined

A healthy life is not just the absence of disease. The World Health Organisation's (WHO) definition of health states: "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (World Health Organization, n.d.). This definition goes beyond the notion that good health relates solely to physical health. The definition includes mental health, an aspect of health not to be overlooked. Mental health is such a major concern that World Health Day 2001 was dedicated to raising awareness of mental health issues world-wide (World Health Organization, 2001). The WHO's definition of health is an holistic view of an ideal state of health, which can be viewed as a goal (Australian Institute of Health and Welfare, 2000). An individual is better able to attain that goal by adopting a lifestyle which includes participation in physical activity, because physical activity is instrumental in maintaining physical health as well as social well-being and good mental health (United States Surgeon General, 1996).

2.1.2 Physical activity: the key to good health

A healthy lifestyle includes physical activity as well as healthy eating, alcohol in moderation, and smoking cessation. Adopting physical activity as a part of a healthy lifestyle significantly improves the individual's health status (Commonwealth Department of Health and Family Services, 1998) and may act synergistically with other lifestyle practices to significantly improve health (Dishman, 1988).

Epidemiological evidence emerging over the last three decades supports the view that moderate-intensity regular physical activity can enhance health and well-being and help in the prevention and recovery of many health problems (Population Health Division Commonwealth Department of Health and Aged Care, 2000b; Shephard, 1997; United States Surgeon General, 1996). The previous three decades have also seen an increased awareness that appropriate physical activity can impart health benefits (Population Health Division Commonwealth Department of Health and Aged Care, 2000b; Wankel, 1988). The emergence of this large body of epidemiological evidence was highlighted in 1996 by the release of the U.S. Surgeon General's Report on Physical Activity and Health (1996). This report states that physical activity does not have to be vigorous; that moderate-intensity regular physical activity improves one's health...
and quality of life. Some of the benefits include improved mental and physical health, as well as reducing the risk of developing diseases such as diabetes, colon cancer and heart disease. In essence the epidemiological evidence highlights the positive effects of physical activity; they include the direct health benefits gained by the individual and the indirect cost benefits to the community.

2.1.2a The significance of the research findings

It is important to understand the significance of the research findings mentioned above as these findings highlight the fact that physical activity does not have to be vigorous, and that moderate-intensity regular physical activity is sufficient to improve the individual's health and quality of life (United States Surgeon General, 1996). Previously it was thought that, for physical activity to be beneficial, it had to be vigorous, done for periods of 30 consecutive minutes or more and take place three to four times a week (Department of Health and Aged Care, 1999). The more recently accepted research recognises that people still may need to follow a more vigorous physical activity regime to attain cardiovascular fitness (United States Surgeon General, 1996). However, moderate-intensity physical activity done on most days will provide health benefits for maintaining or improving one's health status (Centers for Disease Control and Prevention (U.S.), 1996; Commonwealth Department of Health and Aged Care, 1999).

2.1.2b Implementation of the research findings is a priority

Many governments now accept that improving their population's health by encouraging participation in physical activity is a priority (Department of Health and Aged Care, 1999). The epidemiological evidence has brought awareness that today many of the diseases in developed countries are lifestyle diseases (Australian Institute of Health and Welfare, 2000; Talarico, 1998). Over the last century developed nations have benefited from improvement in areas such as healthcare, vaccination, clean water and improved housing. Many infectious diseases are now eradicated and life expectancy is greatly improved. Today it is lifestyle diseases that are more likely to lead to incapacity and/or premature death, diseases such as diabetes, colon cancer, and heart disease. Inactivity, inappropriate diet and obesity, tobacco and/or alcohol use are significant contributing risk factors for these diseases (Australian Institute of Health and Welfare, 2000; Commonwealth Department of Health and Family Services, 1998; Stephenson et al., 2000; World Health Organization, 1998b). Moderate-intensity regular physical
activity, as well as enhancing health and well-being, also helps in the prevention of and recovery from many lifestyle diseases (Population Health Division Commonwealth Department of Health and Aged Care, 2000b; Shephard, 1997; United States Surgeon General, 1996). Thus, the implementation of strategies to facilitate the community's involvement in physical activity is seen by many governments as a priority (Department of Health and Aged Care, 1999; Ohta, Tabata, & Mochizuki, 1999; United States Surgeon General, 1996).

2.1.2c Australian research relating to the benefits of physical activity

Australia collaborates with other parts of the world such as the USA, Canada and Britain in the area of health and physical activity research. As a result of research undertaken within Australia and from keeping abreast of this shared body of knowledge, generally Australian health professionals are aware of the health benefits of physical activity. Accordingly strategies to improve the population's health status have been adopted (Commonwealth Department of Health and Family Services, 1998). The release of the National Physical Activity Guidelines (NPAGs) in May 1999 (discussed in detail in a later section) is one such initiative. The NPAGs are the evaluative result of the epidemiological evidence supporting the health benefits attributable to participation in moderate-intensity regular physical activity (Population Health Division Commonwealth Department of Health and Aged Care, 2000a).

There is the potential to improve the health of Australians by encouraging more Australians to participate in moderate-intensity physical activity. In Australia, as in other developed nations, lifestyle diseases are the leading causes of death (Australian Institute of Health and Welfare, 2000). Although women live longer than men heart disease is the number one cause of death in both males and females. This is followed by other lifestyle diseases, specifically, cerebrovascular disease (stroke), lung cancer, chronic obstructive pulmonary disease and colorectal cancer, with each disease affecting male and female death rates slightly differently. Many of these deaths occur in people under 70 years of age. This suggests that the potential life years lost are significant considering that presently in Australia, 65-year-old women have a life expectancy of a further 19 years while their male counterparts have a life expectancy of a further 15 years (Australian Institute of Health and Welfare, 2000; National Health and Medical Research Council, 1994; Stephenson et al., 2000). As well as being a health burden on the
individual these diseases are also a financial burden on the community (Francis, 1999; Stephenson et al., 2000). Getting the sedentary population to participate in physical activity would significantly improve the health status of the nation (Bauman, Owen, & Rushworth, 1990). Thus, a more active population would be a healthier population and health care costs would be reduced.

In essence, health status and life expectancy are determined by exposure to infectious diseases, genetic make-up, lifestyle, and to a lesser extent gender, (Australian Institute of Health and Welfare, 2000). Of these factors, the individual has greatest control over their behaviour, that is, their choice of lifestyle. However, many Australians, like many others in developed nations, are not making healthy lifestyle choices. The sedentary sector of most populations in developed nations is high; for example, in America up to 60% of adults are estimated to lead sedentary lifestyles (O'Clark & Nothwehr, 1999). In Australia 44% of the population is estimated to be inactive (Stephenson et al., 2000) and less than 20% are estimated to exercise at a level which produces cardiovascular benefits (National Health and Medical Research Council, 1994) while approximately 56% are estimated to be overweight (Heart Foundation, 1999).

Therefore, as the research indicates, the individual has wide scope for making improvement. As the evidence linking inactivity with cardiovascular disease, colon cancer, and diabetes is as strong as that between tobacco smoking and heart disease (Stephenson et al., 2000), then adoption of moderate-intensity physical activity by the sedentary has enormous benefits.

2.1.3 Physical activity the key to good mental health

Physical activity improves mental health as well as physical health. The National Physical Activity Guidelines (discussed later) which advocate physical activity for health state: “Health in this instance, refers to metabolic well-being as reflected in low risk levels of blood fats, blood pressure and body weight as well as general physical and mental well-being” (Department of Health and Aged Care, 1999).

Increased energy expenditure during physical activity produces metabolic changes that result in positive improvements to health (National Health and Medical Research Council, 1997). During physical activity, increased secretion of beta-endorphins, which produce a natural high, contribute to a person's sense of well-being (Shephard, '97). Morgan and Goldstone (1987, cited in Shephard, 1997)
stated that exercise counters mild depression while other research has found improvements in a person's mood (Pate, Pratt, Blair, et al., 1995).

Physical activity can also contribute to social well-being as physical activity is often undertaken in the company of other people (Corti, Donovan, Castine, et al., 1995; Myer, Malott, Gray, et al., 1999; Shephard, 1997). Participants who exercise also gain increased energy levels and resilience to diseases and this state of 'health' can be carried on into old age (Australian Institute of Health and Welfare, 2000).

Inactivity can exacerbate some conditions such as depression and arthritis (Stephenson et al., 2000). Although O'Brien Cousins and Horne (1999) suggested that the cumulative evidence that physical inactivity contributes to depression in older people is weak they acknowledged there is evidence to support some benefits. A more recent study, conducted specifically with depressed elderly patients, demonstrated the antidepressant effectiveness of exercise (Singh, Clements, & Fiatarone, 2001). Other research has found that after moderate-intensity physical activity, improvements occur in a sense of well-being (Resnick, 2000) and levels of fatigue and confusion (Hansen, Stevens, & Coast, 2001).

2.1.4 Technological advances

Labour-saving technology in the home, work place, and transportation has encouraged sedentary lifestyles which are deleterious to maintaining good health (Booth, Mayer, Sallis, et al., 2001; Commonwealth Department of Health and Family Services, 1998; King, 1994). Where once people walked to the shops and changed the TV channel by getting out of their chair, they now drive to the shops and use the remote control. The deleterious effects of this decrease in physical activity are exacerbated by the increases in food consumption; some individuals find the enticement from fast foods outlets is often hard to resist (Booth et al., 2001). People have embraced the benefits of technology without making compensatory adjustments to their life-style, the one area where they have greatest control.

2.1.5 Physical activity defined

"Physical activity refers to any activity that involves significant movement of the body or limbs" (Commonwealth Department of Health and Aged Care, 1999).
Resnick (2001, p. 287) defines exercise as "a sub category of physical activity [which is] planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness". However, the main focus of this study is on moderate-intensity physical activity which "will cause a slight, but noticeable, increase in breathing and heart rate and may cause light sweating in some people" (Commonwealth Department of Health and Aged Care, 1999). Also, moderate-intensity physical activity can be the unplanned physical activity which is incidental to one's everyday activities.

Examples of moderate-intensity physical activity include brisk walks, dancing, cycling (Department of Health and Aged Care, 1999), gardening and household activities such as lawn mowing and window cleaning (Gunn, Brooks, Withers, et al., 2002). It is the accumulation of regular, short periods of moderate-intensity physical activity which is important in gaining health benefits, rather than the specific type or duration of physical activity (Pate et al., 1995; United States Surgeon General, 1996). Participants should aim to do a minimum total of 30-minutes of activity per day, but this does not have to be continuous activity. The activity can be done for example, in three 10-minute sessions accumulated over the day and preferably done every day (Department of Health and Aged Care, 1999).

2.1.6 Cost benefits of physical activity to the community.

The cost savings to the community of encouraging physical activity are significant. In Australia physical inactivity is estimated to contribute to the risk in 6,400 deaths per annum from lifestyle diseases alone (Stephenson et al., 2000). Incapacity from all these diseases is also significant. The community bears the economic burden resulting from inactivity. In dollar terms it is estimated that the direct health care cost of physical inactivity in Australia is approximately $377 million per year (Stephenson et al., 2000). Therefore, by encouraging the sedentary sector of the population to commence appropriate physical activity, substantial savings can be made (Bauman et al., 1990). The greatest savings will come from promotional targeting of physical activity to the sedentary sector of the population instead of encouraging the already active to increase their activities (Bauman et al., 1990; Kerr, Eves, & Carroll, 2000).
2.2 Physical activity and older people

This section looks at physical activity and older people. First the demographics relating to older people and the consequences of these demographics are discussed. Secondly, the benefits of physical activity to older people are presented. Thirdly, the types of physical activity appropriate for older people are presented. Fourthly, the cost benefits to the community from older people's participation in physical activity are considered. Lastly both the barriers to physical activity and the facilitators of physical activity are discussed.

2.2.1 Demographics relating to older people

The world's population is ageing. Overall, the world's population is increasing by 1.7% annually yet the population over age 65 years is increasing by 2.5% annually (World Health Organization, 1998a). In 1998 the world's population was 5.8 billion with people aged 65 years and over totalling 390 million. The projected figure for 2025 is 8 billion and 800 million respectively (World Health Organization, 1998b), a significant increase in the number of people over 65 years of age. In Australia the trend is also towards an older population and the longer life expectancy of women is contributing to a greater proportion of women over men – 50.2% and 49.8% respectively (Australian Bureau of Statistics, 2000). In June 2002 the Australian population was 19,662,800 persons with the number of people over the age of 65 years reaching just under 2.5 million. Proportionally the most significant population increase is in the over 85 year old group. This group increased from 265,200 to 280,400 in the twelve month period to June 2002 – there are more than twice as many women as men in this group (Australian Bureau of Statistics, 2003). Projections for 2021 suggest a total population of just under 23 million with 18.4% (4.232 million) aged 65 years and over (Australian Bureau of Statistics, 2001). This represents a significant increase in the size of the Australian ageing population, as the baby boomer generation moves into young old age.

2.2.1a Life expectancy

Life expectancy has increased over the last century. Australians have gained 20 years life expectancy at birth. The average life expectancy, at birth, is 81 years for females and 76 for males (Australian Institute of Health and Welfare, 2000). Four times as many Australians reach 85 years than at the turn of last century (National
Health and Medical Research Council, 1994). Similar gains have been made in most developed nations, with females living on average six to eight years longer than males (Shephard, 1997; World Health Organization, 1998b). This increase in life expectancy in the developed nations is due to rising standards of living and eradication of infectious diseases.

The above figures do not reflect Indigenous life expectancies which are significantly lower than non-Indigenous rates. “In 1998-2000, life expectancy for Aboriginal and Torres Strait Islander peoples was shorter by 21 years for males and 20 years for females, compared with the total population” (Australian Bureau of Statistics, 2002).

2.2.2 Benefits of physical activity to older people

The National Health and Medical Research Council (1999, p. 34) suggests that the greatest improvements to public health would result from an increase in physical activity on the part of the population that are sedentary and this is particularly true for the older sector of the population. Getting sedentary older people to participate in physical activity will have a greater impact on this sector’s health than getting the active individual to do more physical activity.

With a view to offering exercise guidelines for the clinician, Christmas and Andersen (2000) reviewed the literature related to the benefits of exercise to older people, specifically sedentary older people. They found sedentary older people gained many health benefits when they adopted a physically active lifestyle. The lifestyle diseases, for example, cardiovascular disease, diabetes and cancer, that are potentially avoidable in 50 year olds are the same diseases that are potentially avoidable in the over 65 age group (Australian Institute of Health and Welfare, 2000; Christmas & Andersen, 2000). However, although the older community gains the same benefits as the general community from maintaining or adopting and maintaining, moderate-intensity regular physical activity, there is added significance. The risk factors of many lifestyle diseases increase with age (Australian Institute of Health and Welfare, 2000; World Health Organization, 1999b). Therefore, the importance of physical activity increases.
2.2.2a Disability-free life expectancy

Of greatest significance for the older sector of the community is that the benefits gained from participation in physical activity can potentially result in a disability-free life expectancy; thus, independent living is maintained (Christmas & Andersen, 2000; Ohta et al., 1999; Shephard, 1993, 1997). Independent living means maintaining sufficient physical function to carry out the daily tasks of living, for example, dressing and feeding one’s self, thus avoiding institutionalisation (Shephard, 1993). This can have even more significance if the older person has some incapacity and is reliant on a care-giver. Should they fail to maintain their capacity to complete daily living tasks then the sudden loss of that care-giver, say, due to incapacity or death, may result in institutionalisation (Shephard, 1995). Limitations to basic physical functions can lead the older person into dependency or institutionalisation; for sedentary older people this is the most likely scenario. The likely pattern for the sedentary at the end of their lives is partial incapacity for approximately 10 years followed by total dependency for the last year of life (Shephard, 1995). Participation in appropriate moderate-intensity physical activity can help to maintain a person’s physical functions and, thus, their independence (National Health and Medical Research Council, 1994).

2.2.2b It is never too late to participate

A specific message for older adults is that one is never too old for physical activity (Centers for Disease Control and Prevention (U.S.), 1996). It can strengthen muscles and reduce the risk of falling, in turn reducing the risk of bone fractures. Commencing physical activity, no matter what one’s age, can also delay the onset or reduce the risk of contracting many lifestyle diseases such as osteoporosis, cardiovascular disease, non-insulin dependent diabetes and colon cancer. Additionally, the potential is there to counter the ill effects or arrest the progress of these lifestyle diseases (Centers for Disease Control and Prevention (U.S.), 1996). Even those people who have been sedentary in their younger years can gain health benefits from changing to a moderate-intensity physically active lifestyle (Christmas & Andersen, 2000; Commonwealth Department of Health and Family Services, 1998). For example, overweight people or those with high cholesterol will find that physical activity confers a protective role in the prevention of heart disease, independent of these two risk factors (Commonwealth Department of Health and Family Services, 1998).
Being physically active leads to improvement in mobility and independence for the older population (Ohta et al., 1999; Shephard, 1993). The difference in calendar age and biological age is more pronounced in old age than at any other time during the life cycle (Ohta et al., 1999; Shephard, 1997; Talarico, 1998). This means calendar age is not a good predictor of functional ability. Some 70-year-olds are functionally disabled while some 90-year-olds live active lives. However, it is never too late to participate in appropriate moderate-intensity regular physical activity. It can be the key to a "healthy life expectancy" and continued independent living into the oldest old age (Ohta et al., 1999; United States Surgeon General, 1996).

Older people need to hear that one is never too old or that it is never too late to begin participation in physical activity. The alternative message must be avoided. What is said or what is omitted must not give older people the message that it is 'too late' (Van Norman, 1995, p. 26).

2.2.2c Older people can take control of their health

In the past individuals may not have had control over factors that contributed to their present health status, due to inadequate knowledge of the risk factors relating to poor diet, lack of physical activity, smoking and alcohol. However, they do have control over their future life course (World Health Organization, 1999c). As people age, their levels of participation in physical activity tend to decrease (United States Surgeon General, 1996). This is not a physiological phenomenon, but a lifestyle choice, a choice that can be reversed. Physical activity can still play a part in the prevention of lifestyle diseases as well as halting the progress, or aiding in the recovery of these diseases. Few older people can meet the WHO's definition of health, but from the older person's perspective they can be 'successfully aged'. Being 'successfully aged' can be defined as "the maintenance of basic functions (vision, hearing, and, mobility) and the absence of life-threatening diseases, such as cancer" (von Faber et al., 2001, p. 2695). Vaillant and Mukamal (2001, p. 844) in their discussion of successful ageing suggested that "the seven protective factors that distinguish the happy-well from the sad-sick are under at least some personal control". One such factor under the older person's control is their commitment to participation in physical activity. The other six factors are: weight, smoking, alcohol abuse, education and our coping styles, and our relationship with our spouse. Thus, to be successfully aged, older people need
to participate in moderate-intensity physical activity; they may need to be informed that it is never too late to start (Centers for Disease Control and Prevention (U.S.), 1996).

### 2.2.2d Falls prevention

Moderate-intensity physical activity helps the older person to avoid falls (United States Surgeon General, 1996). The prevention of falls amongst older people is a major goal for public health administrators. In Australia the number of hospitalisations due to older people falling is increasing with the increased numbers of people reaching old age (National Ageing Research Institute, 2000). People experience falls at all ages but the consequences are likely to be much more severe in later life. The most serious injury is hip fracture. In the U.S. it is estimated that 95% of hip fractures are caused by falls and that 50% of seniors who are hospitalised for a hip fracture do not recover their previous level of mobility (Preboth, 2000). About one in 40 seniors who fall are hospitalised and, of these, only half are alive one year later (Gatti, 2002). In Australia in 1998, around 1,000 deaths and nearly 50,000 hospitalisations were caused by falls (Commonwealth Department of Health and Aged Care, 2001). The health burden of falls is expected to increase as life expectancy increases (Gatti, 2002). The Australian government has concluded, "an urgent requirement exists to inform older Australians that it is possible to reduce the risk of falling" (Commonwealth Department of Health and Aged Care, 2001, p. 2). Although falls are not an inevitable part of ageing, there are identifiable risk factors which are more prevalent in the aged, for example, poor footwear (Menz, Lord, & McIntosh, 2001), failing eye sight (Lord & Menz, 2000), taking multiple medications (Gatti, 2002; Lippincott, Williams, & Wilkins, 2001), potential hazards in the home such as frayed rugs (Gill, 1999), impaired balance and mobility and low levels of physical activity (National Ageing Research Institute, 2000). Some falls do not result in injury but can result in a loss of confidence in the older person's perceptions of their balance and mobility. This "fear of falling" is an impediment in itself to the older person's participation in physical activity (National Ageing Research Institute, 2000). Due to this fear of falling the very activities that improve balance and mobility and help in the prevention of falls are likely to be avoided.
2.2.2e Osteoporosis

Later in life, osteoporosis a skeletal disease characterised by the gradual decline in bone mass, will affect a large proportion of the population (World Health Organization, 1999e). In Australia 8% of the population is affected, comprised of 126,100 females and 29,100 males (Australian Institute of Health and Welfare, 2000). The loss of bone mass starts somewhere between 30-40 years of age and it is not uncommon for bone loss to increase by 10% per decade thereafter. Also, bone atrophy will increase with lack of physical activity (National Health and Medical Research Council, 1994). Part of both the prevention and cure of osteoporosis is physical activity, specifically weight bearing exercise (World Health Organization, 1999e). There is clear evidence that for older people regular physical activity is beneficial for the prevention and to arrest the progress of osteoporosis as well as improving bone density (Christmas & Andersen, 2000; National Health and Medical Research Council, 1994). This message is particularly important to post-menopausal women where the decline in hormones exacerbates their loss of bone density (National Health and Medical Research Council, 1994).

2.2.2f Sleep

During middle age and increasingly into old age many people experience problems with sleeping. Often, as well as other symptoms, people link this loss of sleep to losing their sense of well-being (Myer et al., 1999). Physical impairment, for example, arthritic pain, may also contribute to the problem (Jordan, Bernard, Callahan, et al., 2000). Often this results in the use of prescription medication to solve the sleep problem (King, Oman, Brassington, Bliwise, & Haskell, 1997). It was found in one study of nursing home residents that sleep did not improve after participants participated in physical activity (Alessi et al., 1995). However, other research, amongst community dwelling older people, suggests that amongst other benefits, moderate-intensity physical activity does result in improved sleep for older adults (Ettinger, Burns, Messier, et al., 1997; King et al., 1997; Myer et al., 1999). For example, one community-based physical activity program which had 213 actively involved participants at the end of four months found 38 percent gave 'sleeping better' as one of the benefits of the program (Jones & Owen, 1998). The related benefits of physical activity to sleep are not instant; the beneficial results take time to emerge compared with pharmaceutical remedies. However, there are financial costs and possible negative side effects related to sleep-inducing
medication. Therefore participation in physical activity could translate into less reliance on sleep-inducing medication and related costs as well as other beneficial effects (Myer et al., 1999).

2.2.2g Continual participation in physical activity is important

Although there are many benefits to being physically active during one's younger life, not all benefits can be stored and called upon during old age (Shephard, 1993). Epidemiological evidence points to the fact that the low-risk profile of the active young adult is not maintained if a sedentary lifestyle is adopted in later life (Commonwealth Department of Health and Family Services, 1998). The old adage 'use it or lose it' is applicable here (National Health and Medical Research Council, 1994). If physical activity ceases or is significantly reduced, then within two weeks to eight months many of the beneficial effects are gone (United States Surgeon General, 1996) and when physical activity resumes it takes longer to regain fitness (Talarico, 1998). This is not to say that it is unimportant to maintain a physically active lifestyle in youth, as there are many long-term benefits. For example, although cardio-respiratory fitness declines with ageing, past and continued athleticism can modify this decline as can the adoption of physical activity (O'Brien Cousins & Horne, 1999). Also, during childhood and adolescence bone mass is determined, an important factor in the prevention of osteoporosis, and continued physical activity helps maintain healthy levels of bone density (World Health Organization, 1999e). Nevertheless, although there are health benefits to participation in physical activity during youth, continued participation is necessary in order to retain those benefits.

Physical activity must be maintained into and during old age to maintain physical health, well-being and independence (Shephard, 1993). Recent evidence would suggest that as much as 50 percent of the functional decline in older people is not due to the inevitable ageing process but is due to disuse (National Health and Medical Research Council, 1994). Hence, appropriate moderate-intensity physical activity is beneficial for older people in maintaining health. Christmas and Andersen's (2000) literature review cited evidence in support of this view. The evidence also suggests that moving from a sedentary lifestyle to adopting a physically active lifestyle is extremely beneficial at any stage in life and specifically during old age. It is never too late to adopt an active lifestyle (Christmas & Andersen, 2000; United States Surgeon General, 1996), although
one needs to be cautious and adopt appropriate physical activity (Shephard, 1997). For example, although it is important to tailor physical activity rehabilitation programs to suit the individual's needs, patients recovering from a heart attack can have their physical condition and confidence improved by participation in a well structured and supervised physical activity program (Bassey, 2000). Participation in moderate-intensity physical activity "adds life to years and may even add years to life" (National Health and Medical Research Council, 1994, p. 6).

### 2.2.3 Types of physical activity appropriate for older people

There are many physical activities that older people can participate in although walking is the most widely advocated (Allen, 1999; Fisher, Ritchie, Abernethy, et al., 1998; National Health and Medical Research Council, 1994; Talarico, 1998; Van Norman, 1995; World Health Organization, 1999g). It needs no particular skills or equipment and older people especially benefit as it improves muscle strength, posture and balance (World Health Organization, 1999a). Many of the everyday incidental activities included in day-to-day living are suitable for the older age group as well as many recreational activities such as gardening, cycling, swimming (National Health and Medical Research Council, 1994; Ohta et al., 1999; World Health Organization, 1999a). More recent studies are emerging in support of the benefits of incidental physical activities (see for example, Gunn et al., 2002). The two important points to remember are 1) moderate-intensity physical activity provides health benefits and 2) this can be an accumulation of short intervals of physical activity (Pate et al., 1995). The most important principle in undertaking physical activity is that the activity must be appropriate to one's physical capacity (Shephard, 1995). This may mean seeking medical advice and having an activity program specifically tailored to suit the individual (National Health and Medical Research Council, 1994).

### 2.2.4 Barriers to physical activity

There are many real and perceived barriers to physical activity that exist to dissuade individuals of all ages from participation in physical activity (Heesch, Brown, & Blanton, 2000; O'Clark & Nothwehr, 1999; Steinhardt & Dishman, 1989; Van Norman, 1998). These barriers tend to be amplified in the older population and some barriers are specific to this sector of the community.
2.2.4a Physiological barriers

With the advancement of age, medical reasons are more likely to present barriers to participation in physical activity. Forty-five percent of the over seventy-five-year-olds in Australia have recognised disabilities (National Health and Medical Research Council, 1994). Satariano, Thaddeus, Haight, and Tager (2000) list fourteen medical reasons for avoiding or limiting physical activity, including: problems with eyesight or hearing, arthritic hip or knee, difficulty keeping balance, dizziness, fatigue and concern about falling. O'Clark and Nothwehr (1999) expressed some of these barriers as fears, for example, fear of chest pain, fear of falling, and fear of shortness of breath. Pain for some older people is a reality and not just a fear (Corti et al., 1995; Ettinger et al., 1997). Eyeglasses often rectify problems with eyesight. However, some older people find bifocal eyeglasses add to their fear of falling (National Ageing Research Institute, 2000). Physical impairment is also likely to disrupt other leisure activities (Jordan et al., 2000).

