

## **Active Living - The perception of older people with chronic conditions**

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## **Abstract**

**Objective:** To describe and understand factors which enhance and impede participation in physical activity for older adults with and without chronic illness and develop a framework of health behaviours for “active living”.

**Methods:** A contrasting groups framework was used to compare discussions in two sets of focus groups with relatively healthy and less healthy older adults. The thematic analysis was informed by the Transtheoretical Model, the Health Belief Model and Social Cognitive Theory.

**Results:** All participants affirmed the health benefits of physical activity and there was broad agreement that social support and conducive environments contributed to the promotion of opportunities for physical activity. However perceptions of specific factors needed to maintain and promote good health differed between healthy and less healthy participants. Connection to community, sense of place and “walkability” of neighbourhoods were identified as motivators for undertaking physical activity, while barriers were associated with health, the environment, family and attitudes to physical activity.

**Discussion:** The focus groups highlighted the importance of social, behavioural and contextual factors in promoting opportunities for physical activity in older adults with and without chronic illness. The findings were used to propose an Active Living Framework which is the subject of ongoing research.

**Key words:** activity chronic, disease, exercise, physical

## INTRODUCTION

As populations age, there is increasing morbidity and mortality due to chronic and complex illnesses such as coronary heart disease (CHD), hypertension, diabetes, arthritis, and chronic obstructive pulmonary diseases (COPD). By the year 2020, non-communicable chronic diseases are expected to be the leading cause of disability throughout the world, and if not successfully managed, will become the most expensive problem ever faced by health care systems internationally [1]. While pharmaceutical and technological advances are improving survival rates for many illnesses, they can be costly and have unwanted side-effects. Lifestyle modifications involving diet and exercise are now seen as ways of alleviating the social and economic burden associated with population ageing and chronic disease [2].

Health problems related to physical inactivity are well documented. There is now a convincing body of evidence to show that regular physical activity can enhance quality of life and well-being, and deliver physical, psychological and social benefits to adults of all ages. As people age, lack of physical activity increases the risk of CHD, hypertension, diabetes, and musculoskeletal and connective tissue diseases including osteoporosis and osteoarthritis [3, 4]. Accordingly there is a growing public health commitment to physical activity programs that promote good health and prevent the onset and advance of diseases commonly associated with ageing [5-7].

Contextual, personal and situational factors influence people's decisions to become physically active. Biological, psychological and social factors, including individuals' perceptions of social support, influence their willingness to undertake regular physical activity [6-12]. Relatively healthy individuals become physically active because they want to improve their health and fitness, lose weight and reduce stress, while others make lifestyle changes after being alerted

to ways of modifying risk factors for conditions such as CHD, stroke or diabetes. Responses to “health messages” regarding the benefits of physical activity are associated with individualised perceptions of illness, as well as age, gender and socioeconomic status. The success of strategies to promote physical activity or “active living” requires understanding the complexity of factors associated with the social and physical environment in which individuals live and work [13].

In addition to the focus on the primary prevention of many chronic illnesses, public health efforts are also directed towards strategies which incorporate activities and lifestyle changes that can be adopted by patients with chronic diseases in order to increase their capacity to resume “normal” activities. Multi-disciplinary hospital outpatient programs allow individuals opportunities to take part in physical activity regimens aimed at modifying risk factors and improving health and well-being [14, 15]. Cardiac rehabilitation (CR) [15-18] and pulmonary rehabilitation (PR) [19-21] are such examples; CR aims to favourably influence the underlying causes of heart disease whilst providing physical, mental and social conditions to facilitate rehabilitation [15], and PR aims to improve exercise tolerance and lung capacity in patients with COPD [14, 22, 23]. Both programs are supported by evidence of clinical effectiveness, however quantitative studies aimed at evaluating effectiveness are not necessarily generalisable to all groups in the population [24, 25]. For instance, much of the research demonstrating the effectiveness of PR has focused on patients with moderate or acute exacerbations of COPD, but because COPD is often undiagnosed until the disease is fairly advanced, patients referred to PR are typically sicker than research subjects [14, 21, 22]. Moreover program participation and adherence can be low [26, 27] and compliance is a major issue for program evaluation [28-33].

While there is convincing evidence that exercise can play a major role in the rehabilitation of patients with chronic conditions such as CHD and COPD, ongoing research requires a better understanding of the beneficial effects of

physical activity across stages of illness. There is a need to understand and distinguish between factors which help determine physical activity uptake and adherence, as well as aspects which may correlate with, moderate, or confound, associations between interventions and outcomes [7, 34]. It is important also to recognise temporal associations between medical, pharmaceutical and therapeutic advances in health care and patient compliance [35]. Qualitative methods can assist in understanding these issues [36-38]. Data collected through focus groups afford ways of contextualising information about individuals' perceptions, opinions, beliefs, attitudes and experiences, and allowing in-depth exploration of issues. Together with evidence of effectiveness drawn from quantitative studies, the results of qualitative studies such as this can help facilitate the development of strategies aimed at changing physical activity behaviours to improve health and well-being [36, 39, 40].