Unless elderly patients specifically ask for help with adoption of physical activity they are unlikely to be encouraged to do so by their doctor. Although medical practitioners are aware of the health benefits of physical activity, many do not broach the subject with their patients, as they feel they lack the training necessary to design an exercise program for their patients (Christmas & Andersen, 2000). Similarly Bull, Schipper, Jamrozik and Blanksby (1997) found that there was disparity between what family practitioners in Western Australia perceived “could and should be done” to promote physical activity and what they were actually doing. In addition, some people find seeking medical clearance to commence an exercise program a de-motivating barrier to physical activity (Shephard, 2000). This suggests that by promoting physical activity as part of everyday living, seeking medical clearance could be considered a negotiable constraint rather than a barrier.

2.2.4b Environmental barriers

Fear of crime and fear for personal safety are consistently mentioned in the literature as barriers to physical activity (Heesch et al., 2000; O'Clark &
Nothwehr, 1999; Satariano et al., 2000). Walking is one of the physical activities advocated by many proponents of physical activity and, apart from comfortable shoes and appropriate clothing, it requires little or no expense (Allen, 1999; Fisher et al., 1998; National Health and Medical Research Council, 1994; Satariano et al., 2000; Talarico, 1998; Van Norman, 1995; World Health Organization, 1999g). Walking is especially suitable for older people. However, for many older people this means leaving the perceived relative safety of their homes to exercise in what they may perceive to be an unsafe environment.

A number of other environmental barriers prevent older people from participating in physical activities away from home. For example, an inconvenient location for the exercise venue forms a barrier, even though the physical activity program may be suitable (Van Norman, 1998). Older people find it difficult to carry the necessary gear to a venue (O'Brien & Vertinsky, 1991) and this can be compounded if public transport is poor. By the age of ninety, fifty per cent of older people cannot use public transport (Vaillant & Mukamal, 2001), precluding them from participation in some away-from-home physical activity programs that may be beneficial to them. Also, because of declining night vision few people over eighty can drive at night (Vaillant & Mukamal, 2001); again this presents a barrier to participation. Older people who can drive to venues still have other obstacles to contend with such as poor parking facilities, poor lighting, stairs or uneven footpaths (Van Norman, 1998).

Other environmental barriers are simple things such as the “walkability” of the neighbourhood; changes in transportation have affected the “walkability” of the local environment (Booth et al., 2001). This includes a lack of footpaths away from traffic and appropriate bicycle tracks (Pate et al., 1995). Other inadequate features include uneven footpaths that can add to a person’s fear of falling, little or no rest areas/seating often needed by older people, and inclement weather, dogs, traffic (Corti, Donovan, D'Arcy, & Holman, 1996; O'Clark & Nothwehr, 1999; Sallis, Hovell, & Richard, 1992) and lighting (Satariano et al., 2000).

2.2.4c Social/interpersonal barriers

Older people find that apart from having lived through the technological revolution that encourages a sedentary lifestyle with its labour saving devices, retirement brings more encouragement to adopt a sedentary lifestyle. Cultural
expectations are that retirees “should take to the rocking chair” (Resnick, 2000), “put their feet up” and take that “well earned rest” (Shephard, 1997) thus, presenting a more subtle barrier to physical activity.

Older people have lived through an era where knowledge relating to the benefits of physical activity was not widespread (Resnick, 2000). Likewise, although older people may now know about the benefits, they may not know how to participate safely consequently non-participation is the likely result (Brandon, 1999).

A person’s socioeconomic status and specifically their education level, is not only an indication of their health status but also a likely indication of their participation patterns in physical activity (Bauman et al., 1990; Jette, Rooks, Lachman, & Lin, 1998; Kendig, 1998; Kuzbansky, Berkman, Glass, & Seeman, 1998; Shephard, 1997). Generally, the lower the socioeconomic status, the lower the health status and thus, the lower the participation rates in physical activity.

Reduced income after retirement is a factor which impacts on both men and women, but as women are likely to live 7-8 years longer than their male counterparts they will feel the effects of reduced income for a longer period (O’Brien & Vertinsky, 1991). Thus, costs related to such expenses as gym memberships, equipment used including appropriate clothing and shoes, and even the cost of a visit to the doctor for a fitness appraisal are potential barriers to participation in physical activity for older people (Ettinger et al., 1997). Also, as women live longer and are more likely to reach oldest old age, spending on average longer time in partial or total disability (Shephard, 1997), their needs are greater, but their participation tends to be lower (O’Brien & Vertinsky, 1991).

Women cite the time required to facilitate their childcare and other home duties as a barrier to participation in physical activity (Corti et al., 1995). In older age this is often still the situation; women are the family care-givers, for example, looking after grandchildren or their spouse. Fatigue, related to care giving, is often cited as a barrier to participation in physical activity (King, Castro, Wilcox, et al., 2000). Some women express a sense of guilt if they neglect their care-giving duties to take care of their own needs (O’Brien & Vertinsky, 1991). These commitments often form a barrier to physical activity for these women, to the detriment of their own health (Field & Hall Gueldner, 2001; World Health Organization, 1999d).
Interestingly Eyler's (1998) research, which looked at physical activity and minority women in California and Missouri, had similar findings but some women in their sample also stated that they felt uncomfortable exercising in co-ed facilities or in gyms where there were younger people. Self-consciousness was also an issue raised by women in King's (2000) research, which explored physical activity and different racial-ethnic groups of U.S. middle-aged and older-aged women. Self-consciousness and a desire for designated exercise areas are not exclusive to older women. James (1998), exploring why young girls are deterred from participation in active recreation, suggested that some young girls would prefer to use segregated school leisure facilities. Some of these young girls felt excluded from school sports facilities, believing them to be the domain of male students. They also suggested they would participate more if they were free from the fear of boys teasing them.

Group exercise programs can create a sense of embarrassment for some older people (Caserta & Gillett, 1998; Corti et al., 1995; O'Brien & Vertinsky, 1991; Schmidt, Gruman, King, & Wolfson, 2000). However, there are other older people who find they like the companionship and support that group activities offer (Caserta & Gillett, 1998; Corti et al., 1995; Satariano et al., 2000). Women in the Satariano et al., study (2000) cited the lack of companionship as the major reason for non-participation. The lack of a companion was not a concern to the male participants but was of significant concern to the women; a third of women over 75 years of age cited this lack of companionship as a reason to avoid physical activity (Satariano et al., 2000).

There are many myths surrounding old age. Older people are often thought of as a homogeneous sector of the population (World Health Organization, 1999c); 'old age' is almost a synonym for disease and poor health (Bernard, 2000) and older people are perceived generally as frail (World Health Organization, 1999d). These myths are often perpetuated. The idea is given that it is 'too late' to make improvements, whether perceived by the older person (O'Brien & Vertinsky, 1991), or implied by external influences (Van Norman, 1998). These myths are likely to form barriers to participation in physical activity. The older person's lack of knowledge about the benefits of physical activity may act as potential barriers. Likewise, the misconceptions or attitudes about the type and amount of physical activity that older people can and should participate in are also potential barriers to physical activity (O'Clark & Nothwehr, 1999).
Although the encouragement of family, friends or doctor can act as a motivating force (O'Clark & Nothwehr, 1999), the reverse is also true; discouragement can act as a barrier as can ageist practices, which assume older people have a confined area of activities (O'Brien Cousins, 1998). Older people put a lot of thought into paying a visit to their doctor, but often find they are treated in an ageist manner (O'Brien Cousins, 1998). Chronological age, which gives little indication of physical function (Van Norman, 1998) and therefore is of least relevance, is often the criterion by which older people are advised and judged (Bernard, 2000).

2.2.5 Facilitators of physical activity

Having the autonomy and knowledge to make choices in relation to the types of physical activity chosen acts as a facilitator to participation in physical activity. Research indicates that adopting a healthy lifestyle, that is making the choice about which physical activity to integrate into one’s everyday life (O'Brien Cousins & Horne, 1999), is beneficial to everyone, including the older person. If this is to be achieved, then older people need to have the knowledge to understand the benefits of a physically active lifestyle (Resnick, 2000) and an awareness of and the choices of physical activity which are appropriate to their needs and abilities (O'Brien Cousins & Horne, 1999). They need to know the physiological, environmental and social/interpersonal factors which facilitate physical activity.

2.2.5a Physiological facilitators

Considering that physical illness and conditions such as dementia can form a barrier to physical activity for a number of older people, the challenge is to create appropriate moderate-intensity physical activity programs for them. The Australian National Health and Medical Research Council (1994) suggested that it is possible to appropriately modify physical activities so that physiological barriers do not prevent participation in physical activity for the older person. Some physical illnesses do render a person at risk of further disability if physical activity is not designed appropriately for that condition. For example, a person with advanced diabetes risks detachment of the retina through inappropriate exercise (Shephard, 1995). Also, appropriate physical activity is needed for people with pain, fear of pain, swelling, unsteady gait and fear of falling (National Health and Medical Research Council, 1994; O'Clark & Nothwehr, 1999). However, appropriately modified physical activities which take account of the condition are possible for older people who have a physical impairment (National Health and
Medical Research Council, 1994). One such example given by Satariano et al. (2000) is that home-based physical activity programs can be devised to accommodate the physical impairments of the older person.

### 2.2.5b Environmental facilitators

Good aesthetic neighbourhood appeal encourages people to make use of their neighbourhood facilities for physical activity purposes. Being in an aesthetically pleasing environment amongst the "bird life" and the "lakes" with good amenities (Corti et al., 1996) or undulating and "enjoyable scenery" (King et al., 2000) can have great appeal to people wishing to participate in outdoor physical activity.

One way to facilitate physical activity would be to address the environmental barriers to physical activity mentioned earlier. Therefore, the development of, or improvement to environments to make them supportive of physical activity will promote participation in physical activity (King, 1994; World Health Organization, 1999f). By improving such things as footpaths, minimising traffic hazards and keeping dogs under control, the environment will be more supportive of physical activity for older people. Improvements to public transport would also help as the closer the venue and the easier the transportation the greater the likelihood of participation (Bagnall, Monk, Gimson, Saul, & Farmiloe, 1998; Corti et al., 1996). Feeling safe in one's neighbourhood encourages participation in outdoor physical activity such as jogging or walking (King et al., 2000). Shelter from inclement weather is also a factor. There is a need for some innovative solutions to these problems. One North American study (O'Clark & Nothwehr, 1999) demonstrated that the utilisation of open space in churches for moderate-intensity physical activity could be one solution. King (1994) discussed modifying the environment to be more supportive of physical activity by increasing the safety or convenience of the facilities, that is increasing the safety of such facilities as swimming pools, ice rinks or the local parks. By increasing the number of walking paths or bicycle lanes or making access to existing ones easier, the safety or convenience of these facilities is improved. Shopping centres can also be venues for physical activity (see for example, City of Ottawa, 2001; Lancaster Mall Walkers, 2000).
2.2.5c Social/Interpersonal facilitators

Social support from family, friends, doctors or program staff facilitates initial and continuing participation in physical activity (Barker, Brennan, Brownson, & Houseman, 2000). Having a companion appears to be important for women (Satariano et al., 2000). Jones and Owen (1998) found 53 percent of the participants in their study identified that having a friend or companion acted as a motivator and 17 percent needed to participate in a group. Sallis (1992) suggested that promoting physical activity to women may be more successful if social support is stimulated, as social support is important to women especially when they initially adopt physical activity.

Sallis (2002), in his examination of two recent studies, found that doctors can be a means to encouraging participation in physical activity. O’Clark and Nothwehr (1999) also found persuasion on the part of the person’s doctor as well as their family and friends could act as a motivator to participation in physical activity. A Western Australian study conducted by Bull and Jamrozik (1998) explored whether general practitioners could, by giving verbal advice, initiate sedentary patients to increase their physical activity levels. Two days after the doctors gave verbal advice an information booklet was mailed to the patients. Following this, a survey was mailed at 1, 6 and 12-month intervals asking patients to report their physical activity levels. At each stage, compared to the control group, those in the intervention group who reported being active also reported a significant positive increase in physical activity levels, indicating the effectiveness of this simple strategy. A further study in New South Wales explored whether sedentary people would increase their physical activity levels if they were given a written prescription by their general practitioner (Smith, Bauman, Bull, Booth, & Harris, 2000). Participants were put into one of three groups: written prescription only; written prescription plus a booklet mailed to their home; and a control group. During an interview participants were requested to report their physical activity levels at 6-10 weeks and 7-8 months. Modest improvements were found to have occurred after the 6-10 week period in participants who received both the prescription and booklet although this was not sustained after the 7-8 month period. However, even these modest gains can accrue to significant gains when adopted by the majority of the population (Smith et al., 2000).
Just as negative attitudes and poor motivation can act as barriers to participation in physical activity (National Health and Medical Research Council, 1994) so the reverse is true. Being motivated is one of the best facilitators for physical activity. Motivation toward physical activity is a state of being influenced or feeling a need or desire to participate; compliance occurs when the person accedes to the influence, need or desire (Van Norman, 1998). The older person will be motivated to participate in physical activity if they feel the activity has some pertinence to them such as fulfilling a psychological, social or physical need. For example, one study found participants’ wish to improve their fitness was a motivating force (Jones & Owen, 1998).

People are influenced by their perceptions of how others perceive them. For example, if someone believes their important loved ones would approve of certain behaviours on their part, they are more likely to participate in those behaviours (Ajzen & Fishbein, 1980). Consequently, people are more likely to participate in moderate-intensity physical activity if family members or friends show their approval. Also, seeing physical activity as a social norm encourages participation. Cialdini, Reno and Kallgren (1990) looked at social norms in their research which explored ways to encourage non-littering. This research explored the source of people’s motivation relating to littering. They suggested that social norms have two parts, the first is called the descriptive norms and refers to what is commonly done (the is) and the second is called the injunctive norms and refers to what is commonly approved or disapproved of (the ought) (Cialdini et al., 1990, p. 1015). They found that in society behaviour tends to follow what is most often done and approved of. Therefore in the physical activity context, people are likely to do what is most often done or approved of. Thus, the increased visibility of people out on their early morning walks is more of a social descriptive norm today than previously and likely to encourage participation by others (Corti et al., 1995).

People need to have a sense of self-efficacy; that is, they need to have a belief in their capabilities to perform the physical activity (Bandura, 1997; Barker et al., 2000; O’Brien & Vertinsky, 1991; Shephard, 1993) thus making them intrinsically motivated (McAuley, 1991). Efficacy expectations relate to four areas: 1) verbal persuasion, 2) primary experience, 3) role models and 4) physiological experiences (O’Clark & Nothwehr, 1999; Resnick, 2000, 2001). For example: the older person is likely to be motivated 1) if they have verbal persuasion from a doctor or friend; 2) if they find the activity is pleasurable they will continue to be...
motivated; 3) if they observe others enjoying the activity or seeing them achieve their goals; and 4) if there is no pain caused, or existing pain decreases, as a result of the physical activity.

Pro-active health promotion to educate and eliminate such barriers as lack of knowledge or misconceptions about physical activity is a potential facilitator to older people’s participation in physical activity (O’Clark & Nothwehr, 1999).

2.3 Health promotion

This section looks at health promotion. Firstly, the coming of age of health promotion is discussed. Next, the discussion covers how public health moved to health promotion and lastly the role of health promotion in promoting physical activity is presented.

2.3.1 The coming of age of health promotion

Health promotion came of age when the first international conference on health promotion was held in Ottawa in November 1986. During the proceedings, the Ottawa Charter for Health Promotion was presented. Its aim was ‘health for all by the year 2000’ (World Health Organization, 1999f). Primarily the focus was on the health promotion needs of industrialised nations, with the needs of other nations similarly considered. The charter suggested that health promotion needs a concerted effort by all concerned and is the province of all levels of government, the health sector and the community. People cannot achieve health unless they are empowered to take control of the means to determine their health and this is achieved through knowledge. Dissemination of this knowledge is via health promotion (World Health Organization, 1999f).

2.3.2 From public health to health promotion

Public health has evolved from a concern with hygiene science to the present day’s consideration of medical science (O’Connor-Fleming & Parker, 2001). From the end of the industrial revolution to the present day many authors have documented the changing phases of public health (See for example, Bernard, 2000; Egger et al., 1999; O’Connor-Fleming & Parker, 2001). In broad terms the first phase, from the end of the industrial revolution to the 1950s, was responsible for improvements in the population’s health due to advancements in such things
as sewerage, the supply of clean water and upgrading in housing conditions. As well as these environmental improvements, during the later years of this phase, there were improvements in health care, the availability of antibiotics and vaccination, which made a further contribution to the elimination of infectious diseases. Over the next 20 years there was a plateau in these improvements and lifestyle related diseases started to emerge as the greatest contributor to mortality and morbidity rates. The next phase, which takes us to date, has been the recognition of the impact of lifestyle diseases on public health. (There is also an emerging phase where infectious diseases such as AIDS and possibly SARS are rising once again (Egger et al., 1999).)

In the past there has been an element of prevention in public health. Egger, Spark, Lawson and Donovan (1999, p. 5) give the example of “John Snow’s removal of the handle of the Broad Street pump in the London cholera epidemic of 1849”. This prevented access to contaminated water thus, preventing further people from becoming infected by cholera. Today it is recognised that lifestyle diseases have behavioural, social, environmental and economic aspects (Bernard, 2000; Egger et al., 1999; O’Connor-Fleming & Parker, 2001). As a result, the preventative aspect of public health is now focused on changing the individual and the community’s behaviour as well as the environments; this is the process known as health promotion (Egger et al., 1999).

Health promotion is a multidisciplinary approach to achieving ‘health for all’. It is “the combination of educational and environmental supports for actions and conditions of living conducive to health” (Green & Kreuter, cited in, Egger et al., 1999, p. x). In order to achieve equity in health the essential resources are “peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice, and equity” (World Health Organization, 1999f).

In an earlier section health was defined as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (World Health Organization, n.d. 1, p. 1). This presents the concept of health as not merely the absence of illness and need for medical attention, but health as a positive state. Part of this holistic approach to health is the need to protect health through preventative measures. The community needs to be informed and educated about the preventative means that help maintain health. Health education is one aim of health promotion (Jones, 1997) as “health promotion is the process
of enabling people to increase control over, and to improve, their health” (World Health Organization, 1999f).

2.3.3 Health promotion and physical activity

Since the 1970s social marketing has served the purposes of health promotion. Social marketing campaigns that involve the promotion of health are defined by Bates and Winder (Egger et al., 1999, p. 5) as “any combination of health education and related organisational, political and economic interventions designed to facilitate behavioural and environmental adaptations that will improve or protect health”. One difference between a social marketing health promotion campaign and a commercial marketing campaign is that generally the social marketing campaign is based on health needs identified by health experts and not on needs identified by the consumer (Sirgy et al., 1985). Social marketing health campaigns use commercial marketing principles and techniques including mass media campaigns. The aim of mass media campaigns is to raise the average health status of the whole population (Egger et al., 1999).

As awareness of the health benefits of physical activity has grown, so has the promotion of physical activity. Governments of many industrialised countries have initiated mass media campaigns to promote the health benefits of physical activity. In Australia one of the more prominent campaigns originated in 1975 in Victoria. The Victorians were introduced to the cartoon character ‘Norm’ and the ‘Life Be In It’ campaign, with the aim of increasing the awareness of the benefits of physical activity. Evaluation of this campaign showed that mass media campaigns could influence awareness. The campaign went nation-wide in 1977 (Wankel, 1988).

There is strong epidemiological evidence that physical activity is beneficial to health (Australian Institute of Health and Welfare, 2000; Commonwealth Department of Health and Family Services, 1998; United States Surgeon General, 1996) and there is evidence that a promotional campaign can influence awareness and change negative behaviour (Kotler & Roberto, 1989). However, there is also evidence that inequalities exist which form barriers to the participation rates of physical activity (see section on barriers). The aim of physical activity promotion should be to break down these barriers and motivate the largest proportion possible of the sedentary population to adopt physically active lifestyles (Bauman et al., 1990; Corti et al., 1995). Epidemiological evidence has indicated that
moderate-intensity regular physical activity is an important means of maintaining health; however, in promoting this message a well planned and implemented campaign is necessary. May 1999 saw the release of the National Physical Activity Guidelines, an Australian Government initiative aimed at achieving this goal.

2.4 National Physical Activity Guidelines

Physical activity for health is one of the responsibilities of the Primary Prevention Section of the Population Health Division in the Australian Commonwealth Department of Health and Aged Care. Their aim is to improve the health status of all Australians; one way of achieving this goal is by promoting physical activity and a healthy diet (Population Health Division Commonwealth Department of Health and Aged Care, 2000a). The release of the 1996 U.S. Surgeon General’s report on Physical Activity and Health (United States Surgeon General, 1996) and the release of the National Health and Medical Research Council’s report Acting on Australia’s weight (National Health and Medical Research Council, 1997) highlighted the fact that moderate-intensity regular physical activity is beneficial to health. This is a departure from previous thinking; it was once thought that exercise had to be vigorous and continuous for 30 minutes per day, 3-4 times per week. A number of key stakeholders had to come on board to enable the department to get this new message out to the general population.

Active Australia was developed and comprised of key organisations in the area of sport, health and recreation. Their aim was to build infrastructure at all levels of government and community to promote increased levels of participation in physical activity (Population Health Division Commonwealth Department of Health and Aged Care, 2000a). Active Australia released a report: ‘Developing an Active Australia: A framework for action for physical activity and health’, which mapped out the health sector’s aim to increase the community’s participation in physical activity (Commonwealth Department of Health and Family Services, 1998).

In May 1999 the Strategic Inter-Governmental forum on Physical Activity and Health (SIGPAH) was convened. The SIGPAH is comprised of all health departments across all states and territories including the Commonwealth Department of Health and Aged Care and observers from the Australian Institute
of Health and Welfare and the Australian Sports Commission. Their aim is to work with Active Australia to advocate the benefits of physical activity as a means of achieving health and well-being for all Australians (Population Health Division Commonwealth Department of Health and Aged Care, 2000a).

Concurrent to the above, in 1997 consultants were assigned to develop national guidelines for physical activity as recommended in the NHMRC’s report. Egger et al., (2001) have briefly documented this process in their paper Developing National Physical Activity Guidelines for Australians; the contents of which are summarised as follows.

In 1997, apart from the USA, no other nation had developed evidenced-based guidelines for physical activity (see also, Ohta et al., 1999), thus the development of physical activity guidelines for Australia was an innovative initiative. The process of developing the guidelines was an interactive one; a Scientific Advisory Board comprising of 10 specialists was appointed to guide the process. In the beginning seven guidelines were drawn up based on reviews of the relevant literature and the previous work of the consultants. There were three main stages of development:

"The establishment of a set of scientifically valid guidelines acceptable to key stakeholders.

The testing of these guidelines against members of the general population to ensure that the guidelines were readily understood and had the potential to motivate inactive people to be more active.

A final assessment by the Scientific Advisory Board (and key stakeholders) to ensure that the scientific validity of the guidelines was not compromised by the modifications resulting from consumer feedback" (Egger et al., 2001, p. 562).

The draft of the seven guidelines was presented on the first day of a workshop to 27 physical activity specialists. On the second day 47 physical activity or health practitioners were given the guidelines. The resulting discussion covered both the draft guidelines and alternatives, resulting in the use of a modified delphi technique to reach consensus on both the wording and need for each guideline.
The resulting guidelines were sent for comment to the stakeholders including government departments through to people in the fitness industry. Over 200 individuals and organisations were asked for comments with more than fifty percent responding. A resulting draft of the guidelines was then circulated to those consulted previously. This was followed with a request for comment by a few international experts. In all there were seven drafts during which there was exposure to various media as well as being placed on relevant Internet user group lists (Egger et al., 2001).

The consumer testing of the draft guidelines first took place during eight focus groups across metropolitan and rural Australia. This was followed by 400 intercept interviews in Sydney, Melbourne and Perth shopping centres. As the aim of the testing was to ensure the guidelines could be understood by the population as a whole and to motivate the inactive, the testing was skewed towards people with lower educational levels and the inactive (Egger et al., 2001).

This research showed that most inactive people preferred a hierarchical set of recommendations. The Scientific Advisory Board was then presented with appropriately modified guidelines to ensure the “guidelines retained scientific accuracy while accommodating public understanding”. After approval by the relevant stakeholders the final draft of the guidelines was drawn up (Egger et al., 2001).

The exhaustive research and testing of the guidelines resulted in the launch of the National Physical Activity Guidelines in May 1999 (Commonwealth Department of Health and Aged Care, 1999). First and foremost the guidelines aim to increase physical activity to levels that maintain good health and are not intended as training for sports. The guidelines encompass four recommendations, specifically:

"Think of movement as an opportunity, not an inconvenience."

"Be active every day in as many ways as you can."

"Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days."
If you can, enjoy some regular, vigorous exercise for extra health and fitness”
(Commonwealth Department of Health and Aged Care, 1999)

Think of movement as an opportunity, not an inconvenience.

The labour saving technology of modern living has encouraged a sedentary lifestyle which humans have accepted. This has been a quiet revolution, a gradual change, but not gradual enough for humans to evolve into healthy sedentary beings. Humans are unhealthy when sedentary; they were designed to move. The result has been increased health problems from lifestyle diseases. A paradigm shift is needed; a change of attitude from seeing exercise as a waste of time to encompassing exercise as a way of life.

Be active every day in as many ways as you can.

Even with the help of labour saving technology lives have become busier and time-out for physical activity seems impossible. However opportunities are there to incorporate physical activity into everyday life, opportunities such as taking the stairs instead of the lift or, when possible, walking instead of taking the car.

Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days.

Putting together 30 minutes of moderate-intensity physical activity does not mean 30 minutes at one time. The exercise can be accumulated over the day; for example, 3 periods of 10 minutes per day is still beneficial to health.

If you can, enjoy some regular, vigorous exercise for extra health and fitness.

This guideline does not aim to replace the previous guidelines. Rather, this guideline aims to add a bonus for those people who are already physically active. For those people in good enough health, this guideline aims to add some ‘huff and puff’ to the physical activity they already engage in. Children and teenagers under 18 years of age should do this regularly. This should be everyone’s goal and it is possible to build physical fitness to achieve this goal. Those who have health problems should seek medical advice.
This literature review has covered a number of issues that have implications for this research topic. Specifically the epidemiological evidence, which emerged over the last three decades and linked physical activity to health benefits, was covered. The relevance of physical activity to health for an ageing population was also highlighted. Then the role of health promotion and the development of the National Physical Activity Guidelines were discussed. However to date there has not been a study which specifically examines the attitudes of older people to the recommendations in the NPAG therefore this study will address this gap in the literature. The next chapter explains the theoretical framework of this qualitative study.
Chapter 3: THEORETICAL FRAMEWORK

This chapter examines the Theory of Reasoned Action and explains how this theory facilitates the exploration of the research question.

3.1 Attitude theory

For the purposes of this study the concept of attitude will be used to understand the individual's response to the NPAGs' recommendations. That is, people's attitudes will be explored on the basis of cognition, affect and behaviour. Of the many theories in the attitude-behaviour literature, Ajzen and Fishbein's Theory of Reasoned Action (TRA) is regarded as the dominant theoretical framework (Olson & Zanna, 1993). This theory forms the basis of the theoretical framework for this research. The aim of the theory is to predict and understand a person's behaviour. The theory proposes that people's intention to perform or not to perform a given behaviour is volitional and that they make rational choices before they make their decision (Ajzen & Fishbein, 1980). These rational choices relate to personal perception about the behaviour and perception of others' beliefs; that is, social norms are an influence on attitude and likely behaviour. The TRA is represented diagrammatically below.
The theory traces behaviour back to a person's beliefs. Although correlation between intention and behaviour is not perfect, unless something unexpected happens, a person's behaviour is usually in accordance with their intentions. That is, a person's intention is likely to be an immediate determinant of their behaviour.

A person's intention is a function of their attitude towards the behaviour and their subjective norm. Their attitude is their positive or negative personal evaluation of the behaviour, whether they will or will not perform that behaviour. Their subjective norm is their perception of the social pressures to perform that behaviour. Additionally these two determinants of behaviour, attitude and subjective norm, are weighted. That is, the individual considers the importance of these two determinants and weights them accordingly.

The theory also states that attitudes are a function of beliefs. If a person believes that performing the behaviour will lead to positive outcomes then their attitude towards that behaviour will be positive and vice versa. These beliefs are termed **behavioural beliefs**. A person also has important others in their lives. A person behaves according to what they believe important others think about a given behaviour. These subjective norms are also a function of beliefs; they are termed **normative beliefs**.

For example, the above theory, when applied to a hypothetical 65-year-old person considering the recommendation to increase physical activity, could result in the following scenario. The person believes (behavioural belief) that increasing their

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**Figure 3.1: Ajzen and Fishbein’s Theory of Reasoned Action**

The person’s belief that the behaviour leads to certain outcomes and his evaluation of these outcomes

The person’s belief that specific individuals or groups think he should or should not perform the behaviour and his motivation to comply with the specific reference

Attitude toward the behaviour

Relative importance of attitudinal and normative considerations

Intention

Behaviour

Subjective norm

(Ajzen & Fishbein, 1980)
physical activity would lead to improved health – a positive attitude. The person also believes (normative belief) that their friends would think them silly and too old to increase their physical activity – a negative norm. So their attitude and subjective norm are in conflict. The resulting behaviour will depend on the weight given by the individual to their positive attitude towards increasing their physical activity and their perceived pressure to comply with the view of their peers. If the person perceives the disapproval of their friends to be more important to them than the perceived health benefits, then they are unlikely to undertake the behaviour. If the person has reason to weight the perceived benefits highly, for example, following a diagnosis for diabetes, then they are more likely to perform the behaviour.

The above theoretical framework is based on the social psychology construct of attitude. Social psychologists use the concept of attitude to explain human behaviour. Ajzen and Fishbein (1980) credit Thomas and Znaniecki in 1918, for first using the attitude concept as a way of explaining social behaviour. Although attitude research has lasted many years, Olson and Zanna’s (1993) review of attitude literature, between 1989 and 1991, found no universally accepted definition of attitude. Olson and Zanna (1993) stated that there are three aspects of attitude that are generally accepted by attitude theorists. The first is the evaluative aspects of attitude. Ajzen (1988, p. 4) also stated that “most contemporary social psychologists seem to agree that the characteristic attribute of attitude is its evaluative nature”. This evaluative response to an entity is either positive or negative (Ajzen, 1988; Ajzen & Fishbein, 1980; Eagly & Chaiken, 1993). Secondly, “attitudes are represented in memory” (Olson & Zanna, 1993, p. 118). Once an individual makes an evaluative response to an entity, an attitude is formed and stored in memory; this attitude can be activated by cues related to the attitude object (Eagly & Chaiken, 1993; Olson & Zanna, 1993). Thirdly, the attitude response can be made on an affective, cognitive or behavioural basis (Ajzen & Fishbein, 1980; Eagly & Chaiken, 1993; Olson & Zanna, 1993).

The most popular method of grouping attitude-relevant responses on affect, cognition, and conation (behavioural) dates back to Plato (Ajzen, 1988, p. 4). Eagly and Chaiken (1993, p. 1) reviewed the literature on attitude and offered their conceptual definition as follows: “Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.”
They suggested that attitude is formed after an individual makes an evaluative response to an entity on an affective, cognitive or behavioural basis.

Underlying Ajzen and Fishbein’s theory (1980) is the concept of volitional behaviour. Eagly and Chaiken (1993) suggested that volition may not be a part of some behaviours, for instance where the behaviour requires certain skills, resources or even opportunities. For example, if a person is precluded from purchasing a gym membership due to a lack of financial resources they are not making a truly volitional decision. However, if this scenario is considered in relation to the TRA it can be seen that a distinction is made between the attitude towards the behaviour and the attitude towards behaving in a certain way (Donovan & Henley, 2003). That is, a person can have a favourable attitude towards gym membership, but an unfavourable attitude towards the purchase of a gym membership, as it may cause financial hardship.

Egger et al. (1999) noted that one of the aims of health promotion is to affect behaviour. They also noted that knowledge of what influences health is not necessarily a motivating factor in changing the individual’s behaviour towards healthy alternatives. For knowledge to be acted upon, health promotion has to affect the individual’s attitudes towards health enhancing behaviours. There are a number of knowledge-attitude-behaviour models to use in the development of a health promotion campaign. The TRA is one of the more developed knowledge-attitude-behaviour models, which has been used extensively in areas of social psychology and consumer decision making and been applied to areas of health behaviour (Egger et al., 1999).

On the basis of the above discussion the TRA is the theoretical framework for this research. The theory aims to predict and understand behaviour. It proposes that the individual’s behaviours are volitional and rational and that social norms influence attitudes and behaviour. Therefore, the TRA facilitates the aims of this research which are specifically to explore older people’s attitudes towards the recommendations in the NPAGs on the basis of cognition, affect and behaviour — how people think, how they feel and their intended behaviour after hearing the NPAGs.

The next chapter discusses the methodology used for this study.
CHAPTER 4: METHODOLOGY

In this section the methodology chosen for this research is presented. Firstly, the nature of qualitative research is discussed. Secondly, the reasons for specifically choosing focus groups to explore older people’s responses to the National Physical Activity Guidelines are explained. Thirdly, the population frame, sample and procedure are explained and finally, the method of analysis is outlined.

4.1 Qualitative research

The overall objectives of this study were to explore an in-depth understanding of ‘healthy’ and ‘unhealthy’ older people’s responses to physical activity in general and to the recommendations in the National Physical Activity Guidelines in particular. This exploratory study was seeking detailed information about how older people would think about the guidelines, how they would feel towards them and how they might intend to change their behaviour. The aim was to enable discovery of the research phenomenon in all its multifaceted forms; rather than finding out ‘how many’ or ‘how often’, the aim was to seek out the “why behind the numbers” (Basch, 1987, p. 411).

Qualitative research is a method of research most suitable for exploratory studies; it allows the researcher an insight into the phenomenon being researched (Leedy & Ormrod, 2001). “The term qualitative research means any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification” (Strauss & Corbin, 1990, p. 17); it is a method of research and analysis where the data come in the form of words (Leedy & Ormrod, 2001). There are various forms of qualitative data collection methods, from the more
conventional interviewing and focus groups techniques (for example see, Fontana & Frey, 1994) to the more contentious method of introspection (for example see, Holbrook, 1995). The specific requirements needed to answer the research question, such as the characteristics of the participants, the available funds for data collection and the available time, will prescribe the data collection method.

4.1.1 Focus groups

Primarily, focus group interviews were the source of the data for this exploratory qualitative research study and were chosen for the following reasons. The Theory of Reasoned Action, the theoretical framework for this study, emphasises personal motivation and social norms. Focus groups allow the researcher to explore individual perceptions of each of these and, through the interaction in the groups, see the social norms influence in practice. Focus groups elicit responses relating to what the subjects feel and think (Debus, 1986). Focus groups have the advantage of being: “inexpensive, data rich, flexible, stimulating to respondents, recall aiding, and cumulative and elaborative, over and above individual responses” (Fontana & Frey, 1994). Focus groups allow interaction between the group’s participants, which creates a fertile environment for the generation of ideas and thus, much richer responses, often unanticipated by the research. Group/peer pressure will be valuable in challenging the thinking of respondents and illuminating conflicting opinions.” This sort of invaluable response may not emerge during individual interviews.

The aim of this research was for the collection of data to be as appropriate to the needs of the participants as possible. Focus groups were appropriate for this purpose. For example, for the individual participant, being part of a group takes the pressure off, they do not have to answer every question (Basch, 1987), thus adding to their comfort level and making their participation an enjoyable experience. The comparatively inexpensive costs of focus groups are an additional advantage.

However, focus groups, as well as having many advantages, also have potential limitations. For example, group/peer pressure can act as a negative force within a focus group, while sensitive issues or group culture may inhibit responses from
some people. Alternatively one group member may try to dominate proceedings (Fontana & Frey, 1994). Also, ‘group think’, a tendency to conform, may stifle spontaneity (Basch, 1987; Fontana & Frey, 1994). Basically, because of the group dynamics, which come into play during the focus group session, the success of the interview is reliant on the interviewer’s skills (Basch, 1987; Fontana & Frey, 1994).

The focus group meetings followed a prepared guide which facilitated the building of rapport amongst participants and helped to counteract peer pressure. The subject of the meetings was a topic that all participants were comfortable to discuss and consequently the sensitive issue disadvantage was not a problem in this case.

4.1.2 Population frame and sample

This research project used a convenience sample. The population was Western Australian residents aged 65-85 years. The sample frame was part of the Western Australian-based Positive Ageing Foundation’s databank. This databank is made up of approximately 3000 older people who have said they are interested in being available for research studies. They have ticked the statement on the Positive Ageing Foundation’s application form that says: “I am keen to have my opinion sought on issues that might improve my life and the lives of other older adults”. The Positive Ageing Foundation does not make the whole databank available to researchers. Their aim is not to “use up” their volunteers so they restrict access to only those people who have not participated in a recent research study. This research project was given the contact details of 70 males between the ages of 65-74, 97 males between the ages of 75-85, 104 females between the ages of 65-74 and 98 females between the ages of 75-85. As the foundation is not usually contacted when a member dies it was found that two of the contacts were deceased.

Research indicates it is desirable to select homogeneous focus groups (Basch, 1987; Debus, 1986; Fontana & Frey, 1994), for example, people who have similar characteristics in respect to demographic, social, and cultural background. This facilitates for the participants an atmosphere conducive to interaction (Basch, 1987).
Non-probability, purposive sampling was used to include points of view that may be related to age, gender and socio-economic status. Thus, findings are not generalisable but can be used to identify hypotheses and apparent differences, especially if consistent with the literature, subject to subsequent testing using quantitative methods (Basch, 1987). Eight groups of between 6 and 8 participants were delineated by age, gender, socio-economic status and whether 'healthy' or 'unhealthy' as follows:

- one group of males, aged 65-74, white collar healthy (M65-74WH)
- one group of males, aged 75-85, blue collar healthy (M75-85BH)
- one group of males, aged 65-74, blue collar unhealthy (M65-74BU)
- one group of males, aged 75-85, white collar unhealthy (M75-85WU)
- one group of females, aged 65-74, blue collar healthy (F65-74BH)
- one group of females, aged 75-85, white collar healthy (F75-85WH)
- one group of females, aged 65-75, white collar unhealthy (F65-75WU)
- one group of females, aged 75-85, blue collar unhealthy (F75-85BU)

Reference will be made to these groups in the text of this report using the abbreviated form shown in parentheses.

Postcodes provided by a market research company were used to categorise the participants' socio-economic status.

Upon making telephone contact with the prospective participants a number declined to participate for various reasons. As this research project was held in the CBD of Perth, by necessity, participants were required to be physically able to travel to the venue unaided or to have their own carer assist them. Consequently there were a few participants unable to make the journey. One prospective participant asked if there were facilities for disabled parking and wheelchair access. Upon enquiries of the Positive Ageing Foundation it was found that they only had instructions on how to travel to their premises for able-bodied people. One prospective participant was blind and unable to travel into the city. A few prospective participants declined to participate because English was their second language and they had poor English skills. A few were deaf, but one offered to participate in written questionnaires. A few said they had hospital appointments.
Some said they were busy and others declined stating their disinterest. Consequently, the data collection was affected by these restrictions, as we were not able to include disabled or very inactive older people.

Initial contact with prospective participants was made by phone. A screening questionnaire (See appendix 1) verified the study requirements of age, gender, socio-economic and self-reported health status. Health status was either 'healthy' or 'unhealthy'. It was anticipated that 'healthy' older people would express more favourable attitudes towards adopting the recommendations than 'unhealthy' older people. In order to have both 'healthy' and 'unhealthy' participants, a self-rated health response was sought as these sorts of surveys have shown to be accurate in the past (McCallum, Shadbolt, & Wang, 1994). Initially it was found that almost everyone considered themselves healthy. Further research of the literature revealed other studies had similar findings (Bernard, 2000; Sidell, 1995; Vaillant & Mukamal, 2001). For example Sidell (1995) noted that as people age there is some form of degeneration therefore older people would not meet the biomedical definition of health. However, older people on a day to day basis generally function well and therefore meet their own definition of healthy. These findings necessitated making amendments to the screening questionnaire. The changed questionnaire asked the prospective participants if they had had a serious illness in the past 5 years (McCallum et al., 1994) and participants who said yes were then categorised by the researcher as 'unhealthy'. Although prospective participants were not also asked to give their subjective assessment of their health, many added that they were healthy even though they had clearly indicated that a medical definition of their health status would for the researcher categorise them as unhealthy.

In recruiting participants for the focus groups the aim was to have groups of five to seven people. This allows all members a turn to speak and a longer period in which to speak thus reducing any frustration while waiting to interject (Debus, 1986). In the past the Positive Ageing Foundation had found that eight people had to be invited in order to achieve groups of five to seven participants. Although eight people were invited to each group, the number of no-shows was much less than anticipated, resulting in numbers of between six and eight for each group. It would have been inappropriate to request that people not participate especially as some had put in a great effort to attend. One female participant had been asked, at the last minute, to look after her grandson and she brought him along rather than
'let the group down'. (The young boy sat away from the group and quietly entertained himself for the duration of the focus group.) A male participant arrived aided by his wife, as he was no longer able to get in and out of the city unaided. (In this instance the wife left the meeting and called back later to collect her husband.)

The focus groups were conducted at the Positive Ageing Foundation's conference rooms, a neutral place for both participants and researcher. They are located in the CBD of Perth, which has access to public transport and parking facilities. Participants were reimbursed the cost of their travel expenses and offered light refreshments.

4.1.3 Procedure

Prior to the focus group interviews participants had been told they were to discuss a health issue so that they came with an open mind rather than with preconceived ideas about the topic. The following briefly describes the procedure for the focus groups.

The discussion outline for the focus groups had the specific purpose of establishing the respondents' attitudes to physical activity in general and the recommendations in the NPAGs in particular, starting from a broad perspective and narrowing to the specific aims of the research (Basch, 1987; Debus, 1986). A topic guide was used (see appendix 2). The guide was divided into six sections and a time frame was allocated to each section in order to adequately cover the material related to that section; the total time was approximately one hour.

It should be noted that in the earlier section on focus groups it was stated that there are potential limitations to holding focus group meetings. In order to minimise any of these limitations, Basch (1987, p. 417) suggested that when the researcher prepares the outline for the proceeding of the focus group, items which relate to the "social and psychological functioning of the group" should be included. This was addressed by inviting participants to come early to meet their fellow participants. They were both offered and encouraged to partake in refreshments on arrival. They were also shown where the amenities were and asked if they needed any other help. As well as giving participants name badges, they were introduced to each other. As each subsequent participant arrived they
were introduced to the earlier arrivals; this meant each participant's name was used a few times.

To establish the researcher's skills as a facilitator of the focus groups the researcher's supervisor facilitated the first focus group while being observed by the researcher. Then the researcher, observed by the supervisor, facilitated the second focus group. Having met the supervisor's focus group facilitation prerequisite, the six subsequent groups were facilitated by the researcher without observation. The topic guide directed the interviewer through each session in approximately the following manner.

On commencement of the focus group session participants were invited, once again, to introduce themselves and give a little information about themselves; for example, how they had travelled to the venue, thus reinforcing both the researcher's and the group's knowledge of each participant's name. The groups were seated around a table enabling each group member sight of all other participants.

After the introductions it was explained to participants just how focus groups work. Before any discussion commenced the participants were informed that this research would comply with Edith Cowan University Ethics policy and standard ethic clearance was sought and approval given. Assurance was also given to participants that their anonymity was protected even though the focus group's proceedings would be audiotaped. Also, participants were reminded that they were free to withdraw at any stage during the focus group. It was also explained to participants that some ground rules exist to facilitate the smooth conduct of focus group meetings, as follows:

We want you to interact but as this is taped please don't all talk at once

Please avoid starting side conversations

Please avoid holding the floor - give others a chance to speak

The session commenced with the interviewer encouraging a discussion on what good health means to the group and moving onto what they do to maintain their health.
Next, to give participants time to think so that they would feel comfortable in offering opinions to the group, the participants were asked to complete a short written questionnaire, which asked questions relating to physical activity. The questionnaire asked the following questions:

*Think for a moment about "physical activity". In the spaces below, what thoughts, feelings or pictures come into your mind?*

- Thoughts (if any)
- Feelings (if any)
- Pictures (if any)

*Here are some things that people think of when they think of doing "physical activity". If they apply to you tick yes if not tick no.*

Enjoyment, pain, being healthy, embarrassment, fear of injury, fear of safety, sense of achievement, too busy, more important things to do, sense of well-being.

The one that most applies to me is number?

*Which of these four statements applies to you most?*

- I do physical activity regularly and enjoy it.
- I do physical activity regularly, but don't enjoy it.
- I don't do physical activity regularly, but wish I did.
- I don't do physical activity regularly and don't want to.

*Please state what physical activity you do each week, if any.*

Upon completion of the questionnaire the discussion was continued and participants were verbally asked the following questions.

*What do you think is a good level of physical activity?*

*Does your family or would your family support you in your efforts to do physical activity?*

*How about your friends; is their support the same as your family's support?*
What about strangers? Do you think about them when you think about doing physical activity outside the home?

Finally, the focus groups were directed towards giving spontaneous attitudes towards the recommendations in the NPAGs. Participants were shown the NPAGs and asked to comment on them. Although the framework of the discussion outline aimed to move from the general to the specific, the aim included using the flexible nature of the focus group technique (Fontana & Frey, 1994) to its greatest advantage. This flexibility was put into practice early in the proceedings as initially the plan was, upon showing the guidelines, to ask: 'How does it make you feel?' However, from the puzzled look on participants’ faces it was obvious they had not seen the guidelines in this form before and the first question was changed to: ‘Have you seen these guidelines before?’ The focus groups were then drawn back to the planned first question and the topic guide was followed as applicable.

At the conclusion of the focus groups, the participants were asked if they had any questions of the interviewer. Questions tended not to relate to the NPAGs, but to the research project. For example, one woman wanted to know if the men had sat through the same sort of focus group and “…if different, how different are they to the women?” Others wanted to know if they had been of help. After all the questions were answered the groups were thanked and copies of the NPAGs were given to all participants. Their attention was drawn to the importance of seeking advice from their GP before commencing any physical activity program.

During the first two focus group sessions it became apparent that a number of participants had limited hearing and the interviewer had to carefully enunciate. In two later focus groups a couple of participants were very deaf and needed information repeated to them in order that they participate. The researcher had not picked up the deafness of these participants during the telephone screening process.

4.1.4 Ethics

All research undertaken by students at Edith Cowan University involving human subjects must have the approval of the Human Research Ethics Committee. This study obtained such approval prior to commencement of the research project. In addition, the researcher had to sign the Positive Ageing Foundation’s ‘Use of database confidentiality agreement’ (see appendix 4). All the participants were
members of the Positive Ageing Foundation's data base and as such had completed the 'Positive Ageing Research Group's' application form (see appendix 4).

4.1.5 Analysis

This section explains the analysis of this study with reference to the relevant literature.

Ultimately the aim of qualitative research is the development of theoretical insights which "describe and explain social phenomena" (Giacomini & Cook, 2000, p. 478). The end product of the research is a descriptive narrative. This written work should be clear so that the reader gets a clear insight into phenomena being studied (Giacomini & Cook, 2000). Often qualitative research is criticised for the mass of unstructured data, which has to be interpreted by the researcher and thus the process is likely to be subjective rather than objective in nature (Barbour, 2001). Therefore the objectivity of the research is reliant on the researcher's skill when collecting and analysing the data. However, all forms of research have aspects of subjectivity (Mays & Pope, 1995) and all forms of research need to engage rigorous standards of analysis to minimise subjectivity.

Transcribing the audiotapes was the first step in the analysis of this study. This process re-immersed the researcher into the focus group proceedings. Although the researcher attended every focus group interview, the data immersion experienced from transcribing and reading the transcription gave the researcher further insights into what was said during the interviews.

The next stage in the analysis was the coding of the data. It should be noted that coding is part of the analysis process and not the analysis itself (Gough & Scott, 2000). Coding is the process which reconstructs the data into a more theoretical structure (Goulding, 1998). Initial coding can be based on what are labelled in vivo codes or theoretical codes. The in vivo labels use the terminology used by the participants. Theoretical labels are those labels that reflect the analysis of the researcher (Green, 1998; Strauss & Corbin, 1990).

Green (1998, p. 1065) states "coding has to be theoretically informed". Malterud (2001, p. 484), in giving the specific terms she uses, suggests the metaphor of "the analyst's reading glasses" for the "theoretical frame of reference" and describes it
as "theories, models, and notions applied for interpretation of the material and for understanding a specific situation".

The coding was done on a line by line basis. Initially the coding labels were theoretical relating to the objectives of this research, that is, the participants' attitudinal responses (emotion, cognition and behaviour) to the research phenomenon. The researcher gained additional insights about the phenomenon of interest as the participants' information indicated they had issues other than those anticipated by the researcher.

Therefore, using different coloured highlighters, firstly the transcripts were painstakingly searched manually and secondly by using a computer’s "word search" for the purpose of coding and ultimately identifying themes relevant to the research question. The transcripts were further searched to refine these emerging themes. Once the themes were identified they were organised to form the structure of the data analysis report by linking the findings to the theoretical framework.

For example, initially, using different coloured highlighters, the transcripts were coded. The first codes used were ‘I think’, ‘I feel’ and ‘I believe’ and they were highlighted with blue, yellow and pink respectively. For example, the transcripts were searched for specific instances where the participants used such terms as 'I think' or 'I feel' in relation to the first question asked during the focus group meetings. The transcripts were further searched using a computer’s "word search" for the same words, to eliminate the chance of them being over looked during the manual search. Accordingly, the participants’ answers to each of the focus group questions were search and coded in the same manner. Next, words were identified which also related indirectly to participants' thoughts, feelings or behaviours, for example, 'gratitude, anger, motivate' and so on.

To identify and refine emerging themes these coded words were re-read in context to establish what the participants were specifically relating to. For example, initially ‘I think’ was one of the codes assigned to this text: 'I think I would go dippy riding an exercise bike. I would go dippy walking around the same bit of Duncraig every day and so I find I do it a different way.' However, from reading the text in context, including the text that came before this text, one of the themes identified here was the participant's need for 'variety in their physical activity'.
Other themes emerged from the researcher's continual reading of the data. For example one participant explained how they had cancelled their papers so that they would have to walk to the shop; they also took the dog on this walk. This brought to the researcher's attention that this participant and other participants were developing strategies to accommodate physical activity into their day. In context this also identified that participants thought they had to do something 'extra' to be physically active. However, this also identified other unexpected themes such as 'easy access to the shops' and 'dog walking' as it became obvious from the researcher's continual reading that other participants were also engaging in one or all of these activities.

As stated this was a painstaking process and initially the process was difficult to manage. With more and more immersion in the reading of the transcripts and experience with coding the transcripts, ultimately the themes were identified and organised to form the structure of the data analysis report.

The next chapter presents the data analysis.
Chapter 5: DATA ANALYSIS

This chapter discusses data from the focus group meetings in relation to the objectives of this research. Attitudinal responses (emotion, cognition and behaviour) are discussed in relation to physical activity in general and then in relation to the National Physical Activity Guidelines. Then the barriers to physical activity and the facilitators of physical activity are discussed followed by the discussion on the participants’ views on the source of the message. The question “Will older people’s perception, of the beliefs other people hold, influence their intentions to participate in physical activity?” is discussed under the heading social norms. Lastly, the question “Are healthy older people more likely to participate in physical activity than unhealthy older people” is also discussed.

5.1 Attitudinal response to physical activity in general

Before the participants were shown the National Physical Activity Guidelines (NPAG), their attitudes to physical activity in general were explored. The responses are discussed in three attitudinal categories: emotion, cognition and behaviour. Behavioural responses include reported current physical activity behaviours and intentions to behave having seen the guidelines. Although the focus groups were divided into two age groups, 65-74 years of age and 75-85 years of age, no discernible differences emerged between the age groups. There were also no discernible differences between the white collar and blue collar groups so the following results are discussed collectively. However each verbatim is coded with the appropriate abbreviation indicating the specific group.
5.1.1 Emotional response to physical activity in general

In this section participants’ emotional responses are discussed under three headings: 1) feelings about physical activity in general; 2) similarities and differences between ‘healthy’ and ‘unhealthy’ participants’ feelings and 3) similarities and differences between male and female participants.

5.1.1a Feelings about physical activity in general

Generally participants in all groups engaged in some form of physical activity and the dominant emotional response was positive. The positive feelings discussed related to pleasure, motivation, gratitude, and enjoyment. There were also some negative feelings and these related to guilt, the limitations of age (although expressed optimistically), the perceptions of others, and some embarrassment.

Participants expressed pleasure in their participation with responses such as, ‘at the stage I’m at, there’s a certain measure of exuberance about it’ (M75-85WU) or ‘I’m grateful that I can climb up on the roof and I can play 18 holes of golf’ (M65-74WH). Others expressed their emotional experience in terms of the rewards they get, such as, ‘it’s the after effects I enjoy, it’s the feeling good afterwards’ (M65-74WH) or ‘I get a little buzz if I walk’ (M65-74WH). One participant put it in terms of both the mental as well as the physical rewards: ‘if you have exercised and done something, it’s good for your sanity as well. You feel good’ (F65-74BH).

A number of participants spoke about motivation; enjoying the activity was an important motivator: ‘it’s what motivates you to do it, if you don’t really like it you are not going to do it’ (F65-74BH). Another way that enjoyment was a motivator was to make sure that ‘as far as possible you do it in a pleasant environment’ (M75-85BH). Another motivator was maintaining good health and therefore extending one’s healthy life: ‘What motivates me now is that you pick up the paper and see guys much younger than me falling off the perch.’ (M65-74WH). Variety of activity was also important to avoid boredom: ‘I would go dippy riding an exercise bike, and I would go dippy walking around the same bit of Duncraig every day.’ (M65-74WH). Having the company of a friend or spouse was also a motivator, ‘as it certainly makes it more pleasant to be able to do an activity with company’ (M65-74WH).
Walking was the most popular participatory physical activity with respondents from all groups expressing the pleasure walking gave them. Some participants made comments such as: 'I still love walking' (M75-85WU), 'I love to walk, and I walk a lot'; 'I enjoy walking very much and have walked on the Bibbulmun Track' (M75-85WU). Others spoke of enjoying their surroundings, mentioning the trees and the birds, and the peace and quiet.