This work is thematically informed by the Transtheoretical Model [41] which focuses on the individual's readiness to act on new health behaviours, the Health Belief Model [42] which predicts health behaviours by concentrating on attitudes and beliefs, and Bandura's Social Cognitive Theory [43] which is based on the principle of self efficacy, and a person's ability to perform specific tasks or achieve certain results.

The aims of this study were to describe patterns of physical activity in groups of older people with and without chronic heart or lung conditions, to better understand factors and individual characteristics which both enhance and impede participation in physical activity for older adults and to inform the development of a framework of health behaviours for "active living".

## **METHODS**

### **Study conduct and design**

Two sets of focus groups were conducted in the Hunter and Mid North Coast regions of New South Wales (NSW) Australia. The first, held with relatively healthy older adults, is called *Never Too Late*, while the second, conducted with relatively less healthy older adults, is called *Active Living*. A contrasting groups framework [44] was used to compare participants in each set. The *Never Too Late* participants were randomly recruited from the Australian Longitudinal Study on Women's Health, seniors groups, and other community-based organisations, while the *Active Living* participants were recruited through two local chronic illness support groups, Heart Support and LungNet.

The focus groups were on average 90 minutes in length. At the outset of each, an experienced moderator overviewed the purpose and format of the focus group and opened the discussion by suggesting that participants comment on how they rated their health and the level of physical activity they regularly undertook, compared with others of a similar age. Throughout the discussions the moderator prompted and facilitated dialogue, taking care to allow a free flow of information and inter-personal interaction. A funnelling process was applied whereby semi-structured questions were sequenced, beginning with conversation about general health beliefs and the perceived benefits of physical activity, before moving onto discussion of more specific issues including how the participants saw physical activity fitting (or not fitting) into their everyday lives. Answers given in the *Never Too Late* focus groups were used to guide the questions in the *Active Living* group.

Demographic information was collected using a short answer written questionnaire distributed prior to the commencement of the discussions. Ethics approval was obtained from the Human Research Ethics Committee of the University of Newcastle and the Ethics Committee of the Mid North Coast Area Health Service. All participants gave informed written consent to participate in the focus group discussions and for the proceedings to be audio recorded.

## Analysis

Participants were de-identified in the transcriptions which provided the content for thematic analysis. The discourse was grouped according to a broad conceptual framework which accommodated interplay between environmental, biological, organisational and psychological issues, and afforded a context for assessing factors considered necessary for behavioural change. The Transtheoretical Model (Stages of Behaviour Change Model) [41] provided the “readiness” context for action whereby interventions are tailored to match each person’s stage of readiness. The “motivational” context was supplied by the Health Belief Model [42] and the “predictive” context was given by Bandura’s Social Cognitive Theory [43]. Statements and comments, grouped in broad areas consistent with this conceptual framework, provided the basis for thematic analysis. Lists of key words, phrases and quotes were collated within each theme. Sentiments captured through this analysis are summarised here.

## RESULTS

### Overview

*The Never Too Late* focus groups comprised 35 males and 46 females who were aged over 60 years. There were 18 participants in the *Active Living* focus groups (7 males and 11 females) and all were aged over 50 years. The 99 participants (42 males and 57 females) covered 14 focus groups (11 *Never Too Late* and 3 *Active Living*). The findings helped to inform an awareness of factors which enhance and impede participation in physical activity for older people with and without chronic illness.

Each participant was invited to rate their health, and the importance they placed on physical activity. *Never Too Late* participants saw themselves as physically active, with the majority rating their health as *very good*. In contrast, *Active Living*

participants rated their health as *fair*, and reported a lower level of physical activity.

Participants reported a wide range of factors that they perceived as being important for the promotion and maintenance of their good health. They included both personal qualities and actions (intrinsic), and factors that involved interaction with others and the environment (extrinsic). Table 1 gives a summary of these intrinsic and extrinsic factors. While there are many overlaps, the following discussion draws out broad themes and describes differences and similarities between the *Never Too Late* and *Active Living* groups.