Participants also spoke of the displeasure they felt if they neglected to do the physical activity that day: 'we feel unless we do it we miss it' (F65-74BH). Participants had feelings of guilt if they missed the physical activity due to their own lack of motivation or because they felt they had not done enough: 'I don't do as much walking as I feel I ought to do' (M65-74WH). If the physical activity was missed due to no fault of the participant they still felt displeased: 'if I've got to miss out because there's another appointment or because there's some other intrusion, I really feel that the day's not right' (M75-85WU).

Although the dominant emotional response was positive, some participants in all groups spoke of the limitations age put on their participation in physical activity: 'It's a struggle to do it sometimes...you've got to force yourself. It's in your own interests' (M65-74WH). Generally the limitations of age were discussed in optimistic terms rather than with feelings of resentfulness. One participant commented: 'Gee if you felt resentful about that, you would be pretty unhappy all the time' (M65-74WH). Although some comments were made such as: 'While I'm doing it I think, oh what the hell I'm getting too old. I'll give this away,' (M65-74WH) this would be tempered by the participant saying: 'but afterwards I think, I feel pretty good now' (M65-74WH). Even though age put limitations on participants' involvement in physical activity, generally participants had not lost sight of the benefits gained from undertaking physical activity.

The groups discussed how other people might perceive the participants' attempts at physical activity. For example, there was a perception that people less able to participate may view an able participant negatively: 'They see me on a bike every morning and I get a few, not really rude remarks, a few remarks, I've got a feeling it's jealousy that's really causing it' (M75-85WU). Some participants discussed how social norms were very different in the past compared to today; that the community held certain perceptions of how older people should behave. This resulted in a sense of embarrassment for participants who had engaged in physical
activity: 'Twenty years ago I went out on my bike in the morning and I was embarrassed because...my next-door neighbour saw me - I was a bit embarrassed; now people just accept it, don't they?' (M65-74WH).

5.1.1b Similarities and differences between 'healthy' and 'unhealthy' participants’ feelings

Generally 'healthy' and 'unhealthy' participants held similar feelings towards physical activity as members of both categories were physically active people. This could be a sample bias as noted in the methodology chapter, as this study by necessity required that participants be able to travel to the venue. Nevertheless, participants, who fitted the 'unhealthy' selection criteria, were more likely to discuss the limitation ill health puts on their ability to participate. Although participants mainly described their physical limitations, such as arthritic pain, some of these limitations were described in terms of emotions such as fear. There was the fear of not maintaining balance. As one participant said: 'You are frightened of moving too sharply or to the left or to the right without knowing that there's somebody or something there to stop you' (M65-74BU). There was also the social fear of getting back into physical activity after an illness: 'It's been very difficult for me sometimes to get out and do things and be with people and so on... But once I get going I'm all right. It's making that effort to take the risk of joining in and doing things' (F65-74WU).

5.1.1c Similarities and differences between male and female participants

Male and female participants generally showed similar feelings towards physical activity but there were some differences. These related to female participants’ fears of leaving the house, fear of uncontrolled dogs, one woman's fear of snakes and protecting the home.

First, only female participants spoke of fear when leaving the house to participate in physical activity: 'I go out early on my own, and if somebody passes me that I don't like the look of, I get quite agitated and find I'm watching over my shoulder as I go along' (F65-74WU). Another said: 'I personally don't enjoy walking around on my own' (F65-74WU). One woman’s comment related to combining physical activity with other activities: 'I used to walk into the city and I liked that, then I would bus home, but then when there was so many bag snatchers I sort of
got a bit worried about that so I stopped doing that' (F65-74BH). Some women spoke of the fear of falling due to uneven pavements or tiled shopping centres where the floors 'were very shiny [and they] felt insecure' (F75-85WH).

Second, some female participants raised their fear of uncontrolled dogs. One woman said: 'I don't ever walk in the hills without a stick. There are dogs; there have been attacks and you have just got to be aware all the time of what you are doing and where you are going' (F65-74BH). One woman castigated irresponsible dog owners saying they are very 'dogmatic' (F65-74BH) about their pets not being a threat. However, some female participants felt that the fear one experiences when confronted by an uncontrolled dog was in itself painful; the dog owner saying, after the fact, 'he wont hurt you' (F65-74BH) came too late to prevent that experience of fear.

Third, one woman had a fear of snakes: 'I don't walk around my precious lake when the snakes are around. Once the snake season's over and they are all gone, wherever they are going, then I'm back on track' (F65-74BH).

Fourth, although male participants did not raise the issue of fear in relation to physical activity, one male participant mentioned he had a 'Staffy', which he took for walks. When questioned on his choice of breed by another participant he said his choice was based on protection for the home. 'Well, I like the dog. We wouldn't have one for a long time but when somebody tried to break-in at some hour of the night while we where asleep I said well, that's it I'm getting a dog. So, I went and bought a Staffy pup and I've been training her up. Believe me they take a lot of training and a lot of work with them to get what you want. She's proving to be a very good little watchdog.' (M65-74BU). This was the only indication that male participants gave of having any fears. One female participant said she saw a man in her area who carried a stick and she surmised it was for protection against dogs.

5.1.2 Cognitive response to physical activity in general

In this section participants’ cognitive responses have been grouped into three parts under the headings: 1) thoughts about physical activity in general, 2) ‘healthy’ and ‘unhealthy’ groups cognitions; and 3) male and female cognitions.
5.1.2a Thoughts about physical activity in general

This section discusses participants' thoughts relating to physical activity in general. There are four areas of discussion. First, generally participants thought that physical activity was something "extra" to normal day-to-day activity. Second, participants were taking physical activity and the ageing process seriously. Third, participants thought physical activity had to be coupled with mental activity. Fourth participants thought the community's attitudes towards older people's participation in physical activity were changing.

First, physical activity tended to be viewed as something extra to do. Participants spoke of physical activity as 'walking', 'swimming', 'riding an exercise bike', 'running marathons' and participating in organised activities such as 'Prime Movers' (M65-74WH) or 'Aerobics for Oldies' (M65-74BU). Some participants spoke of strategies they built into their day that helped them achieve their idea of physical activity. For example, one participant said, 'we cancelled our newspaper so that we have to go out and pick it up' (M65-74BU). One man, who, in his retirement, had a young family and a working wife and had taken on the role of homemaker stated, "women have the best activities in that sort of regard...normally, aerobics is entailed in doing all the activities that a woman normally does" (M65-74BU). However, generally participants viewed physical activity as something extra to do rather than an incidental part of their everyday lives.

Interestingly, in response to the question 'Please state what physical activity you do each week?' in the 'Focus Group Questionnaire' (see appendix 3), most of the same categories of physical activity as above were mentioned. However a number of participants mentioned some day-to-day activities. Nine of the twenty-seven men and ten of the twenty-six women who chose to respond to the questionnaire stated gardening as one of their physical activities. One man mentioned woodwork and three men mentioned house maintenance as their physical activities. Three women included housework as a physical activity.

Second, participants had obviously given a lot of thought to the ageing process and their involvement in maintaining control of their physical wellbeing. 'My
impression is that elderly people like us are taking it fairly seriously and giving it their best shot within their physical limitations. They are demonstrating that they realise that it depends on themselves making an effort' (M65-74WH). They had learned to come to terms with the limitation age puts on the body's ability to undertake physical activity: 'It means being orientated towards the idea that things aren't the same today as they were yesterday and adapting to the changes that your body puts upon you,' 'I think, as you get older you get slower. Your reactions are slower. I'm sure mine are' (M65-74WH). They suggested 'one learns to live with one's capabilities and liabilities; it's just part of getting old' (M75-85WU). This was not a negative attitude towards ageing; it was an acceptance of a natural process.

It was suggested that one's perceptions of age could be totally different from the reality of one's chronological age. One participant said, 'mentally you think you're fifty, not seventy-four, but I can't do what I could do when I was fifty. I have to bow my head and think I can't do that anymore' (M65-74BU). Another stated, 'You say, 'I can do it'. That is the danger. You still reckon you can, but actually you cannot' (M65-74BU). Other participants spoke of 'doing the level that you know you can do comfortably' (F75-85WH). No one suggested ceasing one's participation in physical activity. Overall, the message was to listen to your body, 'the body sort of indicates to you' (M75-85WU).

A number of participants spoke about striving to maintain their levels of physical activity. 'At every stage you pick a goal that's just beyond your reach, something to strive for' (M75-85WU). However, generally participants added a precautionary note: 'I think you have to push yourself a little bit to extend yourself but not too much' (F75-85WH). 'I think much the same, that you do eventually know your limitations. You are sensible enough then not to push beyond that level.' (F75-85WH).

Third, there was general agreement that 'mental and physical exercises are important to maintain one's health and well-being' (F65-74BH). (The mental activities they described will be discussed further in the behaviour section.) In maintaining one's health and wellbeing the interaction with others was also considered an important contributing factor. As one participant suggested during this discussion: 'I think it's most important that those [physical] activities involve interacting with other people' (M65-74BU).
Fourth, participants' thought that the community’s attitudes had changed towards older people participating in physical activity compared with attitudes of the past. Again participants showed their awareness of changing social norms; they compared the past to the present. One participant suggested: 'the fact that more elderly people are doing this [physical activity] has swung the pendulum over to where it’s fashionable to do it, where numbers alone have changed the social attitudes...And I think young people admire older people having a go' (M65-74WH). Another participant said: 'I found out that my daughter was saying “my dad’s eighty and he broke his wrist playing squash”.’ (M75-85WU). He explained that she was proud that her father was still playing squash at eighty.

5.1.2b ‘Healthy’ and ‘unhealthy’ groups: cognitions

The following discussion covers three areas. First, ‘unhealthy’ participants believed in the benefits of taking a rest. Second, pain can act as an inhibitor to physical activity. Third, the role of medication is discussed.

First, while both ‘healthy’ and ‘unhealthy’ groups thought one should be sensible about the amount and type of physical activity one does, the ‘unhealthy’ groups also mentioned that it was advantageous to have a rest. The idea was that there is no need to keep going all day, that rest can be beneficial: 'I think if you're feeling tired don't try and get past the mark too much. I mean, everything is wearing out for us' (M75-85WU). One participant agreed 'that you should have a rest in the afternoon occasionally,' (M75-85WU) but, it was important not to fall into the trap of 'sitting around too much' stating that the body was 'like a car engine, it's got to go' (M75-85WU).

Second, one ‘unhealthy’ group discussed pain and how that can limit their physical activity. There were thoughts on how much physical activity to do: 'I reckon from half-an-hour to an hour each day if you can fit it in, no sense in getting into the pain level,' (M75-85WU). 'I think a good level is just before it becomes painful. Then you cease to enjoy it' (M74-85WU).

Third, one ‘healthy’ group participant believed that being healthy meant ‘not to be dependent on any medication’ (M65-74WH). However, in the ‘unhealthy’ groups the use of medication was viewed positively. One participant said, 'without it some of us mightn't be alive' (M65-74BU). In some cases, medication enabled
both 'healthy' and 'unhealthy' participants to engage in physical activity. For example one healthy woman stated, 'I try my best to maintain my activities and I take medication for my arthritis and anaemia. (F65-74BH).

5.1.2c Male and female: cognitions

There were no apparent major differences in the way male and female participants thought about physical activity. However, in two separate groups of female participants the hazard of wearing bifocal spectacles was raised. There was nodding agreement within these groups that bifocal spectacles increased one’s chances of losing one’s balance. One woman stated: ‘if you have got bifocals it only takes a little bump to turn you over’ (F65-74BH).

5.1.3 Reported physical activity behaviours

Participants reported their physical activity behaviours and this is discussed in this section under three headings: 1) self reported behaviours; 2) ‘healthy’ and ‘unhealthy’ participants and 3) male and female participants.

5.1.3a Self-reported behaviours

In discussing participants’ self reported behaviours their responses are grouped into six areas. First, the sorts of activities participants pursued are discussed. Second, companionship was important. Third, dogs played a role in people’s physical activity. Fourth, personal strategies can be built into the day to increase physical activity. Fifth, weather influenced physical activity. Sixth, it is important to exercise the mind as well as the body.

First, participants reported being engaged in many forms of physical activity. The most frequently reported outdoor activity was walking. Other activities included bike riding, golf, bowling, swimming, gardening, and for one, running a marathon.

Second, participants spoke of doing activities with others. Companionship and social interaction were important aspects of engaging in physical activity. Some participants had the company of their spouse and others had family members who sometimes joined them. Both male and female participants spoke of meeting and walking with friends. The suggestion was that it offered encouragement to participate and, as one participant said: ‘we encourage each other not to do
anything foolish’ (M75-85WU). Clubs such as bowling and swimming were talked of as facilitating physical activity in the company of like-minded people; they offered company within the same age group and with people of the same physical capacity. Another participant spoke of the companionship a dog offers and said, ‘I evangelise a lot with my little dog as we are walking’ (F65-74BH) while another participant said: ‘When my wife was working...I walked three times a day for a least twenty minutes with the dog’ (M75-85BH).

Third, participants mentioned having to walk the dog as an encouragement to walk. As one participant said: ‘I have got a dog that has to go for a walk so I walk all the time’ (M65-74WH). One participant spoke of having ‘worn his dog out’ (M65-74WH) and having to go out twice, once for a slow walk for the dog and another, brisker walk, for his own benefit.

Fourth, a number of participants had devised strategies to increase their physical activity. Some mentioned walking to buy the newspaper and several had cancelled the newspaper so they had to walk to the shops to get it. For some participants, walking to get the newspaper tied in with walking the dog.

Fifth, there was mixed reaction to the influence of weather. Some participants found it had no influence on their behaviour, one participant saying: ‘we make a point of walking for 30 minutes minimum of every day, hail, rain, or shine... you can do it between showers even in the wintertime’ (M65-74WH). Others found it did influence them, as one participant said: ‘in the summer I have to walk much earlier because I can't stand the heat. In the winter I don't care if it's raining I walk anyway’ (F65-74WU). Another participant said: ‘we bought a walking machine, because we were going out walking on a morning but, when the inclement weather came along of course that's not so good to do’ (M65-74WH).

Sixth, as mentioned earlier (section 5.1.2a) participants believed exercising the mind as well as the body was the link to maintaining good health and well-being. As one participant put it, ‘I think physical activity is important and I think mental activity is just as important’ (F65-74WU). Some participants did ‘crosswords to keep [the] mind working’ (F65-74WU). Others studied, one participant saying he had ‘been admitted as a Barrister and Solicitor at the end of last year’ (M65-74BU). Significantly, he stated, ‘I regard that as a mental exercise’ (M65-74BU) as he did not practice. Another participant belonged to the University of the Third
Age, which kept her mind active and added pleasure to her retirement. A number of participants undertook voluntary work: 'I'm a volunteer at the Battey Library... it's enjoyable I look forward to it' (F75-85BU). Others volunteered for 'Meals on Wheels' (F75-85BU), acting as a visitors guide at 'His Majesty's' (F75-85BU), or office bearers at their clubs. Some participants believed having a hobby also contributed to one's health and sense of well-being; woodwork was mentioned and one participant spoke of embroidery: 'I find a sense of achievement in doing these beautiful things'. (F75-85BU).

5.1.3b 'Healthy' and 'unhealthy' participants

Both 'healthy' and 'unhealthy' participants engaged in age specific activities, such as 'Prime Movers' (M65-74WH), or 'aerobics for oldies' (F75-85WH). However, 'unhealthy' participants, where their physical capacity was limited, were using aids to help them continue their participation in physical activity. One woman used a walking frame; she found that it helped her balance as she had 'both hands on something' and could 'walk quicker'. (F75-85BU). One male participant said, 'if I have got to get down to the ground I like to take a little bamboo pole with me. It makes it easier to stand up rather than to search for something to hang onto' (M65-74BU). Others had developed their own strategies to help them continue their participation in physical activity. One man said rather than overworking his knees as he had 'osteo 'he 'saved them up for golf' (M65-74WH). One participant who had asthma mentioned participating in Asthma Swimming.

5.1.3c Male and female participants

Fear appeared to impact more on the behaviour of female participants than on male participants. Female participants were more cautious; for example they said they tried to walk with another person, to feel safer. They tended to go outdoors only during daylight hours. As one participant stated: 'I am aware all the time of where I am, what I am doing. I only travel at certain times; I wouldn't travel anywhere near or after dark or towards dark. Even early in the morning is not funny sometimes on the train because you've got the dregs of the night before' (F65-74BH). Also, female participants paid more attention to uneven pavements and dogs when participating in physical activity compared to their male counterparts.
5.2 Attitudinal response to the National Physical Activity Guidelines

In this section the participants’ attitudinal responses to the recommendations contained in the guidelines will be discussed. Firstly, participants’ initial responses to the National Physical Activity Guidelines are discussed. Secondly, the participants’ emotional (affect), cognitive (thinking) and behavioural (cognition) responses to the NPAGs in general are discussed. Thirdly, where appropriate, each guideline is individually discussed and any differences in male and female responses and ‘healthy’ and ‘unhealthy’ participants’ responses are also noted.

5.2.1 Initial responses to the NPAGs

The first question asked of the participants relating to the guidelines was: “Have you seen these guidelines before?” The overwhelming response was no. What became apparent during the rest of the focus group meetings was that participants had not seen the guidelines in that form before. However, participants were aware of most of the information contained in the guidelines; this had filtered through to them via the media.

Generally participants’ initial response to seeing the guidelines was positive. Participants made comments such as ‘good’ or ‘it’s all good’ and ‘all good’. However, some participants were doubtful that the guidelines could be applicable to the whole community. Some participants voiced negative responses and these responses tended to be directed at the source of the message rather than the message itself. This is discussed in a later section.

5.2.2 Emotional response to the NPAGs

Emotional (affect) responses to the NPAGs by participants will be discussed in terms of both pleasure and guilt.

Before participants had seen or given any thought to the guidelines, they had thought physical activity was something ‘extra’ (see 5.1.2a) that one had to do and would feel guilty if they had not done it: ‘I actually do have guilt if I don’t do it’ (F65-74WU). For some participants awareness of the NPAGs’ recommendations
alleviated this guilt. Participants felt relieved from feeling guilty as, without realising, they were already incorporating physical activity into their everyday lives.

Others felt they should not be made to feel guilt. One participant felt that there were: ‘...two good things about being retired: one is being able to read the paper at breakfast time without worrying about going to get on the bus to go to work and the second thing is you can take life at your own pace... You know I don’t really want anyone to tell me what to do. I don’t want it nailed up on the dunny wall and look at it every time I go in there...and be made to feel guilty’ (M65-74WH). Other participants echoed these sentiments. One woman stated: ‘I’m not going to bother about guilt at my age’. (F75-85BU).

Viewing the NPAGs some participants expressed the same sentiments they had expressed in relation to physical activity in general. It had to be pleasurable ‘otherwise you don’t do it’. ‘If you don’t enjoy it, I don’t see much point in doing it’ (M65-74WH). ‘If you don’t enjoy it, it is not going to do you any good whatsoever.’ (M75-85BH). However, as participants were generally active, their sentiments were: ‘...for us oldies it’s a pleasure to do it’ (M65-74WH).

5.2.3 Cognitive response to the NPAGs

Thoughts (cognition) relating to the guidelines are grouped into five areas: the participants’ views of the guidelines’ targeted audience, the value of the guidelines’ message for older people, participants’ awareness of the message and its value for older people, mental activity and lastly the value of a woman’s daily routine.

First, the guidelines’ target audience came into the discussion. A number of participants had expressed doubts that the guidelines were suitable for the whole community. These participants thought the guidelines would be better targeted at the younger age groups. Participants believed that by getting the message across to the young they would form good physical activity habits by the time they reached old age. One participant stated ‘...it’s important...if you can convince the younger people it’s money in the bank and that if you do it now they can enjoy a better quality of life in their old age’ (M65-74WH). Another suggested: ‘I think that’s worth bearing in mind. I guess if we had seen these when we were in our teens or twenties, well, it just dripped feeds you with that information to continue it
throughout your life' (M65-74WH). One participant said you had to 'understand why you do it [physical activity] ...but it's hard to sell to young kids because they think they are never going to get old' (M65-74WH). Another used the adage 'you can't put an old head on young shoulders' (M65-74WH).

Some participants believed that their less active contemporaries should see the guidelines. 'Maybe there would be other people of our age who don't do as much as we...that should have had this sent to them. We have absorbed it from the recent publications... mentioned, that the health department has put out. It makes a difference' (M65-74WH). One participant posed the question: '...how do you get it across to them that they would be much healthier and happier if they were more active?' (M75-85BH). Another participant offered the answer: '...that is like people smoking. They know it is not very good for them, but they keep on doing it. You say don't do it, don't do it, but they can't listen' (M75-85BH).

Second, some participants thought that targeting over 65 year olds with the messages contained in the NPAGs was too late. One man who inspired this study's title stated: 'I actually think, if you can change people's lifestyle after they are 65 it is a bit too bloody late. You have got to start early, you might as well, sort of, write it off because it is too late.' (M75-85BH). 'I think, aerobic exercise to a woman when she gets past 50 is too late to do anything about brittle bones.' (M65-74BU) 'When you get to our age most people have worked out what they can and can't do anyway. Guidelines, for most older Australians, aren't going to do a whole heap. You know what you should do and what you can do.' (F65-74WU).

Third, some participants believed that the guidelines' message was getting through and the message had significance for the future: '... in the last few years we've had a great consciousness of seniors and what is good for seniors and the new things that they're starting for seniors. And I think a lot more are becoming aware of physical exercise, of going out. You have your seniors' walking clubs and other activities that you do now. And, I think a lot more people are participating than would have done or could have done in my parents' time, for instance. So, I think that it's gradually getting through; and with the baby boomers coming on now and going to be the seniors, they should have had quite an indoctrination of it by the time they get there. So, with a bit of luck they may become even more active than our generation, you know.' (F65-74WU).
Although participants debated the guidelines' target audience, they recognised the guidelines contained a message for them. 'Lifestyle does play a part, but a lot is the genes and I think what we are looking at is, we can’t change the genes but we can change people’s lifestyle.' (M75-85BH). One participant concluded with the statement: ‘but at the same time recognising if you don’t do it you’re only disadvantaging yourself, you’ve got to be honest to yourself’ (M65-74WH).

Fourth, during the general discussion of the guidelines as when discussing physical activity in general participants brought up the idea that mental activity was as important as physical activity. ‘Shouldn’t the mental side also come into this?’ (M75-85BH). There was a strong belief that mental activity was as important as physical activity in maintaining health and wellbeing. ‘I think physical activity is important and I think mental activity is just as important.’ (F65-74WU) ‘What if you do that and you have no mental activity?’ (F65-74BH). ‘...If you are keeping your mind active as well as your body, as much as you can, one complements the other. I feel that helps as you’re getting older too. You just don’t think about getting older - you just get on with it.’ (F65-74WU). Participants were resolute in this belief and implied the guidelines were remiss in omitting the importance of mental activity. Participants obviously held the belief that ‘...you have got to exercise your brain’ (F75-85BU).

Fifth, a number of female participants responded to the guidelines with comments that suggested they held the belief that their daily routines kept them more active than their male counterparts: ‘But, the average woman... well she is usually active all the time. I feel guilty if I sit down too long. I usually see something that needs doing.’ (F65-74WU). One male participant held the same view, believing women’s daily routine gave them all the activity they needed: ‘She is expected to do all the housework, the shopping, looking after the children and all that.’ (M65-74BU).

5.2.4 Behavioural response to the NPAGs

This section looks at what participants said they intended to do in light of the guidelines' recommendations. Intended behaviour by participants can be grouped into three areas. First, some participants did not intend changing their behaviour. Second, some participants did mention their intention to change some aspects of their behaviour. Third, pain was a constraining factor.
First, some participants, having given thought to the recommendations in the guidelines, said they would not change their behaviour in the future. These participants believed they were already complying with the recommendations and were doing enough physical activity; this applied to both male and female participants. In the main, these participants were already active people and showed no inclination to make sweeping changes to their physical activity regimes. ‘In general we have a certain lifestyle and I don’t think any of us are going to change’ (M65-74BU).

Second, some participants did intend making changes: ‘Well I think I have already said I’m going to change because I want to’ (M65-74BU). They could see ‘the proof that you can have a better style of life by doing regular exercising. Certainly I’m all for that because I want to enjoy my life right the way down to the end’ (M65-74BU). Some thought they would make changes to their behaviour but these changes related to specific guidelines and are discussed later.

Third, although one ‘healthy’ participant suggested pain could influence whether one did or did not participate in physical activity, it was mainly the ‘unhealthy’ participants who discussed pain as an inhibiting factor when attempting physical activity. Although pain in general was discussed, participants found arthritic pain was the pain most likely to inhibit their participation in physical activity. Thus, it was not the guidelines’ message that would influence their intended behaviour but how they felt prior to doing physical activity. As one participant stated: ‘It’s a good thought. I think, for me it depends how I’m feeling. Some days I’ve got more pain than others so therefore that day when you haven’t got pain you want to do things more and you can’ (F65-74WU).

5.2.5 Attitudinal response to first guideline

“Think of movement as an opportunity, not an inconvenience.”

This guideline aims to change people’s attitudes towards physical activity for health. The goal is to have people reason that movement is an opportunity to improve health and not a time-wasting inconvenience. Here, the desired change is a change of “mind-set” rather than a change in physical activity. Participants were given the example: “If you leave something behind in the bedroom, having to go back to get it can be viewed as an opportunity for more movement, more exercise, rather than an inconvenience”. This scenario influenced the participants’
responses more than was anticipated, as participants tended to give responses relating to their forgetfulness. Participants' responses to the recommendations contained in the first guideline will be discussed under the attitude headings: emotional, cognitive and behavioural.

5.2.5a Emotional

The dominant emotion discussed by participants relating to “thinking of movement as an opportunity, not an inconvenience”, was 'frustration' (M65-74BU). Some participants had stories relating to their forgetfulness and how they had to go back to redo something. These participants tended to think this was an 'inconvenience' and 'rather frustrating' (M65-74BU). '...I put the keys down somewhere today and I couldn’t find them and it was a bit frustrating for 5 minutes...so that was inconvenience' (M65-74BU). However, some participants thought that it could be good if the frustration could be turned into a positive thought. One man already did just that: ‘...I forget and I really get angry with myself that I’ve done it again...but immediately I actually do consciously do what you say...and I really do think it’s a sensible frame of mind’ (M65-74WH).

5.2.5b Cognitive

Thoughts (cognitions) relating to the first guideline are grouped into three areas: First, participants generally did not think of movement as an opportunity. Second, some participants recognised the guideline’s message. Third, some participants had to consider their pain.

First, some of the comments, such as: ‘I don’t think of it as exercise I just do it’ (F75-85BU), 'I don’t think about that at all' (F65-74BH) and ‘I just don’t think that much’ (F65-74BH), indicated that some of the participants had not thought of looking at movement as an opportunity. One participant thought it was ‘aimed at somebody who is not very mobile’ (F65-74BH). Others were more ‘philosophical’ (M65-74WH) and looked upon it 'as a fact of life' (M65-74WH), or as one participant said ‘very grateful’ (M65-74WH) that he was able to go back and do it. Another said: ‘I don’t think it is an opportunity or a punishment, I just smile and say “you old idiot”’ (F75-85BU).

Second, generally participants came to the conclusion: ‘...It’s a very positive attitude. When you think of that, you say to yourself “Oh bugger it!” ...on the
other hand you think positive... it's good because I've just done muscle so and so.' (M65-74BU). 'I agree with that wholeheartedly. I think that is excellent to get that into your mind. I am not saying I do it but I think it is a better way of thinking about it rather than saying, oh I've got to get up again.' (F65-74BH). 'So rather than thinking that this is an inconvenience, think this is extra exercise which is good for me.' (F65-74BH).

Third, participants experiencing pain, did not dismiss the guideline's message but thought: '...there are always qualifications. If it's going to hurt like holy hell to go back again, you're not going to think of it as an opportunity.' (M75-85BH). 'That's OK if you're capable.' (M75-85BH).

5.2.5c Behavioural

The aim of the first guideline is to change people's attitudes. Therefore, participants' intended behavioural changes related more to their thinking than their deeds. These changes can be grouped into positive, negative and pain-restricted views.

First, some participants accepted the merits of thinking of movement as an opportunity. 'I still think of it as an inconvenience but now you have put a positive spin on it I'll think positively about it. I like being positive' (M75-85BH). Generally participants would try to be positive but could see they may still initially think about the 'inconvenience' before thinking about the 'positives'. Changing one's behaviour would 'depend on how much time you have got' (M75-85BH). 'If you were in a hurry it's an inconvenience.' (F75-85BU).

Second, there were participants who did not accept this guideline's message. One participant stated: 'it's just one of those things you do because you have to' (M75-85BH) another stated 'I think it is silly - useless' (F65-74BH). 'There is too much thinking involved.' (F75-85BU).

Third, for a number of participants in the 'unhealthy' category, the difficulty of movement meant that they did not often experience this scenario of forgetting something another room. 'Mentally I'm forced to remember...You are forced by nature. I have to keep my mind, my wits together, because otherwise my legs have to do the job' (M65-74BU). Although some participants thought 'the mind doesn't
cope with working things out, it happens... Oh, I've left this thing, I've got to go back. You can't avoid it' (M75-85BH). Participants experiencing pain thought one's mind did work things out. 'Your mind does if you're in pain' (M75-85BH). These participants found their physical state would determine their response to this guideline.

5.2.6 Attitudinal response to second guideline

"Be active every day in as many ways as you can"

This guideline states that as well as thinking of all movement as an opportunity, taking the opportunity to do lots of little extra movements (incidental activity) is cumulative and will contribute to the amount of physical activity one does each day, thus, improving one's well-being. This incidental physical activity includes numerous activities that form part of day-to-day living. As well as being shown the guideline, participants were given two examples to consider and discuss: 1) Parking the car away from the shops and walking that extra distance; and 2) Getting off the bus a stop earlier and walking the extra distance.

Participants' responses to the recommendations contained in the second guideline are discussed under the headings: emotional, cognitive and behavioural. Differences between male and female participants' responses and differences between 'healthy' and 'unhealthy' participants' responses are discussed where appropriate.

5.2.6a Emotional

The relief of guilt was the primary emotion expressed in relation to the second guideline by participants who were already acting in accordance with this guideline's message. Before being shown the guideline they had said things like: 'I feel guilt, I know I should be doing more' (F65-74WU). Afterwards, participants who were already very active around the home and garden felt they could continue with their daily activities and still maintain their health without feeling guilty. Later, one participant wrote to the researchers saying the discussion had taught her that she 'can regard housework or shopping as exercise... so I don't feel a bit guilty' (F65-74BH).
5.2.6b Cognitive

Participants' thoughts (cognitions) relating to the second guideline can be grouped into three areas. First, generally participants recognised that they had thought of physical activity as something "extra". Second, participants generally approved of the guideline. Third, some participants thought the guide was intended for a different target audience.

First, a number of participants had thought of physical activity as something "extra" to everyday activities, but once they saw the guideline they realised they were already following this recommendation. There were comments such as: 'I sort of feel I automatically follow all these things' (M65-74WH) and 'this is what I do without consciously thinking of this' (M65-74WH). One participant thought the guideline was 'very important' stating, 'the word "activity" covers a lot of things' (F65-74BH) and realised she was already doing incidental activity.

Second, a number of participants thought the idea of increasing one's incidental activity was very good and preferable to 'a forced regime' (M65-74BU). Another participant thought, 'if I have got to be active I am quite happy about it' (M75-85BH), but the activity had to be meaningful and 'not just for the sake of it'. (M75-85BH). Another participant would view their incidental activity positively: 'Well I won't complain about my seven back step: when I am having a tiring day' (F75-85BU).

Third, some participants expressed the idea that the guidelines in general and the second guideline in particular were intended for a different target audience. One participant said: 'I think they tend to apply more to people in offices who would tend to sit down a lot and school children....they sit down and watch the telly' (F65-74WU). Others thought it better to target a specific audience; one participant suggested: 'I feel that statement ["Be active every day in as many ways as you can"] would be very good with regards to some of my friends who are not very active' (M75-85BH).

5.2.6c Behavioural

Intended behavioural changes by participants in relation to the second guideline can be grouped into four areas: the intentions of active participants, intentions to do more, special needs and negative views.
First, in terms of expressed intentional behavioural response to this guideline, participants who were already physically active around the house and garden did not intend doing more physical activity but did intend to maintain their current level. A number of female participants commented that they were more active than their spouses: 'I take twenty times more exercise...he sits and does his crossword puzzle ...and I am running back and forth around the house doing chores', 'a women's work is never done. That is why we live longer probably'. (F75-85WH).

Second, some participants expressed an intention to be more active: 'Well, I ride a pushbike every morning to get the paper but I could increase the length of that because it's not a great distance to the shop and back. I could go a different way I suppose and make an effort to lose my 20 kilos.' (M65-74BU).

Third, some participants said they had limited physical capacity: 'Well I have got an ACROD sticker so I park in front of the door' (M75-85BH). Other participants spoke about parking close because of their spouse's needs but would park at a distance if they were alone. Others parked close because, 'I find I've got enough just walking around the shopping centre' (F65-74WU). Walking and carrying can be limiting for older people: 'I can walk ...providing I am not buying something huge' (M65-74BU).

Fourth, not all participants were positive towards this guideline's recommendations and implied they would not change their behaviour; for example one participant said, 'I've paid my bus fare from one point to the other and you want me to walk? No bloody way!' (M65-74BU). Others made comments such as 'Nuts!' (M65-74BU) and 'You jest of course?' (M65-74BU). These participants were not necessarily inactive; some had indicated they were physically active. The negativity on the part of these participants was directed at the message source.

5.2.7 Attitudinal response to third guideline

"Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days."

In the past it was thought that for physical activity to be beneficial to one's health it had to be vigorous, at least of 30 minutes duration and done three to four times
per week. Current research shows that by doing shorter periods of moderate-intensity activity which totals 30 minutes per day, and done on most days, one can achieve health benefits. This was explained to participants and their responses to the recommendations contained in the third guideline are discussed below. There were no apparent differences in male and female, or ‘healthy’ and ‘unhealthy’ responses.

5.2.7a Emotional

Generally the emotional responses to this guideline were positive. Firstly, some participants felt a certain freedom as they were allowed to do the amount of physical activity that suited them and then stop. Later they could come back to continue further physical activity. It released them from the guilt they felt in not doing a substantial block of physical activity: 'Perhaps then, I won't feel bad about coming back later on and completing the half-hour' (M75-85WU). Secondly, some participants, although not disputing the guideline’s message, felt that for them, 30 minutes duration was more appropriate to their needs. 'Doing 30 minutes together helps you sleep at night. It makes you feel good. For me, it has a sort of calming, happy effect.' (F65-74WU).

5.2.7b Cognitive

This newer research which shows physical activity can be cumulative was generally met positively by participants.

Some participants were not aware that “30 minutes of moderate-intensity physical activity on most, preferably all, days” could beneficial: ‘So you can choose 3 lots of 10 minutes rather than the full half-hour?’ (M75-85WU). 'If we are going to count it, as you would just suggest now, that even walking or any kind of effort we can count it as an exercise for us to do. I have never thought of it like that before. It was always punishment.' (F75-85BU). 'I think that is great, count all those little bits together.' (F65-74BH). 'I agree I never thought of shopping at the Galleria, but I mean, I don't just dawdle around walking in shop windows, it is flat out from one end to the other. And then I forget something and have to go back to the other end and I take my mum shopping.' (F65-74BH). 'But you don’t think of that as physical activity.' (F65-74BH).
Some participants were aware of the third guideline's message and believed that 'most people do' what the guideline recommends. This recommendation had already reached them through the media. Furthermore some participants had never agreed that exercise had to be done in 30 minutes blocks to be beneficial. 'I never believed that in the first place, I have always been under the impression and belief that if you are on the go for the daylight hours then you are doing your activity.' (M65-74BU).

Prior to seeing this guideline some participants thought it had to be 20 minutes rather than 30 minutes duration, for physical activity to be beneficial to one's health. 'I thought 20 minutes was the recognised time.' 'Twenty minutes is what I do.' (F65-74BH). 'Twenty minutes apparently is what is required to get the blood going right through, 10 minutes wasn't enough.' (F65-74BH).

Some participants believed there was no need for the guideline: 'Unnecessary, is my first reaction' (F75-85WH). 'No, that is everyday living, you know, that you have to do.' 'Well I do that everyday anyway. I think that happens in your general getting out and moving around.' (M65-74BU). 'If you are physically active, not disabled, then you are probably active most of the day I would think.' (M75-85BH).

5.2.7c Behavioural

In this section the discussion relates to both those participants intending a behavioural change to comply with the third guideline and the views of participants not intending to change.

Generally participants were receptive to this guideline's message and their intentions were to comply with the recommendations in the guideline. They held the view: 'I would definitely do it' (M65-74BU).

Some participants, while agreeing with the guideline's message, had no intention of changing their behavior. 'Well, I agree with it but in my case it, I'm happy if I just get the one session, which is pretty close to the 30 minutes by the time I've finished. But, I've never been able to split it up...I do it and I say that's done. Whether it's the full 30 minutes or not' (M65-74WH).
Others thought they did far more than the guideline's recommendation: 'I'm doing more than that already'. 'Well if you do, for instance, two 15 minute walks a day as I do, and you have many more things to do during the day like the housework, weeding, gardening and cutting the grass, and so on. It must add up to probably more than two and half-hours or so of irregular exercise.' (M75-85BH).

A number of participants linked their ability to sleep with the amount of physical activity done in one block and felt they needed to do a block of 30 minutes. 'Doing 30 minutes together helps you sleep at night.' (F65-74WU). They indicated they would continue what they were already doing as it was working for them.

5.2.8 Attitudinal response to fourth guideline

"If you can, enjoy some regular, vigorous exercise for extra health and fitness."

Vigorous exercise is the sort of exercise that makes people "huff and puff" and makes talking in whole sentences difficult. Vigorous exercise is only advocated "for those adults who are able and who wish to achieve greater health and fitness benefits". This guideline is an adjunct to the third guideline; it adds a further dimension to the exercise program of able-bodied people. "Research has shown that able-bodied people can get added health and fitness benefits...by carrying out some regular vigorous exercise." This was explained to participants and their emotional, cognitive and behavioural responses to this recommendation are discussed. Some female participants expressed specific views relating to fear and some male participants expressed views relating to physical ability and former occupation. Some participants in the 'unhealthy' category also express their inability to do vigorous exercise. These viewpoints are discussed where appropriate.

5.2.8a Emotional

Fear was the primary emotion discussed in relation to the fourth guideline and there were three different views relating to fear. First, participants were fearful of undertaking vigorous activity. Second, some female participants had other views relating to fear. Third, some participants discussed challenge and fear. Another area of discussion relates to the sense of achievement from engaging in vigorous exercise.
One, these older participants generally did not believe vigorous exercise was suitable for them. They compared their present physical ability with their ability when they were younger and considered it to be diminishing. They believed vigorous activity was now inappropriate and they were fearful of undertaking it. 'I think it is a mental thing for me, the thought of having to huff and puff again. It is a bit scary but I think it is a confidence thing as well.' (F65-74BH). 'There is a certain fear.' (F65-74WU) 'I don't know what it is but I can't do that any more. It annoys me but I can't.' (F65-74BH).

Two, some female participants who spoke of being fearful due to their diminishing physical ability, also discussed their fears of the consequences of diminishing physical ability. One woman, who was the carer for her mother, gave an example: '...fear of being sat in a chair like my mum is. I would hate that, I want to arrange to have a pill handy when I can't do it anymore I will just quietly move along to another world' (F65-74BH). She went on to say: 'I have always been able to do it [physical activity] until the last three or four weeks and it is scary, so I have got to come to terms with that, but I don't know how I am going to do it. I have already found it depressing.'

Three, other participants spoke of the challenge: 'I think there is nothing worse than fear; it is one of the great defeat things. I don't think you should be frightened of anything like that; I just don't think like, whether it's fear? (F65-74WU). I don't worry I just do what I can do and get the most pleasure I can, but the fear, huffing and puffing!' (F65-74WU). One participant walked up a formidable hill for vigorous exercise but viewed it as both a challenge and a fear. 'I think it is a challenge and I think it does make you feel better once you have calmed down...But you sort of feel a bit worried about doing it because it is a bit of a risk factor. You don't quite know how far you can stretch yourself sometimes with physical activity, that's the thing.' (F65-74WU).

Participants who did engage in vigorous exercise spoke of their sense of achievement. 'There are, where I go up and down hills, 3 or 4 moderately steep hills and I puff a little bit but, I feel good. I think gee, I'm going to get up this one.' (F65-74WU). They spoke of 'feeling good afterwards.' (F65-74WU). 'It does do you good and you feel much better afterwards.' (F65-74WU)
5.2.8b Cognitive

Both positive and negative cognitive responses are discussed below.

First, the initial response by participants was to strongly oppose the idea of doing "vigorous exercise". There were three main objections. One, the guidelines did not differentiate between age groups: 'I still can't understand these points you are making: these are from these guidelines? Well, they are stupid because they make no distinction between age.' (M75-85BH). Two, generally participants believed it was inappropriate to encourage older people to do vigorous exercise: 'Strain yourself?' (F65-74WU). 'For our ages?' (M75-85BH). 'For an 80 year old?' (M75-85BH). 'But it can't be!' (M75-85BH). 'Well, I mean, why should we?' (M75-85BH). 'I would say no, I think, from what I have read, in the ageing process, it would be positively harmful because I hear and read every day of people pushing themselves and dropping dead or doing some activity that is injurious to their well-being.' (M75-85BH) 'You have to consider your age.' (M75-85BH). Three, there was scepticism that the guideline could deliver the promised benefit: '...could you guarantee that? How'd you know you are going to get extra health and fitness? It might be doing too much actually. I can't imagine a.... is there an example of – of what that would be?' (M75-85WU). 'I don't think it would be for extra health and fitness because if I rush around the park I don't feel well' (M75-85WU).

Secondly, a number of participants took exception to the word vigorous: 'If it was dinkum I would really like to know what is meant by vigorous exercise. It needs examples. Are...we expected to run a certain distance in a certain time?' (M65-74WH). 'There are aged people here and the word means a different thing to each of us' (M75-85WU). 'That word vigorous should be preceded by a word like "relatively" vigorous.' (M65-74WH). 'One person’s “vigorous exercise”, somebody might go to a dance on a Saturday night and call it “vigorous exercise”, other people just call it enjoyment.' 'It depends on what it is, if it was push-ups, tha's too gung-ho.' (M65-74WH). One participant thought it may be 'exhorting' people to stretch themselves beyond their capabilities. Basically participants thought: 'Vigorous, I think is wrong, I think you go at your own pace when you are older...I think moderate is the word.' (M65-74WH).
Third, both 'healthy' and "unhealthy" participants believed one needed to be cautious in relation to this guideline. The following verbatim comes from both these categories of participants:

'Because if somebody has got a heart problem they most certainly wouldn't want to be doing that, would they?'

'So you really would need to know you are physically OK to push yourself that much further.'

'What we need to be sure, is that our physical fitness is in such a state that it is OK to do it.'

'That's right.'

'You listen to your body.'

'That's right. (F65-74WU).

'It depends on your health ... I can't do it too vigorous but moderately' (F65-74BH).

Fourth, some male participants thought the impact of their former occupations, coupled with their age, made vigorous physical activity undesirable. 'Well hard physical activity is something that I reckon at our ages must be avoided because it is just too strenuous and can lead to damage. In fact that was what caused my break down, I didn't realise, at 60, trying to do the work ... like when I was 30 - well something had to give. I would say I have probably ended up in an early grave because of that. I would say no!' (M65-74BU). 'Well I feel as if I am doing the necessary strenuous exercise as far as that is concerned. ... I came from working hard on a farm until I was in my fifties and that was fairly hard work because I worked a ten thousand acre farm on my own.' (M75-85BH). 'I was farming too and I reckon I did enough puffing and puffing during my lifetime until I retired so I don't want to do any more now.' (M75-85BH).

Fifth, some male participants thought that it was solely the impact of ageing and not occupation, which made the difference to one's physical ability. 'I have always lead a sedentary life because I was an architect sitting down all day, and I used to play tennis as an outlet, not deliberately, I enjoyed it very much, ...as I got a little older I was playing less tennis.' (M75-85BH). 'I was just going to say too, when I was younger I would have gone out, in fact I did do fairly vigorous
exercise, but I can't think of trying that now, not to the same extent' (M75-85WU).
'I have just given away an air walker. I thought it was excessive. I do enough exercise anyway.' (M75-85BH).

Sixth, some participants thought there was a time when you had to concede that your physical ability was no longer the same as in the past. 'I always believe you could push yourself and get another bit out of yourself, particularly when you are doing jobs around the place, push a little bit more to get it finished but, I find I push a little bit more now and you feel sorry for it later on.' (F65-74BH). 'You pay for it.' (F65-74BH).

Seventh, some participants approved of this guideline's message: 'Well I cracked a vertebrae last year and I was immobilised for a few weeks... and I am not allowed to carry things, heavy things, but yes, I walk and I make myself puff every now and again just to see if I can still do it.' (F65-74BH). 'I really feel strongly about exercise, I feel that if I don't do it I will deteriorate and I have got to look after myself, you know, be responsible for myself... and there will not be a time when I will not try.' (F65-74BH). Another participant was considering vigorous physical activity. 'This is something that I have been looking at in the last few months actually, getting into pumping iron. That is, to get some tension exercises... I realise I am getting a bit older that the muscles are going to need to do the extra physical work. The physical work used to be there as a working person. As a retired person the actual physical effort is not enough to maintain my muscles.' (M65-74BU).
5.2.8c Behavioural

Generally participants did not intend to change their behaviour as a result of this guideline. Those participants already engaged in vigorous activity intended to continue with their current physical activity regime. Participants not engaged in vigorous activity also intended to continue with their current physical activity regime; these participants felt '...if you can manage it, it is good' (F75-85BU) but they would not be increasing their physical activity. 'It is good if you can do it' (F75-85BU), but 'I think I am doing all I can' (F75-85BU) or 'I think I am doing the best I can under the circumstances' (F75-85BU).

Some participants in the 'unhealthy' category explained that they could not do vigorous activity: 'as I have said earlier, asthma prevents me from huffing and puffing. If that situation arises I have to take more medication so it is a no-no'. (M65-74BU). 'If my lungs would allow me to go for the huff and puff I would do a bit more than I am doing now...but there is no huff and puff because I cannot do it.' (M65-74BU)

5.3 Participants' confusion

There was confusion on the part of participants in relation to understanding the guidelines' recommendations; this confusion included both 'healthy' and 'unhealthy' participants. Also, participants stated they were often confused by the mixed messages they received through the media.

5.3.1 Participants' confusion with the guidelines

Although participants were shown the third and fourth guidelines and these guidelines were read and explained to them, some participants' responses indicated they were confused with these guidelines' messages. This confusion took two forms: 1) some participants were confused with a specific guideline and 2) some participants were confused because they were linking the two guidelines together.

5.3.1a Confusion with specific guidelines

Some participants were confused by the third guideline message: "Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all,
days”. Some of these participants were already active people putting together 30 minutes of moderate-intensity physical activity during their day. However, rather than making this connection they thought the guideline was putting more pressure on them to do more. Both ‘healthy’ and ‘unhealthy’ participants were confused. One ‘healthy’ participant said: ‘That is more than I do; I suppose I could extend it. I think exercise is very good for you and I think when you are older you must do it, but I don’t know about 30 minutes’ (F65-74BH). An ‘unhealthy’ participant stated: ‘But, I don’t quite know. There is a limit to what you can do when you’re not feeling a 100 per cent. Pushing yourself too much I find is the worst thing of all. I’ve done that for too long, push, push, push, yourself to do more.’ (F65-74WU).

The fourth guideline states “If you can, enjoy some regular, vigorous exercise for extra health and fitness.” Confusion arose with the fourth guideline because participants had not understood the “if you can” part of this message. Some participants thought the guideline applied to them regardless. One participant was giving some thought to trying vigorous activity ‘...about once a week maybe’ and believed ‘at the age of 76 with physical disability I find that is as much as I would want to do’ (75-85BH). (All participants were given the guidelines and advised to seek medical advice before undertaking any new physical activity at the end of the focus group.)

5.3.1b Confusion due to linking two guidelines

Some participants confused the recommendations contained in the third and fourth guidelines. Rather than comprehending the guidelines had separate recommendations they were linking the recommendations together. ‘Yes, I think at our age we would have to be careful about that - the 30 minutes of vigorous exercise. It could do more harm than good too, at our age. Younger, yes agree’ (M75-85WU).

5.3.2 Mixed messages

Participants spoke of the mixed messages they receive, often through the media, which left them confused. This confusion could also be interpreted as a rejection of the ‘expert’ opinion. They explained how one is exhorted to do a certain activity in one instance and then told something else in another. For example, some participants had been told ‘20 minutes activity’ (F65-74BH) was the correct
amount and now they were being told something different. In some instances participants took information on face value rather than understanding there was room for a combination of activities. 'I mean one moment the message is telling us to go out and walk and the next minute they are telling us to go on the internet which means sitting there for hours on end absolutely absorbed by this technology. One is cancelling the other, to me.' (F65-74BH). Mainly, participants believed there was too much conflicting information. 'The dilemma also is, there's so much information. On the one hand you say, to keep arthritis at bay you've got to move it, keep moving it. On the other hand you get some sort of bone specialist, or whatever they call them, and he says the little bit of muscle that separate the vertebrae in your spine they dry out and they wear out. And you think on the one hand I've got to keep moving but if I move I wear it out! In the end you're prostrate!' (M65-74WH).

5.4 Barriers to physical activity

Participants discussed a number of "barriers to physical activity": environment, fear of falling, physical illness and pain, uncertainty of benefits, and a disinclination unless activity is pleasurable.

5.4.1 Environment

There were seven issues in the environment that were of concern to participants and acted as barriers to physical activity. These areas are discussed below under appropriate headings: uneven pavements, shopping centres' floors, fear of crime, uncontrolled dogs, weather conditions inconvenience of travel and family commitments.

5.4.1a Uneven pavements and modified pavements

Some participants were concerned about uneven pavements as this added to their fear of falling. 'I think you have to watch because some of the pavements are bad. You can easily trip unless you look where you are going.' (F65-74WU). One group brought up the problem of pavement modification for the benefit of the blind and people in wheelchairs. While they approved of accommodating the special needs of these groups of people, they found these modifications created more obstacles for them: '... for the handicapped people, when they make those
dips in the road if you're not watching, you think you're going level then suddenly you've gone down' (F65-74BH).

5.4.1b Shopping centres' floors

Discussion during these focus group meeting brought to light the prevalence of shopping centre visits made by older people; it was a significant part of their lifestyle. However, shopping centre floors were perceived as slippery and added to participants’ fears of falling. 'I did find myself at Garden City today walking very gingerly on some of the floors there.' (F65-74WU) 'They are very shiny.' (F65-74WU).

5.4.1c Fear of crime

Female participants brought up their fears of leaving the relative safety of their homes for the perceived unsafe external environment related mainly to the fear of crime. This fear of the external environment included the use of public transport. 'I don’t like the weirdos on the train and they will probably be the reason why I finally give up public transport.' (F54-74BH). These fears related to both the daylight and non-daylight hours. This fear was related to leaving the house for many reasons, including physical activity.

5.4.1d Uncontrolled dogs

Female participants discussed their fear of uncontrolled dogs. The sight of an uncontrolled dog evoked fear in some women thus acting as a barrier to physical activity. Assurances by the dog’s owner that the dog is harmless come too late to prevent initial fear.

5.4.1e Weather conditions

For some participants the extremes of weather conditions acted as a barrier to physical activity. When the weather conditions were too hot, too wet or too windy some participants were inclined to forgo their outdoor physical activities.

5.4.1f Inconvenience of travel

The difficulty of having to travel to a venue to participate in physical activity was thought of as a barrier. One participant saw the benefits of going to a gym, but
said, 'I've got to go there... I'm certainly not going to do that' (M75-85WU). However, participants spoke of visits to shopping centres without referring to inconvenience.

5.4.1g Family commitments

Although not a major aspect of discussion, the role of baby-sitter or care-giver would be seen as a barrier to participation in physical activity. One participant suggested, 'Social obligations to the family would probably stop you' (F75-85BU).

5.4.2 Fear of falling

Participants spoke of their fear of falling due to environmental obstacles, discussed above. However, they also spoke of just simply being fearful of losing one's balance and falling. Some female participants thought bifocal glasses added to this loss of balance making them fearful of falling.

5.4.3 Physical illness and pain

Participants found participating in physical activity difficult if they were experiencing ill health or pain or both. 'When you can't bend. When you've got pain. When you are so crippled up that you can't, that would stop me.' (F75-85BU). Some participants found ill health or pain inhibited some forms of physical activity but other activities were within their capabilities. Medication also helped some participants to continue participation in physical activity: 'I take medication for my arthritis'. Returning to physical activity after an illness was often difficult for participants: 'I have found it's a big effort after having heart surgery and other things in my life...At the moment it is fine, but it is taking those first steps. Sometimes it is difficult to get yourself together and plunge into society.' (F65-74WU).

5.4.4 Uncertainty of benefits

During the discussion of the fourth guideline some participants discussed their scepticism that there would be accrual of health benefits if they followed the guideline's recommendations. Although the guideline stated "These benefits include extra protection against heart disease..." this scepticism remained and was raised in other discussions. For example, one participant gave the view: 'It is an
interesting statement there. You had a hip replacement. Now I have been looking at this and nearly all these people who have been involved in sport and heavy activity they always seem to be the ones that have to go in and have bits and pieces replaced or whatever. I have never been an active person. My most active game ever was table tennis; I was more likely to play snooker and billiards, that was an energetic activity for me and yet I haven’t got any worn out parts yet. So, I am beginning to wonder whether the very active people are the ones that are going to wear bits out quicker’ (M65-74BU).

5.4.5 Disinclination unless activity is pleasurable

Participants found they were either disinclined to participate in physical activity unless it was pleasurable or found it difficult to maintain participation. One participant said with reference to the guidelines: ‘Can I show you one word on there I think is vital? “Enjoy!”’ (M65-74BU).

5.5 Facilitators of physical activity

Participants spoke of the sorts of things that acted as motivators or facilitated participation in physical activity, although not using these terms.

5.5.1 Company of others

Participating in physical activity in the company of other people added to participants’ enjoyment in physical activity as well as acting as a motivator to participate. Several participants frequently raised this topic. For some participants it was the company of their spouse; for others it was the company of friends. For female participants it facilitated their sense of safety, as the company of another person helped them feel safe when outdoors.

5.5.2 Walking the dog

Participants appeared to enjoy all aspects of walking their dogs. It gave them physical activity, pleasure and enjoyment, and companionship. All participants that spoke of walking their dogs spoke only in positive terms. During one discussion on the benefits of dog ownership one participant also commented: ‘The Americans say if you’ve got a dog you live 15 years longer’ (M75-85BH).
5.5.3 Personal strategies

Some participants had built strategies into their daily routines that facilitated their participation in physical activity. These included indoor activities when the weather was inclement. One participant had an exercise bike just for the days when the weather was bad. Several participants had cancelled their newspapers so they had to walk to the shops to collect it. Another participant carried one cup of tea at a time rather than two cups together, just to get an extra walk.

5.5.4 Not smoking

Some male participants suggested that being non-smokers had made participation in physical activity possible in older age. 'I think too, that being a non-smoker probably helped. I never smoked. When I was a kid, there was no money around... in the thirties and there was no money to buy cigarettes'. 'Yes that is right, so I missed out on that, so I think that it perhaps helped my physical life to some extent' (75-85BH).

5.5.5 Health maintenance

Some participants thought the knowledge that one was contributing in the maintenance of one's own health was a motivating factor. Some thought that if one's health was threatened and there was a chance of regaining good health then again one would be motivated to participate in physical activity. 'I think it basically boils down to, if the doctor said to you "look you are going to die in a month if you don't get up and do a bit more", well, it is then that you get the message pretty quick.' (M65-74BU).

5.5.6 Independence

Without making direct links between physical activity and the maintenance of one's independence, some participants were indirectly motivated to participate in physical activity as a means to maintaining their independence. These participants tended to link their comments relating to good health and physical activity with independence. 'I exercise every morning for about one hour to an hour and a half in the garden and I do volunteer work for the museum, 10 hours a week or so. And I have all kinds of other things and I live independently.' (F75-85BU). 'I think I enjoy what I do and I am independent.' (F75-85BU). '...Have sufficient energy to be independent that I can do things still for myself, make decisions and have
freedom from pain of any description' (F75-85BU). One participant suggested that being healthy was having 'independence' (F65-74WU).

5.6 Message source

One area of negativity towards the guidelines was aimed at the source of the message. Not all participants had negative attitudes towards the source; some were complimentary. Below both the negative and positive attitudes of participants are discussed.

5.6.1 Negative attitudes towards message source

Those participants who experienced negative attitudes towards the source of the message were mostly male and tended to show very strong emotion when making their comments (also see 5.2.6c). Personal motivation is one aspect of the Theory of Reasoned Action and these participants felt this had been negated. They indicated they objected to living in a 'nanny state'. Some participants questioned the physical activity participation rates of the messages' authors: '...It would be interesting to take a survey on the people who prepare this, how much physical activity they do themselves' (75-85BH). Some participants viewed the source of the message as someone young and objected on those grounds. 'So a young person is going to tell me that I have got to do this exercise or that exercise. I am going to ignore them. I want somebody in my own age bracket who knows what the heck he is talking about and knows what I am feeling when I am doing that exercise.' (M65-74BU).

One participant viewed Canberra, the political capital of Australia, as the source and expressed his objections: 'As far as I am concerned it conjures up in my mind...I used to fly to Canberra about once a fortnight. And there are people in Canberra that are putting out those pamphlets. It makes me angry, and they store them all in multi-storey buildings. They chop down two or three forests to fill it up with information that is not read. I have never seen that pamphlet; I have never been in a position to see the pamphlet. I go to the library. Where do they distribute this stuff? Do they give it to Universities or do they put it in an archive somewhere? It is going to go into history to say that we citizens of our age used to do these things. No! Couch potato! Sorry, because it was on television and it is, was, on everybody's tongue but that pamphlet was useless stuff. And honestly if
that's the sort of information that when you have finished your Masters Degree you are going to disseminate, it will get lost in Canberra. And Canberra is hopeless for it; I give you first hand information.’ (M75-85BH).

5.6.2 Positive attitudes towards message source

Some participants expressed positive attitudes towards the source of the message. One participant thought it was the ‘duty of the government’ (F65-74BU) to disseminate this message. Another said: ‘The Government has done a fair bit, some of those “Life Be In It things”. There are still groups going in the suburbs. Like you meet somewhere at a certain time and there will be somebody there and take you for a brisk walk or a slow walk or whatever you need and that is actually getting people out of their homes and actually doing something. And also giving them some social interaction with other people and I think that is positive, instead of them just sitting at home being depressed or lonely or whatever. There are a lot of people that don’t do any activities or have anything to do with people. They are lonely people but they don’t know how to reach out to someone and there is plenty of people out there that want to abuse and use them that will feign friendship. Whereas I really feel as though like this sort of thing is much more positive.’ (F65-74BH).

5.7 Social norms

One of the questions this research aimed to answer was: “Will older people’s perception, of the beliefs other people hold, influence their intentions to participate in physical activity?” Groups discussed how other people might perceive them during the discussion on physical activity in general. This area of social norms is further discussed below under appropriate headings.

5.7.1 Family

Generally participants felt their families were supportive of their participation in physical activity and that their families’ approval was important to them. As stated earlier, one man’s daughter was bragging about her father’s sporting ability and he was pleased about this. Some participants enjoyed their picnics with the younger members of the family and, with tongue-in-check, suggested: ‘they wear me out quite frankly, I’m glad to see them go’. Another participant when asked by the younger members of the family to join in a game of cricket, told the family: ‘I’ll
play cricket if I can have a runner’ (M75-85WU). The family let him have a runner so he would participate. What these participants had in common was the knowledge that their families were approving of their participation in physical activity and this was important to them. These participants felt their families had a “sense of pride” in their older relatives’ achievements and in turn this approval made them feel proud of their own achievement.

There were some participants who thought their participation in physical activity was their own business and nothing to do with their family. ‘I just do my own thing. And they would expect me to and I expect them to. I think it’s just my business.’ (F65-74WU). There were also some participants who had no family and were therefore not influenced by any family considerations.

5.7.2 Other people

In an earlier section (see 5.1.1a) participants discussed their belief that in the past the community had held certain perceptions of how older people should behave and this resulted in participants feeling embarrassed about participating in physical activity. In today’s society participants felt they were encouraged to participate in physical activity and were less likely to feel embarrassment. Other participants suggested that as you get older you get less concerned about what other people think. ‘That might have been the case, in my case, some years ago but I think I’ve grown through that.’ (M65-74WH). Some participants suggested that ‘at this age we can do what the hell we want’ (F65-74BH) and there was no reason to be concerned with what other people may think of their participation in physical activity.

5.8 Are healthy older people more likely to participate in physical activity?

The people who participated in these focus group meetings were generally physically active people and held similar feelings towards physical activity regardless of whether they were categorised as ‘healthy’ or ‘unhealthy’. Both ‘healthy’ and ‘unhealthy’ participants discussed pain but only those participants in the ‘unhealthy’ category mentioned pain as an inhibiting factor in their participation of physical activity. Some of these participants were reliant on medication as a means of facilitating their participation in physical activity. Also,
some of these participants thought a rest during the day and being careful not to over do it were helpful and important. Nevertheless, participants, who fitted the 'unhealthy' selection criteria, did bring to light the limitations ill health puts on their ability to participate and in that sense they were generally less likely to participate in physical activity.

Below are the results of section 3 of the 'Focus Group Questionnaire' (see appendix 3) which also indicated that both the 'healthy' and 'unhealthy' participants were active people. The four categories were:

1) I do physical activity regularly and enjoy it.
2) I do physical activity regularly but don't enjoy it.
3) I don't do physical activity regularly but wish I did.
4) I do physical activity regularly and don't want to.

The results are listed in table 1 as follows:

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>M65-74WH</th>
<th>M75-85BH</th>
<th>M65-74BU</th>
<th>M75-85BU</th>
<th>F65-74WH</th>
<th>F75-85WH</th>
<th>F65-74BU</th>
<th>F75-85BU</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
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<td>n=8</td>
<td>n=5</td>
<td>n=7</td>
<td>n=6</td>
<td>n=5</td>
<td>n=5</td>
<td>n=8</td>
<td>n=7</td>
<td>N=53</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
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<td>7</td>
<td>6</td>
<td>43 (81%)</td>
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<td>1 (2%)</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<td>8</td>
<td>15%</td>
</tr>
<tr>
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<td></td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Totals</td>
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<td>7</td>
<td>6</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>53</td>
<td></td>
</tr>
</tbody>
</table>
In this chapter the data were analysed. The most important findings are listed below:

In general participants had positive attitudes toward physical activity.

Although generally participant’s attitudes towards the NPAGs were positive there were also some negative responses directed towards the source of the message.

Participants thought physical activity was something ‘extra’ and did not fully understand the concept of incidental activity.

Some participants did not understand that short bouts of physical activity could be accumulated to total to the recommended 30 minutes per day.

As well as giving examples of the facilitators to physical activity participants gave examples of the barriers. One specific example was the fear of falling relating to uneven pavements and uncontrolled dogs.

For unhealthy older people pain could also be a barrier.

The regular visits participants made to shopping centres suggested they were convenient venues for incidental physical activity.

Social norms influenced attitudes to physical activity. For example participants recounted their perceptions that increasing numbers of older people are out walking today compared with the past.

Some participants believed mental activity was as important as physical activity and should be included in the guidelines.

Participants believed a good night’s sleep was the reward for engagement in physical activity.

There was some scepticism that adherence to the guidelines’ recommendations would result in positive health benefits and some said that it was too late for older people.

There was some negativity towards the idea of vigorous exercise for older people. Participants suggested the guidelines did not consider their age.

In the following chapter the discussion on the data analysis will relate to the literature already discussed in the literature review chapter and subsequent literature.
Chapter 6: DISCUSSION AND CONCLUSIONS

This chapter extends the examination of the main findings discussed in Chapter 5 in relation to the objectives of this research and the relevant literature. The initial objective was to explore the following:

What is the attitude of healthy and non-healthy people aged 65 years and older, towards physical activity in general and the National Physical Activity Guidelines (NPAGs) in particular?

How do they feel towards physical activity in general/NPAGs? Does it differ between healthy and unhealthy older people?

What do they think about physical activity in general/NPAGs? Does it differ between healthy and unhealthy older people?

What is their behaviour towards physical activity in general and their behavioural intention towards NPAGs? Does it differ between healthy and unhealthy older people?

Are healthy older people more likely to participate in physical activity than unhealthy older people?

Do older people's perceptions of the beliefs other people hold influence their intentions to participate in physical activity?
The following discussion relates to the main findings of the data analysis and the relevant literature in relation to these objectives. In addition, barriers and facilitators to physical activity for older people and other issues raised in the focus groups will be discussed.

6.1 Attitudes to physical activity in general

Generally the participants held positive attitudes towards physical activity. This section discusses the participants’ strongest motivation to participate in physical activity. Then the discussion relates to the participants’ positive views of physical activity, but more specifically to their view that it was something ‘extra’ to do rather than a part of their daily life.

The literature gives many reasons for people participating in physical activity. However, it appears that more and more people are becoming aware of the health benefits associated with improving one’s physical fitness. In an Australian study (Jones & Owen, 1998), which looked at reasons for involvement in a community-based walking program, one of the two main reasons given by participants for participation in the program stemmed from a desire to improve their physical fitness. The other main reason was having the opportunity to meet other people. In an American study (Cohen-Mansfield, Marx, & Guralnik, 2003) which looked at motivators and barriers to physical activity amongst community-dwelling 74-85 year old people, pain was the most reported barrier, but improving health and feeling better physically was the most significant motivator. It therefore appears that a number of older people are aware of the importance of physical activity to their health and illustrates older people’s awareness of the importance of maintaining physical activity.

In this study reference was made to one’s vulnerability to ill health or death if physical activity was not maintained. As one participant said: ‘What motivates me now is that you pick up the paper and see guys much younger than me falling off the perch.’ Moreover, this suggests that not only are older people aware of the importance of physical activity to their health, but also that older people’s observance of their peers’ decline conveys a strong message about the importance of participating in physical activity.
Furthermore, foremost in the minds of our participants were feelings of gratitude that they were still physically able to do the things they enjoyed. Also, when they compared themselves with some of their peers, they felt lucky they were still able to enjoy their physical prowess. Henley and Donovan's (2002) research explored younger people's motivations for adopting healthy nutrition and physical activity behaviours. This younger age group (31-51 years), were already reporting their main reason for wanting to participate in physical activity as firstly “to have a better life” and secondly “to avoid illness”. Our older participants had reached the age where they appreciated that it was their previous participation in physical activity that contributed to their ‘better life’ and their ‘avoidance of illness’ and especially so when compared to their sedentary friends. They also appreciated the importance of maintaining their participation in physical activity. Again, comparison with their peers was a strong message for older people.

A number of participants spoke not just about their attitude to physical activity, but how they felt afterwards. Feeling good afterwards was one reason for participation. For some participants the participation in the activity was as important as the activity itself, for example meeting with friends and the related social interaction.

In general participants from both the healthy and unhealthy groups engaged in physical activity and expressed positive attitudes towards physical activity. This was both during the focus group meetings and in their completed questionnaire (See table 1). However, some participants viewed physical activity as something ‘extra’ to do, such as attending ‘Prime Movers’ aerobics classes or going swimming. Generally, participants did not consider incidental physical activity such as housework, window cleaning or lawn mowing to be physical activity.

Similar results emerged in Eyler et al.’s (1998) qualitative study with minority women. When these women were asked to give examples of physical activity they also said “bike riding”, “swimming” or “aerobics” amongst their many examples. As Eyler et al., (1998, p. 642) stated, these examples of physical activity were similar to “what is traditionally defined as exercise”. Just as our participants thought physical activity was extra to one’s day-to-day activities, Eyler et al.’s (1998, p. 642) sample also thought physical activity was something extra; one woman in their sample said “I always think of it as things on top of what I normally do - not what I do”. In one section of Burden's (1999) research where
participants gave their personal meaning of leisure it was found that Anglo-Australian women spoke of 'walking' or 'swimming' as something they "should" be doing for health and fitness" (Burden, 1999, p.32). Interestingly, these women were non-participants in these activities - these activities would be something 'extra'. Incidental physical activity is further discussed in the section 'Attitudes to the NPAGs'. However, it would appear that the message that moderate intensity physical activity is beneficial to one's health and this includes incidental physical activity needs to be disseminated more effectively.

6.2 Attitudes to the National Physical Activity Guidelines

In this section the participants' attitudes to the National Physical Activity Guidelines (NPAGs) are discussed with reference to the theoretical framework for this study.

When considering attitudes to the NPAGs it is appropriate to look at the Theory of Reasoned Action (Ajzen & Fishbein, 1980). The theory states that behaviour is determined by a person's intentions and those intentions are influenced by people's *attitudes towards the behaviour* (personal) and their *subjective norms* (perceived social influence). Both these determinants can be positive or negative. People's beliefs underpin their attitudes and their subjective norms and are based on the knowledge they have about their environment (whether correct or incorrect). Therefore, a person's behaviour is determined by their beliefs. It follows that in order to attempt to influence a change in people's behaviour they have to be made aware of information that would change their beliefs.

The aim of the NPAGs is to provide the information people need to make positive changes to their beliefs relating to physical activity. The Theory of Reasoned Action (Ajzen & Fishbein, 1980) is based on the assumption that people make rational decisions relating to the information available to them. However, a person's intentional behaviour is influenced by the determinants of intention, *attitudes towards the behaviour* and *subjective norms*, and this will vary between individuals according to how they evaluate these determinants. The following discussion focuses on the participants' attitudes towards the NPAGs. Some attitudes have been formed from knowledge already available to the participants and some attitudes are challenged by new information provided by the NPAGs.
When shown the guidelines the participants' first reaction was to say they had never seen them before. This was borne out at a later stage when participants were given a leaflet and later when a poster was shown to them. It was obvious from their puzzled expressions that they had not seen the guidelines in this form before. However, most of the guidelines' recommendations had filtered through to participants via the media. In general, their knowledge of the health benefits gained from participating and maintaining participation in physical activity was made obvious from their discussion.

Participants' responses to the first three guidelines tended to be positive but the second guideline attracted some negative responses from one group of male participants and the fourth guideline also attracted some negative responses. There was some doubt that the guidelines could be applicable to the whole community. This doubt was most prevalent in relation to the fourth guideline.

During the stages of development of the NPAGs (Egger et al., 2001) it was concluded that the blind acceptance of effort-saving technology was hampering efforts to increase the population's physical activity levels. The first guideline: "Think of movement as an opportunity, not an inconvenience" aims to change people's thinking towards their behaviour. That means getting people to change their 'mind-set' towards movement and seeing all movement as an opportunity to gain health benefits rather than as a 'time-wasting inconvenience'. By raising people's awareness, that is changing their 'mind-set', some of the deleterious consequences due to technology can be overcome. Most importantly, this first guideline's message is to change one's attitude and see the need to move more positively.

Responses to the first guideline primarily indicated that participants did not currently think of movement as an opportunity, but they concluded this could be a positive attitude to adopt. It appeared that once participants gave the guideline some thought they could see the benefits. For these participants this was a profoundly different attitude towards movement and especially in relation to inconvenient movement; they had never thought to adopt a positive attitude before. Considering this was a new way of processing their thoughts; participants conceded that it would take time to change, but generally they were convinced of the merits of the guidelines' message.
There were participants who said their health status often meant that at times it was painful for them to do extra movement and consequently think of it as an opportunity, but they still embraced the merits of the first guideline. They said their head did the work for them by making sure they did not forget things. When in pain, they had their own coping strategies which kept movement to a minimum, but this did not preclude them from approving of the guideline's message and where possible putting it into practice.

Generally the response to the first guideline was positive. Participants were already aware of the health benefits attributable to physical activity; this message had filtered through to them through the media. Changing the way one thought about movement; that is ‘thinking of movement as an opportunity’ was a new way of thinking for them and is, in fact a fairly new concept. They had not arrived at this belief from information in the media or from community attitudes. A search of the literature did not reveal any other research which discussed 'thinking of all movement as an opportunity rather than an inconvenience'. Mostly, opportunity related to the opportunity to participate for example, having the facilities which present the opportunity to participate (Twiss et al., 2003).

The most significant improvement in the nation’s health status would come from encouraging small increases in moderate-intensity physical activity by the sedentary sector of the population (Bauman et al., 1990). This was the thinking behind the second guideline (Egger et al., 2001): “Be active every day in as many ways as you can”. The aim is to encourage people to take the opportunity to do lots of little extra movements (incidental activity). This second guideline coupled with the first guideline would add to the level of physical activity that people do on a daily basis and ultimately improve the nation’s overall health status.

Incidental activity is not a new concept. In 1996 the WHO (1996, p.1) stated “physical activity is operationally defined as all movements in everyday life, including work, activities of daily living, recreation, exercise, and sporting activities”. One example of moderate-intensity physical activity, which could potentially form part of one’s everyday physical activity, is stair climbing and posters can draw attention to and encourage the use of stairs (Kerr et al., 2000). More recent research by Gunn et al., (2002), which determined energy expenditure during some incidental activities, concluded that house and garden work such as washing windows or lawn mowing expended energy which could be
classed as moderate-intensity physical activity. However, generally our participants had not been aware of the concept of incidental physical activity.

These small increases in day-to-day physical activity will come from small changes in people’s everyday activities. These changes can be as simple as walking to the shops instead of driving, using the stairs rather than the escalator or lift and reverting to stretching and opening the garage door instead of relying on remote-control technology. The changes older people make to their activities should be sensible changes commensurate with their physical capabilities. For example if they have problems climbing stairs then taking the lift up may be appropriate; nevertheless, walking down stairs may still be a possibility. Other changes should be considered such as parking at a greater distance from the shops and walking. These small changes in the amount of physical activity people undertake are cumulative and add to the daily amount of physical activity done by the individual. This second guideline aims to get people to think about forming good habits by being active in as many ways as possible.

Until participants discussed this second guideline many of them believed physical activity was something ‘extra’ to their everyday activities such as organised exercise classes. Understanding that the incidental activity of day-to-day living is physical activity impacted on these participants in two ways. Firstly, because some participants felt that they did not want to do ‘mindless exercise’ they could now see some positive purpose to physical activity. Secondly, because some participants thought physical activity was something extra they had been living with a sense of guilt related to not going out and doing ‘exercise’ and this new knowledge changed their thinking and feeling about physical activity.

In the first instance, having a purpose behind undertaking physical activity was important for some participants. They did not want to pedal an exercise bike or walk aimlessly around a track. In Eyler et al.’s (1998) study which looked at physical activity and minority women, there were similar findings amongst Chinese and Filipino women. These women needed to have a purpose behind their physical activity pursuits and generally their physical activity came from their day-to-day activities, usually housework. Our participants were generally fairly active people during their daily lives and they felt happy to be active every day in as many ways as they could as long as the tasks were purposeful.
In the second instance, participants indicated they could let go of their sense of guilt because they now understood that physical activity did not have to be 'extra' activity. The knowledge that people feel guilty if they are not 'exercising' is an important issue. As stated earlier, being healthy is a holistic state, which includes the mind as well as the body (World Health Organization, n.d.2). Negative emotions such as guilt will have a negative impact on a person’s overall health and well-being. The WHO has a strong focus on improving world health and specifically mental health (see for example World Health Organization, 2001). There is a need for social marketing and health promotion practitioners to act with caution when promoting physical activity to avoid inducing guilt, which could adversely affect a person’s mental health. It would be ironic if the inadvertent result of promoting improvements in physical health was an adverse effect on mental health and well-being. Making people more aware that physical activity does not have to be organised exercise and that incidental physical activity is beneficial to health could empower people and reduce guilt.

Overall, participants had favourable attitudes to the second guideline’s recommendations, particularly once they understood that physical activity did not have to be organised exercise. Incidental activity related to day-to-day living was a concept that participants had not understood. Eyler et al., (1998) had similar findings in their qualitative research which looked at physical activity and minority women over the age of 40 years. Their participants did not understand the concept of incidental activity. They did not know that aspects of housework or walking briskly could be accumulated to give the 30 minutes of moderate-intensity physical activity recommended by their own Surgeon Generals report.

One group of male participants gave some negative responses to this second guideline. Their responses were directed at the message source and message source is discussed further in a later section.

As noted earlier in this section, it is the sedentary section of the population that is the main target of this guideline and there were some participants who thought that this second guideline was more applicable to inactive people. Some participants suggested their sedentary friends were not getting the message and that they needed targeting by this guideline.
The third guideline: "Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days" incorporates the new data on physical activity and health. This new research shows that improvements in health can be gained from cumulative amounts of moderate intensity physical activity (Department of Health and Aged Care, 1999; Egger et al., 2001). Previously the belief was that exercise was only beneficial if it was done vigorously for at least 30 consecutive minutes 3 or 4 times a week (Commonwealth Department of Health and Aged Care, 1999). It is important to note that this guideline aims to improve health. Cardiovascular fitness and weight loss require longer duration of physical activity.

This new data shows that moderate-intensity physical activity is beneficial to health. These activities include brisk walking or cycling (Department of Health and Aged Care, 1999), but also incidental activity such as housework or gardening (Gunn et al., 2002; World Health Organization, 1996). Riddoch (2000), in an editorial discussing Glass et al.'s (1999) article relating to social and productive activities in elderly Americans, pointed out that the body does not distinguish between the purpose of the physical activity. The body does not take account of whether the physical activity is for sport and recreation purposes or house and garden activities. What matters, as suggested by this new data, is that either a single activity or combination of activities should be done for periods of 10 minutes, which accumulate to at least 30 minutes per day. These activities should cause a slight increase in heart rate and breathing.

During the focus groups' discussion of the third guideline, incidental physical activity was again raised, not necessarily by the same participants that raised the issue during the second guideline's discussion. Participants were again indicating they had thought of physical activity as something 'extra'. Also some participants believed that by complying with the third guideline's recommendations they felt they were free from the constraints of having to do 'exercise', that is something 'extra'. Also, there was a certain freedom about doing day-to-day activities that suited them and over a timeframe that also suited them. Again, this raises the issue that knowledge of the benefits of incidental activity is not widespread.

There were a number of other views relating to the third guideline. For example, some participants understood that their daily activities were in line with the third guideline's recommendations. Some participants had never believed that physical
activity had to be done in blocks of 30 minutes. There were some participants who believed the guideline was unnecessary, that they were already active and did not need guidelines to tell them to do what they were already doing. This was a more critical reading of the guidelines, which can be interpreted as a rejection of the 'expert' opinion.

Generally participants were receptive to this guideline's message and would try to follow the recommendations. Those who believed they were already active would not change their behaviour, but agreed there was merit in the guideline's message. The issue of incidental activity was discussed again, indicating a need to disseminate the message that incidental activity is beneficial to health and that activity can be accumulated throughout the day.

The fourth guideline: "If you can, enjoy some regular, vigorous exercise for extra health and fitness" is not intended as a replacement for the previous guidelines. This guideline is aimed at those people who are capable of adding an extra level of activity to their fitness regime, that is people who are 'able-bodied'. One particular target group is children and teenagers under 18 years of age. Vigorous exercise makes people "huff and puff" and makes talking in whole sentences difficult. However, some participants thought the fourth guideline illustrated that these guidelines could not apply to the whole community, suggesting this guideline did not take account of their age; the related discussion tended to be rather heated.

Some participants believed vigorous activity was unsuitable for their age group. They were fearful of the consequences of participation in vigorous activity. Some participants stated they had read of older people encountering injuries or death from vigorous physical activity. They made comparisons with their capacity for physical activity when young compared to the present day and believed it inappropriate at their age to participate in vigorous physical activity. They also thought it inappropriate for the guideline to encourage older people to do vigorous exercise. They were also sceptical that the promised benefits would accrue; in fact, some asked if these benefits could be guaranteed.

There was concern on the part of some participants that one can 'wear bits out quicker' especially when participating in vigorous physical activity. This concern was mentioned in O'Brien and Vertindly's (1991) paper relating to exercise as a
resource for ageing women. They mentioned that “wearing out” the body was a concern for older women as far back as the 1980s and this concern had not been dispelled in the general community. Further, in Ettinger et al.’s (1997) study comparing aerobic exercise and resistance exercise in older adults with knee osteoarthritis it was found that moderate exercise did not worsen the condition, though their literature review did highlight research that found vigorous forms of exercise could accelerate the disease. Therefore, the participants’ concern about the adverse consequences of some vigorous physical activity may be legitimate.

The fourth guideline recommends seeking medical advice before commencement of vigorous activity and this was brought to participants’ attention; yet some remained hostile to this recommendation. The important message that moderate-intensity physical activity is safe for all older people and vigorous activity is only meant for those people who are able to do it did not reach all participants in the early discussion and had to be reiterated.

A number of participants had done heavy physical work during their working lives. Some believed that this contributed to their physical decline; that is, if their past work had been less physically demanding they would be in better health now. Shephard (1994) suggested that attitudes affect behavioural intentions. Therefore, if one’s attitude of a lifetime is to associate success with the reduction of the physical exertion related to work then in retirement one is not going to do vigorous activity. Our findings support Shephard’s conclusions. Some of the participants believed they had done their fair share of physical work and had earned the right not to do vigorous activity in their retirement.

A small number of participants were already participating in vigorous physical activity and enjoying it. Some thought of it as a challenge and others spoke of their sense of achievement from the participation. However, generally the focus groups did not accept this fourth guideline’s recommendations. Participants believed that one needed to be cautious in relation to this guideline and that basically the guideline was inappropriate for older people. The participants focused on the word ‘vigorous’ and the discussion indicated that the participants had taken the message to imply that “the whole population” should do vigorous physical activity. The reaction of the participants tended to imply they were not taking into account the words “If you can...” even though these are the first three words of the fourth guideline.
6.3 Barriers/facilitators to physical activity

In this section the barriers/facilitators to physical activity which were raised by our participants are discussed in relation to the literature. Just as Corti et al.,(1996) and King et al., (2000) found, our participants also expressed that, when outdoors, an aesthetically pleasing environment both encouraged and added pleasure to their participation in physical activity. Birds, trees and lakes were amongst the many things which gave pleasure and contributed to participants’ motivation towards participation in physical activity.

Companionship, widely discussed in our focus groups by both male and female participants, has also been widely discussed in the literature (Caserta & Gillett, 1998; Corti et al., 1995; Satariano et al., 2000). Having a companion encouraged participants to engage in physical activity. This also added the extra dimension of the enjoyable social interaction, thus adding to one’s sense of well-being. Satariano’s research (2000) found that older women needed a companion more than older men. This was not confirmed in our sample as both male and female participants discussed their need for companionship. Interestingly however, female participants mentioned that having a companion decreased one’s fear for personal safety. A search of the literature did not reveal research in support of this, suggesting it would be an area for further research. However, it would have limited practicality as a health promotion strategy as it could adversely increase women’s fears of walking alone.

Personal safety relating to fear of crime is widely mentioned in the literature as one reason that people, and not just older people, are unwilling to leave their homes to participate in physical activity (see for example, Heesch et al., 2000; O’Clark & Nothwehr, 1999; Satariano et al., 2000). The literature did not indicate that this fear was gender specific although there is literature demonstrating women’s fear for personal safety (Eyler et al., 1998). During our focus groups sessions only female participants raised this issue.

Participants mentioned dogs as companions in the same sense as they spoke of human companionship during physical activity. Walking the dog was part of the lifestyle of some participants. This study did not establish the amount of walking done by the participants though it did indicate that walking the dog was generally
perceived as a pleasure rather than a chore. However a recent study (Bauman, Russell, Furber, & Dobson, 2001) relating dog ownership to amounts of physical activity found that 59% of dog owners did not walk their dogs. Also, of those who did, only 26% attained the amount of physical activity recommended by the US Surgeon General’s report. In their discussion of these findings, Bauman et al. (2001) suggested that a “useful health promotion strategy” would be the encouragement of dog ownership for inactive non-dog owners. They suggest a national strategy advocating “Walkies for all by the year 2010” (Bauman et al., 2001, p. 634). Considering the pleasure our participants experienced from dog walking this could be one pathway to the adoption of physical activity into one’s lifestyle.

Many researchers (for example see, Corti et al., 1996; O’Clark & Nothwehr, 1999; Sallis et al., 1992) have found that negative aspects of the environment such as uneven walking surfaces or uncontrolled dogs can act as barriers to participation in physical activity. Our participants’ contributions supported these findings and the issues raised are discussed next.

Fear of falling is a real issue for older people (National Ageing Research Institute, 2000; O’Clark & Nothwehr, 1999; Satariano et al., 2000) and participants in these focus groups confirmed this. One specific example of this fear related to shiny slippery floors in some shopping centres. Another interesting example, which was raised and not found in the literature, related to the fear of falling due to pavements modified to accommodate wheelchair usage and blind people’s needs at road crossings. The paving dips to allow wheelchairs to cross and the paving stones also have positive circular impression, which can be felt underfoot by a partially sighted or blind person. Some of our female participants felt that for the older person who is not so steady on their feet and/or with failing eyesight, this sort of crossing can prove to be quite hazardous. The change in pavement surface and height can cause some older people to feel unbalanced. The literature (Corti et al., 1996; Eyler et al., 1998; see for example, King et al., 2000) suggests a number of the environmental barriers to physical activity are modifiable. However, our participants’ example found one modification aimed at helping one sector of the community was impacting in a negative way on them.

The fear of dogs as a barrier to physical activity did not appear to be either gender or age specific in other research (Corti et al., 1996; O’Clark & Nothwehr, 1999;
Sallis et al., 1992); rather, it is accepted that this fear is not uncommon within the general community. However, in this study the women in particular mentioned the fear aroused by the sight of an uncontrolled dog. Some participants indicated the blame lay with irresponsible dog owners rather than the dog itself indicating a need to educate dog owners of their responsibilities, particularly where older people are concerned. Further, this fear may have wider consequences considering older people's 'fear of falling'.

Participants raised the issue of pain and for some this proved to be a barrier to physical activity. This is supported in the literature (Cohen-Mansfield et al., 2003; Ettinger et al., 1997; O'Clark & Nothwehr, 1999), although there are instances where physical activity can reduce pain – particularly in knee arthritis (Ettinger et al., 1997).

6.4 Older people's perceptions of age and health

In determining an answer to the question 'Are healthy older people more likely to participate in physical activity than unhealthy older people?' it is essential to have an understanding of older people's perceptions of themselves. This section will discuss old age and how older people perceive their old age and their own health status. This will provide the means to an understanding of the answer to the above question, as older people are likely to perceive themselves as younger than their chronological age. Also, they are likely to define themselves as healthy even when they are unwell or have a disability (Bernard, 2000; Sidell, 1995; also see Vaillant & Mukamal, 2001 for other references of similar findings).

Ageing is gradual and multidimensional and takes account of the biological, sociological and psychological aspects of one's life (Moschis, Lee, & Mathur, 1997). For centuries births were not officially registered and therefore, people's notion of chronological age was vague. Age was more likely to relate to the decline of physical or mental capacity (Midwinter, 1997). Today's society tends to set arbitrary ages for old age. For example, in the UK there is an arbitrary age of 65 for men and 60 for women, which designates when they qualify for their 'old age pension', but this takes no account of other factors affecting age (Achenbaum, 1998; Long, 1998). Moreover, unlike the earlier years of life, which can be charted to follow a comparative pattern across the community, the later years of
life follow no pattern; at no other time during the life cycle are there such marked discrepancies. For example, on the one hand there are 90-year-old marathon runners while on the other there are 70-year-olds dependent on full-time carers. Also, just as the onset of old age is indefinable so is its pace (Bernard, 2000; Shephard, 1997). Therefore, any stereotypical description of old age would be wrong because the homogeneity of old age is a myth - people age differently. Not only is chronological age no way to define old age it is also an inappropriate indicator of how older people define themselves (Sidell, 1995).

Older people's perceptions of their own age are different to their chronological age. In a large American study (The National Council on the Aging, 2002) 3,048 people over the age of 18 years were canvassed to give their perceptions of ageing; they were interviewed by phone for 25 minutes. Of the 3,048 participants the numbers were positively skewed towards older people with 1,155 being over the age of 55 years, 55% were between 65-74, and 45% were 75+. In answer to the question "Do you consider yourself young, middle-aged, old, or very old?" 43% of the respondents said they considered themselves middle-aged or younger. Furthermore, 9% of the 65-74 year olds said they considered themselves young, and 7% of the 75+ group said they considered themselves young. In addition, when asked: "At what age do you think the average man becomes old? The average woman?" generally, the perceptions were that men begin old age at age 70 and women at age 75.

Much of the literature points out this discrepancy between chronological age and perceptions of age. Montepare and Lachman (1989) noted that discrepancies between actual age and subjective age increase with chronological age. Where young people are happy to add years to their age, older people's subjective age identification is quite different. However, as today's older generation is likely to spend 3 decades over the age of 50 years, this suggests 50 is a realistic midpoint and not the end point (Silvers, 1997) and older people's perceptions of age are much closer to reality than the stereotype. Mainstream marketing is also grappling with older people's perceptions of their age. People over the age of 55 years control more than 50% of the USA's assets and discretionary income (Moschis et al., 1997) and this is not a market that marketers wish to alienate. Commercial marketers are becoming more mindful of not stereotyping the older segment of the market (Bradley & Longino, 2001; Moschis et al., 1997; Nielson & Curry, 1997). Social marketers also need to be mindful of the heterogeneity of older people if
they wish to target that market. Older people perceive themselves as younger than their chronological age and it is of value to understand this phenomenon.

Montepare and Lachman (1989) cited literature which indicated that older people use a subjective younger age as a form of defence against the stigma of old age. Sidell (1995) suggested that older people consider themselves younger than others of the same chronological age because they have internalised the stereotypical older person and do not associate themselves with that stereotype. This is carried through to their perceptions of their own health. When compared with the stereotypical image of the older person, which often gives a negative image of health, older people perceive themselves as healthy. Also, Sidell (1995) suggested that the way health is defined will influence perceptions of health.

Sidell (1995, p. xix) stated that "ways of seeing" affect "ways of knowing". The western biomedical view of health sees health as the absence of disease. This view of health sees the physiology of each human body as identical and that the body can be broken down into normal working parts. When a part malfunctions or is diseased it is treated as a distinct part rather than an interactive whole. The other end of the spectrum is the holistic view of health. This view sees people as unique, thinking, feeling and creative individuals and health as a state where body, mind and spirit are in equilibrium. Older people's bodies will have succumbed to some form of degeneration and would not meet the biomedical definition of health. However, the majority of older people are able to function well in their daily lives. Therefore, if health were defined along a continuum older people would meet some definition of health.

This study had real life examples of the above phenomenon. The perceptions that older people have of themselves and their health were encountered during the recruiting process for this study. Initially, when prospective participants were asked to say whether they viewed themselves as 'healthy' or 'unhealthy', they all said they were 'healthy'. Subsequently prospective participants were asked if they had had a serious illness in the past 5 years. If participants answered in the affirmative to this question they were classified as 'unhealthy' by the researcher.

However, even though the questionnaire had been amended, it became evident during the focus group interviews that some of the participants, who had categorised themselves as 'healthy', did in fact have an illness. For example
during the interviews a few 'healthy' participants made reference to the fact that they took medication for a heart condition or they had painful arthritis, one 'healthy' female participant made reference to her arthritis and anaemia. Nevertheless these participants considered themselves to be 'healthy'; this confirms findings from other research which revealed older people perceive themselves as healthy (Sidell, 1995; Vaillani & Mukamal, 2001).

The participants in this study were generally active people and whether they were categorised as 'healthy' or 'unhealthy' they were likely to participate in physical activity. For example, one asthmatic participant participated in a swimming group for asthmatics. One health-related barrier to physical activity emerged from this study: the amount of pain that participants suffered at a given time. Only participants categorised as 'unhealthy' mentioned pain as an obstacle to participation in physical activity. 'Healthy' participants also at times suffered pain, most likely arthritis, but they did not say that it inhibited their physical activity.

Apart from the limitation pain placed on 'unhealthy' participants, in essence, it was difficult to determine any other difference in the participation rates of 'healthy' or 'unhealthy' older people. Also, generally 'healthy' and 'unhealthy' participants had the same positive attitudes towards physical activity and to the recommendations in the NPAGs.

6.5 Social norms

Social norms are the beliefs people hold of the attitudes and behaviours they believe to be normal within their social group. People have perceptions of what normal behaviour within their group is or should be and these norms will impact on their own behaviour (Higher Education Center, 2003).

The theoretical framework for this research is Ajzen and Fishbein's (1980) Theory of Reasoned Action. This theory takes account of both personal and social influences. Ajzen and Fishbein (1980) suggested that in applied settings their theory can be used to explain, predict and influence behaviour. The theory links the concepts of beliefs, attitudes, intentions and behaviour. The theory assumes people to be rational and that their actions are reasoned actions. The assumption is that people give thought to the implications of their actions and therefore when
they act their actions are volitional; that is the actions are under their control. Consequently, when a person makes a decision to engage in or not engage in certain behaviour the implications of this behaviour have been reasoned.

The Theory of Reasoned Action (Ajzen, 1988) states that there are two determinants of intention, one is personal and the other social. The first determinant is the person’s personal belief that the behaviour leads to their evaluated outcome; their belief influences their attitude (personal evaluation) towards the behaviour, which can be negative or positive. For example, they may have reasoned and now believe that participation in physical activity is beneficial for their health. These beliefs will influence their intentions. Unless something unexpected happens, a person’s behaviour is usually in accordance with their intentions.

However, the second determinant, the social determinant, also influences attitude. This social determinant is the person’s social environment and its influences upon that person. This refers to the person’s belief that people of importance to them, for example their spouse or peers, will have thoughts about how they should behave. This is a perception of how they think ‘important others’ would expect them to behave. For example, if a person believes that their peer group will think them too old to participate in physical activity this will have some bearing on the person’s intentions to participate in physical activity.

Both the personal and social determinants can have a positive or negative influence on a person’s intentions to perform the behaviour. The direction these influences take is a function of a person’s assessment of the importance they place on both these influences. Consequently it could happen that a person forms the belief that participation in physical activity would lead to a positive outcome and accordingly their attitude towards the intended behaviour is positive. However, it could also happen that a person would not participate in physical activity if they find the social influence more powerful than their personal assessment of the behaviour. Essentially, both the personal and social determinants have some bearing on people’s attitude; this in turn leads to their intentions to perform (or not perform) the behaviour.

Ajzen and Fishbein (1980) stated that both personal and social determinants influence people’s intentions and these intentions are formed by the person
weighing the importance of each of these determinants. The influence of the social group is also a determinant of the Social Norms Theory (Berkowitz, 2003). Social Norms Theory suggests that a substantial amount of peer influence is based on misconceptions. If these social norms are misconstrued (false norms) and a person's perceptions of their social group's behaviour are inaccurate they are likely to behave in the perceived manner; that is they will follow the false norms (Berkowitz, 2003). Even though these perceptions may be inaccurate they are nonetheless powerful influences.

Social Norms Theory (Berkowitz, 2003) has its roots in research conducted by Perkins and Berkowitz's in the USA in the early '80s. This research aimed to understand college students' negative drinking behaviour in order to resolve the problems associated with that negative behaviour. Their research noted that college students often overestimated their peers’ drinking habits. This resulted in students emulating their perceived peers’ drinking habits due to their own false perceptions (false norm) rather than them emulating the actual behaviour (actual norm). This research showed that as well as students misperceiving the use of alcohol and the permissiveness of their peers it also showed that their peers’ use and attitude towards alcohol was more moderate than the perceptions. Thus, the researchers recommended that preventative strategies should focus on making available to students the accurate drinking habits of their peers. This was a new and interesting approach.

Social Norms Theory has implications for health promotion (Berkowitz, 2003). The theory states that misperceptions influence behaviour. Social norm intervention, which disseminates information about the actual norms, provides the information for people to act in line with their personal attitudes. Social marketing has been used to correct misperceptions (Higher Education Center, 2003).

The social environment that people experience has a powerful influence on their behaviour. Other authors (Bernard, 2000; Burbank & Riebe, 2002) have suggested that social influences have proven to be barriers to physical activity for older people, stating that ageist attitudes can be a negative social influence. Often these attitudes imply there is behaviour “befitting” older people, so when an older person contemplates participation in physical activity they are negatively influenced by these attitudes. Also, in the past young women were not encouraged to participate in “unladylike” physical activity. This influence carries over into old
age unless there is some intervention to rectify this influence (Burbank & Riebe, 2002).

King et al. (2000) also found social norms were a barrier to physical activity. This research was a nationally representative sample of US women from minority groups aged 40 years and older. King et al. looked at personal and environmental factors, which affected the physical activity of their sample of women. The women mentioned the lack of people in their neighbourhood who went out and walked. In this instance it was the absence of the behaviour that was the influence. That is, the social norm was not to see women out walking in their neighbourhoods. King et al. found that it was the absence of the positive social norms that formed barriers for these women. The women in this instance rarely saw people participating in physical activity in their neighbourhoods and therefore by example did not participate themselves.

By comparison with King et al.’s (2000) study, Corti et al. (1995) also found social norms influence people's attitudes towards physical activity, but in this instance the influence was positive. Corti et al.’s study was based in Western Australia. The focus groups were stratified by levels of physical activity participation (sedentary and low to moderate) as well as gender and socioeconomic status. Participants' ages ranged from 31 to 71 years with an average age of 46 years. One outcome of these focus groups was the observation made by the participants that in recent years more people were out walking. The visibility of walkers, even 'elderly couples', was discussed in positive term by these participants. Some of the benefits they mentioned were improving and maintaining health as well as achieving a sense of well being. Corti et al., (1995, p. 16) stated that amongst other things "the impression that ‘everyone is doing it’" is a foundation on which to build strategies for the encouragement of physical activity. The visibility of people out walking was a social norm, which had positive influences.

Just as Corti et al. (1995) found, our participants also expressed their awareness of the increasing numbers of people walking in recent years compared with the past. Our study is also a Western Australian study. Our participants also noted that this change related to older people. Specifically, the participants suggested there was a marked change in society's attitudes towards older people participating in exercise over the last few years. ‘Ageist’ attitudes, which indicated that physical activity is
an inappropriate activity for older people, were seen as definitely changing. One eighty-five year old participant believed times had changed for the better. He reflected back twenty years to when he was sixty-five and described how he encountered disapproval of his physical activity pursuits from his peers at the time. Where Corti et al. (1995) found that many of their participants regarded walking as a ‘social norm’ for the general population, our participants regarded this ‘social norm’ as being especially relevant to their older age group.

For some people, participation in physical activity in the public domain would influence their behaviour. King et al. (2000) found, for one ethnic group of women, that self-consciousness relating to physical appearance had a negative affect on participation in physical activity. Self-consciousness and/or embarrassment is mentioned elsewhere in the literature (Caserta & Gillett, 1998; Corti et al., 1995; O’Brien & Vertinsky, 1991; Schmidt et al., 2000). Corti et al. (1995) for example, found that even though some women had an awareness of the benefits of walking and knew it would help improve their weight, a sense of self-consciousness still acted as a barrier. Inasmuch as they had a poor image of their physical appearance, they felt discouraged to participate and did not want to “go prancing down the street” (Corti et al., 1995, p. 14) and consequently did not initiate participation.

However, the responses from our participants were quite different. Participants mentioned embarrassment in relation to the past where the social norms of the time established certain behaviour for older people. However, they believed that just as the social norms have changed, so had their behaviour. Some participants mentioned that embarrassment was once part of their youth, but maturity gave them the right to ‘do what the hell we want’. Participants did not speak about self-consciousness as a barrier to physical activity. There was a sense that they had reached a time in their life when it no longer mattered what other people thought. They did not have to meet the expectations of others (social). If they believed there was a favourable outcome for them from participation in physical activity, then that was what they would do (personal).
6.6 Source credibility leading to message credibility

Although not anticipated as a factor prior to conducting the focus groups, source credibility emerged as a major influence in participants' thinking. Raised voices and animated discussion indicated that this was of considerable importance to the participants. Male participants particularly tended to show very strong emotion when expressing their attitude towards the government source of the NPAG’s message.

The following section discusses source credibility and its importance in achieving message credibility. Source credibility relates to the assumption that the effectiveness of a message is influenced by the sender of that message (Hovland, Janis, & Kelly, 1953). That is, no message is received independent of its sender. Therefore, the persuasiveness of the message and the influence it has on the receiver is affected by the receiver’s perception of the sender (Hovland et al., 1953; McCroskey & T e ven, 1999).

The credibility of the source of the message plays an important role in the communication process. Many communication models explain the components of the communication process; one such component is the receiver’s interpretation of the message’s source (e.g., Dwyer, 1993). The receiver of the message, as a single individual, interprets both the message and the source of the message through their own perceptions. These perceptions are based on the receiver’s unique experiences of their own environment. Therefore, when interpreting the message, the receiver is filtering both the message and the sender of the message through these perceptions. Hence, the received message is not independent of the sender. Hovland et al. (1953) suggested the persuasive effect of the message is influenced by the receiver’s perceptions of the sender that is, the credibility of the source of the message.

The credibility of the message's source or “source credibility” (Hovland et al., 1953) is the mind’s eye image that the receiver has of the source of the message. This has been the pivotal aspect in the study of persuasion since Aristotle (McCroskey & Teven, 1999). Aristotle is attributed with identifying three dimensions of source credibility: intelligence, trustworthiness and goodwill (McCroskey & Teven, 1999). Hovland et al.’s (1953) two dimensions of source
credibility mirror Aristotle's. They are: expertness and trustworthiness, which includes the intent (goodwill) towards the receiver. Expertness is the degree to which the sender of the message is perceived to be a source of reliable information - the intelligence of the sender. Trustworthiness is the degree of confidence the receiver has in the sender's intent to convey the most valid message - the truthfulness and goodwill of the sender. The receiver of a message gives weight to the credibility of the message based on the expertness and trustworthiness of the sender. It is the perception that the source has expert knowledge and the communication of this knowledge is being shared honestly, which creates credibility. Credibility is reduced or lost if the message lacks either of these dimensions.

Reduced credibility occurs where the sender of the message is perceived as trying to gain something from the interaction; thus they are perceived as less trustworthy (Hovland et al., 1953). A more recent finding of this example was identified in research (Smith, Young, & Gibson, 1999) relating to consumer confidence and source credibility during the outbreak of bovine spongiform encephalopathy (mad cow disease) in Britain. Consumers perceived that the Meat and Livestock Commission (MLC) had some self-interest for making their assertions about safety relating to the consumption of meat products and thus perceived the MLC as untrustworthy. On the other hand, credibility can be reduced if the sender is perceived as lacking expertness. A sender can have a number of attributes that are perceived by the receiver as relating to expertness. One area where the receiver can perceive the sender as an expert is the perception that the source has similar attributes to themselves (Hovland et al., 1953). For example this could be social standing, the values they hold or their age group. The individual receivers who consider the sender to hold the same attributes as themselves will usually judge the message favourably.

A full literature review of the research relating to source credibility is beyond the scope of this study. However, as early as 1953 Hovland et al. (1953) noted that source credibility was already being exploited as a technique in commercial advertising. There are many recent marketing articles which cover source credibility and its influence pertaining to the formation of marketing strategies (for example see, Goldsmith, Lafferty, & Newell, 2000; Lafferty, Goldsmith, & Newell, 2002; Stern, 1994). Hovland et al. (1953) also noted that endorsement of an assertion by a person of high status can have as much influence as if they were
the originator of the message. Today, celebrities endorse many goods and services to the advantage of their sponsors. However, the literature also notes that today's sophisticated consumers have perceptions relating to multiple sources and their credibility, and not just to one source. Therefore when advertisements use an endorser to represent a corporation the consumer has perceptions relating to both (Lafferty et al., 2002).

A search of the literature on source credibility in the area of physical activity promotion revealed only two articles. Rosen (2000) explored the adoption of physical exercise from three different theoretical perspectives. It involved sedentary college students and in part looked at how their exercise readiness influenced their processing of the messages and how this related to their intentions to exercise. The students were given messages that were either "compelling or specious" and attributed to an "expert or non-expert source". The results were inconsistent with the above discussion of source credibility; in some instances it was found that the message was considered favourably even when one component of source credibility was lacking and unfavourably when both components were present (Rosen, 2000). Jones, Sinclair and Courneya (2003) also centred on college students who were similarly given either a positively or negatively framed message with either a credible or non-credible source. They found that students receiving the positive message from a credible source showed more positive intentions towards physical activity than the recipients of the other messages. For these students, the persuasive effect of the message they received was influenced by their perceptions of source credibility.

In summary, the source of the message must have the two component parts of expertness and trustworthiness for the message to be persuasive. This has been established by more than five decades of research in the area of source credibility. Although only one paper relating to physical activity found that when the component parts of source credibility were present the message was favourably received this does not discount the influence that source credibility has on message credibility. In fact source credibility appears to play a vital role in achieving message credibility and thus a persuasive social marketing message.

As discussed above Hovland et al., (1953) suggested that the receiver of a message may perceive the sender as an expert if the sender has similar attributes to themselves; one such attribute of expertness is age. Age in relation to the source
of the message was a concern to some participants in this study. They interpreted the source of the message to be young – certainly in a younger age bracket than they were. Of specific concern to these participants was the idea that someone young had produced the guidelines. They believed that a young person would have no empathy with the older age group. They did not want a young person telling them what they should do in relation to physical activity. They suggested that a person in their own age bracket, with some empathy with their needs should be the source of the message. They stated they would ignore the perceived ‘young person’s’ message. This perception of the age of the message’s source was particularly relevant in relation to the fourth guideline, which encouraged vigorous activity for those able to do it.

The other component of source credibility relates to trustworthiness. A receiver of a message will look unfavourably towards a source they perceive is out to influence them (Hovland et al., 1953). Some participants were sceptical about the physical activity done by the source of the message inferring that the source was trying to influence them without revealing their own commitment to the guidelines. As they were not able to judge the trustworthiness of the sender they viewed the message unfavourably. One participant, who had interpreted the source of the message as ‘Canberra’, was very disparaging. This participant dismissed the source of the message out of hand on the basis that ‘Canberra’ had no credibility. Older people may generally be more cynical than younger people and this could impact on perceptions of the message’s source. Healey’s (1997) research which looked at fear arousal in anti-smoking messages found that older people generally rated the message as less credible than younger people suggesting that older people are more ‘critical (or cynical)’ in rating such messages.

6.7 Holistic Approach

One unanticipated area of discussion raised by participants was the idea that activities other than physical activity were just as important to maintaining one’s health. Participants in this research raised the issue of purposeful and social activities as well as mental activities and claimed these activities were as important as physical activity in contributing health benefits. They stated the social aspect of engaging in physical activity was as important as the activity itself. They spoke of gardening, embroidery, voluntary work, University of the Third Age, doing crosswords, and just keeping active mentally as important
health-enhancing activities. They believed their participation in activities that exercised their minds was of vital importance to them. For some participants it was as important as physical activity in contributing to their health status. These participants believed the guidelines should include activities that stimulated the mind and that one shortcoming of the guidelines was the omission of this message.

Glass et al. (1999) explored the relationship between social, productive, and fitness activities on morbidity and mortality in older people. Their findings suggested that social and productive activities are as beneficial to health as fitness activities. They suggest that the benefits, which result from activities, come via physiological and psychosocial pathways. There are three editorials (see, Lesser, 2000; Molineux, 2000; Riddoch, 2000) relating to Glass et al.'s study. Riddoch (2000) in his editorial suggests that most of the social and productive activities in Glass et al.'s research are not necessarily passive and would entail some incidental physical activity and it is this physical activity which bestows the health benefits. However, the other two editorials, which come from the viewpoint of occupational therapy, uphold the view that meaningful and purposeful activities, which may not necessarily be physical activity, bestow health benefits. As discussed, the participants in this study also concurred with this latter idea. There was sufficient support in this study for a holistic approach that a recommendation can be made to social marketing practitioners to incorporate holistic aspects in any physical activity strategy for older people.

6.8 Sleep

The issue of sleep came up throughout the focus group interviews. Participants perceived sleep to be a positive outcome of participation in physical activity. The following section will look at sleep, older people and physical activity.

Getting a good night's sleep as a recompense for physical activity participation is not mentioned by the US Surgeon General's Report (Centers for Disease Control and Prevention [U.S.], 1996) and for most people this would be a surprise omission. Most people would consider time engaged in physical activity for example, time gardening or playing tennis or walking in the fresh air would result in the reward of a good night's sleep. The expression often used in this context is, they will 'sleep like a baby' (Buchner, 1997). Implicit in that old adage is the idea
that the young enjoy a better quality of sleep than the old. Generally this is true. In older age the amount of sleep one enjoys diminishes (Montgomery & Dennis, 2002; World Health Organization, 1996).

Sleep problems can occur at any age. However, older people are more likely to encounter sleep problems (Montgomery & Dennis, 2002). People over 60 years of age are more likely to present with sleep problems and often this problem is related to sleeping less. Sleeping less is not a problem in itself if the quality of sleep leaves the person refreshed. In older age this can be a normal pattern (World Health Organization, n. d.). Nonetheless, sleep problems make up one of the most common problems facing older people and often the solution is either over-the-counter or prescription medication. For example in the USA “35%-40% of sedative-hypnotics” are prescribed for older people (King et al., 1997, p. 32).

In an Australian study (Jorm, Grayson, Creasey, Waite & Broe, 2000) that investigated the long-term use of Benzodiazepine by community-dwelling people aged over 75 years, it was found that rates of use for this medication were both high and long term. The authors posed the paradox: why is it that elderly people use less alcohol, tobacco and illegal drugs and their mental health tends to be better than their younger counterparts yet they are heavy users of prescription drugs for the treatment of “anxiety, nervous tension, depression and sleeping problems?” (Jorm et al., 2000, p. 7). One suggested answer is the greater prevalence of sleep problems in the older age group. This leads to their seeking help and the resulting treatment is prescription drugs.

Sleep disorders can cause such symptoms as cognitive impairment, depression, and the deterioration of quality of life (Montgomery & Dennis, 2002). Prescription drugs, which offer some solution to the problem, often lead to undesirable side effects for the elderly. These side effects can cause such things as drowsiness and confusion, and can lead to falls (King et al., 1997). There is a potential for other harmful effects if these medications are taken with other medication. As an alternative solution to drugs, participation in physical activity (Montgomery & Dennis, 2002; Myer et al., 1999) is not a quick fix solution yet it does not have the same inherent risks as over-the-counter or prescription medicine.
Although the US Surgeon General's Report has omitted to advocate physical activity as a prescription for better quality sleep, it is widely supported in the literature (Jones & Owen, 1998; Myer et al., 1999; National Health and Medical Research Council, 1994; World Health Organization, 1996). For example, the World Health Organisation (1996) recommends physical activity as an aid to sleep and research cites participants themselves reporting better sleep from physical activity participation (Jones & Owen, 1998; King et al., 1997). A study by Jones and Owen (1998), conducted in Australia, with older people who participated in a four-month community-based walking program, found that at the end of the program 38% of 213 participants reported "better sleeping" as one of the program's benefits.

In this study participants talked of their problems related to sleep. Although the participants did not raise the issue of medication for sleep problems in other respects it appeared their sleep patterns were no different than any other group of older people. For example, one participant mentioned lying in bed in the early hours of the morning unable to sleep. His newspaper was delivered about three in the morning and he would listen for this newspaper falling on the lawn so he could get up and have something to do.

Some participants reported that sleep was one of the benefits of engaging in physical activity. Interestingly, some participants linked their ability to sleep to the amount of physical activity done in one block; that is, they felt they needed to do a block of 30 minutes. 'Doing 30 minutes together helps you sleep at night.' As a result these participants felt the third guideline's message: "Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days" was of little value to them. These participants believed that accumulating 10-minute bouts of physical activity would not give them the same sleep benefits. They indicated they would continue their normal pattern of physical activity as it was working for them. In this study the benefits of sleep was sufficiently supported that a recommendation can be made to social marketing practitioners to incorporate sleep-related benefits in any physical activity strategy for older people.
6.9 Never too late

Some participants were sceptical and thought that the messages embodied in NPAGs would be of no benefit to older people. Research indicates that one is never too old for physical activity and it is never too late to start (Centers for Disease Control and Prevention, [U.S.], 1996). People who have been sedentary most of their live can gain health benefits from changing to a moderate-intensity physically active lifestyle (Christmas & Andersen, 2000; Commonwealth Department of Health and Family Services, 1998). One recommendation to social marketing practitioners is that this is an important message and should be included in physical activity strategies aimed at older people.

6.10 Summary of major findings

In exploring older people’s attitudes to physical activity in general and the National Physical Activity Guidelines in particular four issues came to the fore. The major finding was the need to effectively disseminate the message that incidental activity was beneficial to health. It was obvious that some of the participants thought that engagement in physical activity meant doing something ‘extra’ to a normally physically active day. Secondly, there is also a need to disseminate the message that short bouts of moderate-intensity physical activity can be accumulated throughout the day to total to the recommended thirty minutes per day. Thirdly, participants held the belief that engaging in physical activity contributed to a better night’s sleep. Lastly, source credibility was an issue for some participants, specifically the idea that someone young was telling them what to do.

6.11 Limitations

As qualitative research findings are not quantifiable, that is, the data are arrived at by non-statistical means, the findings cannot be generalised across an entire population. Qualitative research also relies on the researcher’s ability to interpret the multifaceted responses of the participants to the social phenomenon being researched. By its very nature, this interpretation of the data cannot be as objective as the interpretation arrived at from quantitative data.
This study was limited to older people resident in the metropolitan area of Perth, Western Australia. It is feasible that the results could be different in other cultures that hold different beliefs relating to male and female older people's participation in physical activity, or where climate differences may impact on participation rates in physical activity.

The participants were recruited from the Positive Ageing Foundation's database and not a random selection. They were self-selected in terms of their current level of activity; that is, very inactive older people would not have been able to attend the focus group venue in the centre of town. For this reason, the groups were delineated in terms of 'healthy' and 'unhealthy' rather than 'active' and 'inactive'. However, it should be noted that even though half the participants were categorised as 'unhealthy' according to their recent medical history, even these participants had to be healthy enough to be able to travel to the CBD.

6.12 Implications of the research

In this section firstly, the implications of this research for social marketing practitioners are presented followed by the directions for future research.

6.12.1 Implications for social marketing practitioners

In social marketing the traditional concepts and tools of commercial marketing are utilised to promote changes in the individual's behaviour to rectify social problems (Andreasen, 2002; Kotler & Roberto, 1989). Social problems that relate to people's health have been successfully addressed using social marketing techniques (Kotler & Roberto, 1989). Therefore the goals of social marketing practitioners should be to use these techniques to change how people think, feel and behave towards social problems; this would include health problems.

Improvements in health in recent years, especially in relation to lifestyle diseases, can be attributed to health promotion (Egger et al., 1993). In their book *Health and the Media*, Egger, Donovan and Spark (1993) discuss health promotion, which in its early stages focused on changing people's behaviour. They point out that with increasing knowledge it became apparent that socio-economic factors impacted on the health gains made by the intervention of health promotion. It was
recognised that in addressing equality in health it was important to address the existing barriers to health that impede health gains in some groups of people. Thus consequently, changes were made to remove these barriers in an attempt to “make the healthy choice the easy choice” (Egger et al., 1993, p. x). Also, as an integral part of health promotion social marketing practitioners need to remember to think in terms of the ‘easy choice’ when considering the strategies to use in promoting improvements to health.

A social marketing campaign, which offers an ‘easy choice’ to better health for older people, is obviously desirable. The results of this research indicated that older people regularly visit shopping centres and that they find access to their shopping centre is relatively easy, overcoming the barrier of inconvenience of doing something ‘extra’. This suggests there is an opportunity to use suburban shopping centres for a social marketing campaign aimed at making incidental physical activity the ‘easy choice’ for older people. The issue of slippery floors would have to be addressed by the campaign, and relevant reassurance would have to be part of the message.

In the USA and Canada there are many shopping centres (malls) which offer their premises and facilities so that all people, not just older people, can engage in physical activity (see for example, City of Ottawa, 2001.; Lancaster Mall Walkers, 2000; Your orthopaedic connection, n.d.). These facilities are available for purposeful and incidental physical activity. Some of the shopping centres open early for people to come along before the shoppers arrive and use the facilities to do their purposeful physical activity while other shoppers use the facilities to walk and shop – incidental physical activity.

Given the findings of this study on the need to further disseminate the concept of accumulated incidental physical activity, it is recommended that social marketers consider running a campaign identifying walking in shopping centres as an opportunity for older people to engage in incidental physical activity. This strategy addresses fears about uncontrolled dogs, fear of crime when walking alone, and barriers relating to weather conditions. Seats are available so that 30 minutes can be accumulated with easy breaks. Two other messages could be incorporated: that it’s never too late to gain benefits from physical activity, and that improved sleep is one of the benefits from engaging in physical activity. The
fear relating to slippery floors in shopping centres would need to be addressed, perhaps in negotiation with shopping centre managers.

The remainder of this section will analyse this shopping centre recommendation in terms of the marketing mix: product, place or distribution, price and promotion.

Product in commercial marketing is the tangible product or service or both, which is purchased by the consumer. Product also encompasses the benefits derived from the purchase (Donovan & Henley, 2003). Donovan and Henley (2003) present the social marketing product as encompassing three concepts, the actual or observable product, the core product, and the augmented product.

In the encouragement of older people walking in shopping centres, the actual or observable product is the idea of safe, all-weather walking. The core product is the improvement to health, sense of well-being, and longer independent life that older people gain by engaging in incidental physical activity. The augmented product is the convenient environment, offering facilities such as music, undercover parking bays, convenient bus stops, seats, toilets, etc. Shopping centres offer large areas of level walking space. Coloured strips on the floor could point out measured distances. Other augmented products could be posters or flyers giving information or encouragement. Flyers can give information on such things as how to build up one's physical activity or explain the concept of incidental physical activity. These posters or flyers could also give information relating to the sleep benefits gained from physical activity participation or that short bouts of physical activity can be accumulated to total the recommended thirty minutes. Also, newsletters can be made available with all sorts of information relative to older people and physical activity with perhaps a complementary web page (see for example, Lancaster Mall Walkers, 2000). The opportunity to make new friendships or have the social interaction and support of one's peers is another aspect of the augmented product. Shopping centres could also offer incentives for reaching goals or other associated achievements, for example, key rings or pens bearing appropriate logos.

Branding in social marketing should aim to reflect all the attributes included in the marketing mix (Donovan & Henley, 2003). A social marketing campaign aimed at older people walking in shopping centres has an opportunity to create its own
brand or logo. When the aim of the campaign is to make the healthy choice the easy choice maybe ‘easy choice’ or ‘it’s easy’ is a starting point for a catchphrase. Another possibility is modifying ‘shop ’til you drop’ to ‘walk while you shop’. A catch phrase could be incorporated into a catchy jingle or a tune from the first half of the 20th century, which can be played at appropriate times in the shopping centre. This would be appropriate if the shopping centre had designated days or times for older people to walk while they shop.

*Place* or distribution in commercial marketing refers to the means by which the product is made accessible to the consumer. Thus, place refers to such things as the number and convenience of the distribution outlets including opening times, ambience, and accessibility of transport. Social marketers need to make the social product easily accessible (Donovan & Henley, 2003).

The choice of shopping centres as a ‘place’ was based on the participants’ own references to visiting shopping centres. This was identified as playing a major part in older people’s lives. Apart from the reference to some shopping centres’ slippery floors, shopping centres were seen as a safe place for older people. Their visits to shopping centres were possible due to the numbers of centres, convenient location, opening hours, etc. Also, the all-weather venue offers relief from the heat of the Western Australian summer and shelter from the winter rains. Therefore, shopping centres appear to be an appropriate choice of ‘place’ for a campaign targeting older people. There is also an opportunity to offer quiet shopping times as the ‘easy’ time for older people to visit the centre.

Intermediaries are often used in social marketing to distribute the social product (Donovan & Henley, 2003). In this instance intermediaries can be people in the community in a position to distribute the idea of walking in shopping centres. For example, people such as the staff at information booths at the shopping centre, librarians, GPs, other older people and places such as senior citizens centres or council offices, etc. Also, health professionals could, on occasions, attend the shopping centres to offer their expertise in relation to physical activity or any other more specific health area relevant to older people.

*Price* in the commercial marketing arena generally refers to the cost of the product in monetary terms. Price in the social marketing context can refer to monetary
cost, but also the opportunity costs associated with giving up one's time or putting in effort and physical discomfort as well as psychological costs (Donovan & Henley, 2003). Social marketers try to keep all costs to a minimum and this would be the aim in getting older people to walk in shopping centres. With incidental activity there would be no cost in relation to time, as the walker would be shopping regardless. However, there may be a cost in terms of effort, as the walker needs to keep up a brisk pace. Some older people may find they have to move out of their comfort zone in terms of being noticed walking in public, especially if they came at a shopping time designated 'easy' for older people – this would be a psychological cost to that person. However, in most instances monetary cost would be low, as walking in the centre is coincidental to shopping, as is the cost of transport, etc. Also, there are no costs in relation to special equipment although it would be appropriate to wear comfortable non-slip shoes.

Further, as exchange is the core concept of marketing and an exchange is "the provision or transfer of goods, services, or ideas in return for something of value" (Pride & Ferrell, 1997, p. 4), older people need to know what they are getting in exchange for the costs they incur by walking in the shopping centres. As mentioned earlier posters or flyers could emphasise the benefits that older people are getting in the exchange. Posters can point out that physical activity improves mobility and physical function; it allows one to maintain an independent lifestyle; it adds to the quality of life and sense of well-being, and often helps one get a good night's sleep.

Promotion is a combination of methods aimed at bringing awareness of the product to the consumer, incorporating such techniques as advertising, sales promotion, free samples, sponsorship, publicity, etc (Kotler & Roberto, 1989).

Where advertising is likely to impact on attitudes and beliefs, sales promotion more readily impacts on behaviour. In social marketing this would include the use of 'incentives' or 'facilitators' (Donovan & Henley, 2003). In offering incentives to walk in the shopping centres, posters can give encouraging information such as, 'The distance between Target and Kmart is half a kilometre and you are nearly there' or a-pat-on-the-back poster saying 'Congratulations! You have walked half a kilometre from Big W'. Facilitators could give free gifts such as key rings, pens and walking diaries to encourage participation, or a map of the site with relevant information such as distances to be walked. A partnership with a cafe could mean
that vouchers for a free drink on completion of the walk could be given as an added incentive which could also boost sales for the cafe. The same advertising modes used to advertise the local shopping centre could be appropriate for a social marketing campaign. As the target audience is older people it is important to remember that all written material used should be appropriately designed so that this age group can read it. Older people find it difficult to read small print, information on glossy paper, and some colours (Henley & Pettigrew, 2002).

There is plenty of scope for partnership and possibly sponsorship in this suggested social marketing campaign. The shopping centre could sponsor free gifts that could bear both the shopping centre logo and the campaign’s logo. Individual shops could display the campaign’s logo, which could indicate that the shop offers discounts or incentives for older people who walk. For example, cafes could offer older walkers a free drink with a purchase of food, or an early morning senior’s breakfast. Shoe shops could offer walking shoes at special prices to older walkers. If older people are encouraged to use designated times in which to walk then the shops could offer appropriate discounted products at those times. For example, during quiet periods, hairdressers and opticians could offer discounts to attract the older market.

Publicity unlike advertising is related to news (Egger et al., 1993, p. 121). For example the launch of the campaign would be news and thus an opportunity exists to involve all forms of the media, that is radio, television, newspapers etc. Events such as a health professional visiting the shopping centre could also attract media attention. Positive results of the campaign could also be reported to attract further media attention, such as individuals reaching goals and receiving an award in recognition of this achievement.

In conclusion there is scope for a social marketing campaign, which targets older people with the primary aim of disseminating the message that incidental physical activity is beneficial to health and does not have to be something ‘extra’. Source credibility could be addressed by using testimonials with pictures of older adults encouraging participation. The campaign should also include the message that short bouts of physical activity can accumulate to the recommended thirty minutes and that physical activity often results in a better night’s sleep, that it’s never too late to start and that shopping centres can provide an ideal venue.
6.13 Implications for further research

Source credibility is an area recommended for further research. Some participants in this study did not perceive the government source of the message as credible. A specific area where source credibility came into question was the participants' view that the source was 'someone young' and they did not want 'someone young' telling them what to do. Interestingly, these comments were made by male participants. Thus, when targeting older people, especially males, further research that explores the use of older people as the source of the message is recommended. As discussed earlier it is appropriate to adopt as spokespeople older people who reflect the same attributes as the target adopters and avoid stereotyping older people (Henley & Pettigrew, 2002).

Additionally, as some older people do not understand the concept of incidental physical activity it is recommended that further research be conducted to discover other effective means of disseminating this message. The same applies to the dissemination of the message relating to the accumulation of bouts of physical activity. Further, the belief held by some older people that physical activity contributes to a good night's sleep indicates an area for further research. It would be interesting to test whether there was any difference in a good night's sleep from separate bouts of physical activity as opposed to 30 minutes at once.

This qualitative study contributes insights on several important issues of value to social marketing practitioners designing physical activity messages for older people. First, there were two areas of knowledge relating to physical activity that need effective dissemination: 1) the benefits of incidental physical activity, and 2) short bouts of moderate-intensity physical activity can be accumulated throughout the day to total the recommended thirty minutes. Second, better sleep was recognised by participants as a bonus from engagement in physical activity and is an area to be capitalised by social marketers. Thirdly, based on marketing theory and using the marketing mix, this study suggests an opportunity exists for a social marketing campaign to be held in local shopping centres aimed at making incidental physical activity the 'easy choice' for older people. Lastly, the study contributes an important finding relating to source credibility and thus message
credibility; that is, older people's perceptions of the message source affects the credibility of the message.

This present study indicates that future research on more effective dissemination of the concept of incidental physical activity, and better understanding of older people's perceptions of source credibility will contribute to an important area of social marketing theory. As one participant said something needs to be done before it is 'too bloody late'.
REFERENCES


Kitzinger, J. (1994). The methodology of focus groups: the importance of interaction between research participants. *Sociology of Health & Illness, 16*(1), 103-121.


http://orthoinfo.saos.org/fact/prev_report.cfm?Thread_ID=75&category=Prevention
APPENDIX ONE:

Screening Questionnaire
SCREENING QUESTIONNAIRE

Name: ____________________

INTRODUCTION

Hi. My name is Joan Jackson. May I speak to ____________________________
Ask for the person by name as given by Positive Ageing Foundation.

Hi. My name is Joan Jackson and I’m from Edith Cowan University and I’m
calling with the permission of Positive Ageing Foundation. We are doing some
research on a health issue. We hold group discussions where 6 or 7 people like
yourself sit around and talk about the research topic. We serve light refreshment
and reimburse people their travel or parking expenses. The group lasts about 1
hour and after introductions are made the discussion is tape-recorded. Are you
interested? We are holding groups of different types of people. I have to ask a few
questions to find out if you fit the types we want.

(Note as appropriate)  

M { }  

F { }

Q1: Firstly, I'd like to check if you are able to come into Positive Ageing's
premises in St Georges Tce during the day? ______

IF NO, THANK POLITELY AND DISCONTINUE
Q2: I'd like to check your age? ________years

(Allocate to appropriate category:) 65-74 { } 75-85 { } 

Q3: Are you still working or retired? _____________________________

(IF RETIRED GO TO Q3a)

Q3a What work did you do? _________________________________

(IF HOME DUTIES GO TO Q3b)

Q3b What work did your spouse do? ________________________________

(Allocate to appropriate category:) Blue collar (BC) { } White collar (WC) { }

Q4

Have you had a serious illness in the last 5 years? ________________

(Allocate to appropriate category:) Healthy (H) { } Unhealthy (UH) { }
IF RESPONDENT REPORTS VERY UNHEALTHY AND HIGHLY DEPENDENT ON MEDICAL CARE DISCONTINUE POLITELY.

IF NOT ELIGIBLE IN ANY CATEGORY, DISCONTINUE POLITELY

(SAY: 'Thanks very much for your time but the group appropriate for you is already full.')

IF ELIGIBLE INVITE TO GROUP:

(SAY: 'We are holding a group at .......... can you make this day and time? The group will be held at ............... (address) at ........... (time). Please get there about 5 minutes before the starting time. Thanks very much')

IF THE PARTICIPANT IS UNABLE TO MAKE THE TIME OR DAY:

(SAY 'If we need to hold another group that you are eligible for when would you be available?')

Times of day_____________ Days of week____________________

NOTE:

Ring the person the day before the group to remind them. There may be a need to get more people if some drop out at the last minute.

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<th>Gender</th>
<th>Age</th>
<th>Socioeconomic</th>
<th>Health</th>
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Add to appropriate group on focus group matrix.
APPENDIX TWO

Topic Guide
OBJECTIVES FOR FOCUS GROUPS

To ascertain the attitude of healthy and unhealthy people aged 65 years and older, to the recommendations in the National Physical Activity Guidelines.

How do they feel towards the recommendations in NPAG?

What do they think about the recommendations in NPAG?

What is their intentional behaviour having seen the NPAG?

Are healthy older people more likely to participate in physical activity?

Will older people’s perception, of the beliefs other people hold, influence their intentions to participate in physical activity?

TOPIC GUIDE FOR FOCUS GROUPS

I Introduction (approx. 5 mins)

introduction of researcher

explain how focus groups work

more in depth than questionnaire

no right or wrong answers

OK to feel/think differently to others

we want as many different points of view as possible

researcher is neutral
explain that this group is looking at health/health maintenance

CONFIDENTIALITY ASSURED

Explain ground rules:

We want you to interact but as this is taped please don’t all talk at once

Please don’t start side conversations

Please don’t hold the floor – give others a chance to speak

II Warm-up (approx 5 mins)

Ask each group member to introduce himself/herself and say a little about themselves, e.g. How did they get here today?

START TAPE

III Promote discussion by asking one or all the questions below: (approx. 5 mins)

Q1 “Would anyone like to start by telling us what being healthy means to them?”

Q2 “Does anyone do anything specific to improve or maintain their health?”

Q3 “What sorts of things stop you from doing physical activity?”

STOP TAPE

Give out questionnaires

START TAPE

Probe following (10 mins)

Q1 What do you think is a good level of physical activity?
Q2 Does your family or would your family support you in your efforts to do physical activity?

Q3 How about your friends; is their support the same as your families support?

Q4 What about strangers do you think about them when you think about doing physical activity outside the home?

Probe/discuss Guidelines (30 mins)

Show PowerPoint print of NPAGs.

Check tape

Be mindful of maintaining a balance between allowing for spontaneous reactions and probing for answers to the research questions.

VI Closure (approx 5 mins)

Ask them if they have questions or would like clarification

Give out NPAG and emphasise the importance of seeking advice from GP before commencing a physical activity programme.

Thank them

TOTAL TIME (approx 60 mins)
APPENDIX THREE

Focus Group Questionnaire
Think for a moment about “physical activity”.

In the spaces below, what thoughts, feelings or pictures come into your mind?

THOUGHTS (if any)

________________________________________
________________________________________
________________________________________

FEELINGS (if any)

________________________________________
________________________________________
________________________________________

PICTURES (if any)

________________________________________
________________________________________
________________________________________
Here are some things that people think of when they think of doing "physical activity".

If they apply to you tick Yes. If not tick No

1. Enjoyment  Yes □ No □
2. Pain  Yes □ No □
3. Being healthy  Yes □ No □
4. Embarrassment  Yes □ No □
5. Fear of injury  Yes □ No □
6. Fear of safety  Yes □ No □
7. Sense of achievement  Yes □ No □
8. Too busy  Yes □ No □
9. More important things to do  Yes □ No □
10. Sense of well-being  Yes □ No □

The one that most applies to me is number ________
Which of these four statements applies to you most?

I do physical activity regularly and enjoy it. □

I do physical activity regularly but don’t enjoy it. □

I don’t do physical activity regularly but wish I did. □

I don’t do physical activity regularly and don’t want to. □

Please state what physical activity you do each week, if any.

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
APPENDIX FOUR

Consent Forms
POSITIVE AGEING FOUNDATION
POSITIVE AGEING RESEARCH GROUP

USE OF DATABASE

CONFIDENTIALITY AGREEMENT

Name: JOAN JACKSON
Title of Research: Healthy and Unhealthy Older People's Response to the National Physical Activity Guidelines
Organisation: ECU

Date: 23.10.01

All names, addresses and related information of members of the Positive Ageing Research Group participating in the research, supplied to you by the Positive Ageing Foundation, to be kept strictly confidential.

The information must not be passed onto other parties for research or any other use.

The seniors must not be approached again for another research study without the submission of a written proposal to the Positive Ageing Foundation. New information and consent forms must be then redistributed to seniors.

Please sign the two original copies and return one to the Positive Ageing Foundation.

Signature: 
Date: 23.10.01
As we get older we become aware that life is not as easy as it once was.

Simple tasks like reading supermarket price tags, using an ATM, reading food packet details and using kitchen tools are often difficult and can be frustrating.

The Positive Ageing Foundation is a national non-government agency working to improve the lifestyles of older people in Australia.

The Positive Ageing Research Group gives older Australians a voice in the type of services, products and policies that affect mature Australians.

This group is a unique market-testing service that provides companies and government with research that is based on the needs of an ageing population.

We are 'Creating Age Friendly Communities' and we need your help to further improve the opportunities for older people in our community.

If you want to be involved in this ongoing voluntary research complete the details overleaf. Depending on the research studies being undertaken, you may be selected to participate in a variety of ways such as:

- Pre arranged phone calls
- Written surveys
- Focus groups
- Internet surveys
- Product evaluations
- Consumer testing surveys

If you are interested in joining the Positive Ageing Research Group please complete the details overleaf.

### APPLICATION FORM

Yes, I'd like to join the Positive Ageing Research Group and I want my opinion to make a difference to the lives of other older Australians.

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I understand the following:

- There is no cost and no obligation to be involved in this voluntary work.
- All information regarding me is strictly confidential and not sold to any outside organisation.
- I will be kept informed about the progress of this work with newsletters and other mailings on a regular basis.

Please return this form to:

**POSITIVE AGEING FOUNDATION**

PO Box 7488, Cloisters Square, Perth WA 6850

Tel: +61 8 9482 2000
Fax: +61 8 9482 2001

Email: info@positiveageing.com.au