[Table 1 here]

#### Attitudes and strategies

All participants reported maintaining independence and *doing what you can* as being essential attitudes for promoting health, and regarded mental attitude and sense of well-being as crucial for maintaining good health. Comments included:

*Working out what's important*

*Positive self-talk*

*Mental attitude: if I can get on top of that I can cope*

Participants in both groups indicated that they would prefer to be more physically active. Activities undertaken regularly were likely to be mostly unstructured in nature. They included “walking around the block” which was a preferred activity because it was close to home. There was less interest in attending physical activities that required traveling time, cost or membership fees. Preferences were expressed for involvement in physical activities that did not require minimum levels of fitness, such as is often the case with competitive



sports or team membership and many reported that they had relinquished their membership of clubs, teams and community groups.

*Never Too Late* participants reported using physical activity as a social opportunity (e.g. playing with the grandchildren, going for a walk with a friend), whereas *Active Living* participants were more likely to separate their physical activity routines from social outings. Many *Active Living* participants described feeling fearful of being at any great distance from their home, *in case something should happen* (exacerbation of a health condition). *Active Living* participants also recognized that their management of routine household tasks had changed with the progression of their illnesses. They were aware of the need to break down routine tasks into smaller units that could be undertaken across several rather than one or two days. These participants were acutely aware of how their physical function could vary on a day to day basis, and saw the need for flexible strategies that could accommodate their physical activities within domestic routines and schedules.

*Dodging trouble! And knowing what to avoid*

*Just keeping going for as long as you can*

### Skills and knowledge

In both groups, there was general lack of understanding regarding the intensity and duration of physical activity required to confer health benefits. Many saw the intention to undertake regular activity as being sufficient, but there was limited knowledge and understanding of how to monitor physical activity levels and set appropriate targets. While some *Active Living* participants had previously acquired a degree of motivation for physical activity from their attendance at pulmonary or cardiac rehabilitation programs, few were confident that they had the skills or knowledge needed to maintain ongoing regular physical activity.

*Don't beat myself up – I do it when I can!*

### Managing physical activity in daily lives

Many respondents, particularly those that had experienced a serious health problem, acknowledged the important role of physical activity in their daily lives as a way of promoting positive health and preventing illness. Most *Active Living* participants who reported “healthful” routines such as regular walking, expressed reluctance to vary their schedules. They discussed their frustrations at changes in levels of ability to undertake physical activity and felt compromised by the loss of function they experienced as a result of their illness. A number were also anxious about *doing too much* (exercise) and as a consequence not being able to complete other daily tasks. By comparison, the *Never Too Late* participants reported physical activities that were both adaptable and varied. Having a purpose for exercise was seen as being important by several of the *Never Too Late* participants and this was particularly true for men.

*My motivation is that I love walking. I get up and my wife goes with me, we walk out along the old track...It's different every morning. The enviroment is interesting. I would walk up the hill to watch the sunrise. That's my motivation.*

### Social support and motivation

Participants in both groups reported upon the importance of having someone with whom to exercise. However social contact and support from friends and family for exercising was valued differently by the two groups. *Never Too Late* participants reported using physical activity as a social opportunity, and saw physical activity as part of their lifestyle, e.g. going for a walk with a friend or playing with the grandchildren. The *Active Living* participants were more likely to separate their physical activity routines from social contact and saw exercise as

part of their “therapy”. This group preferred to exercise at home and set their own goals rather than feel that they had to pace themselves against someone else.

Self motivation to exercise was important for both groups. There was broad agreement that the motivation to exercise *could* be enhanced by family and friends, and also by being actively involved in useful activities.

*it has to be something you want to do for yourself*

Many participants were motivated by others with similar conditions, especially those who they saw as having “control” over their illness or condition. The desire to arrest declining physical health through exercise was expressed in both groups:

*never giving up!*

*I had my first heart attack 20 years ago and I have been walking ever since*

### Family influences

The influence of families was seen as having both positive and negative aspects. While there was acknowledgement that partners and carers could play a valuable role in providing encouragement for exercise, some participants described their frustration at “not being allowed” to be active.

*I felt smothered – then started to think “am I really that bad”*

Participants in both groups described the importance of having a supportive network of family and friends, opportunities to attend support groups, and a connectedness to the immediate community. These factors were seen as being conducive to physical activity and there was relatively little emphasis placed on the importance of social support whilst undertaking physical activity.

Those without support of family or friends saw the lack of family support as a barrier and were concerned that this influenced their ability to place priority on physical activity. Those participants who expressed fear of panic and anxiety in social situations were more likely to be isolated from family and friends.

### Supportive environments

Ready access to pleasant and peaceful physical surroundings was seen as being important but relatively less so than social support. However a number of *Never Too Late* participants expressed their “sense of place” as being a strong motivating force for regular physical activity. Making the effort to feel connected to their community, and the general benefits resulting from being outdoors were generally seen as positive influences on health and well-being. *Active Living* participants however, were more likely to avoid being “out and about” during busy times in their local streets, being fearful that their physical activity during these times might not be a positive experience. Few *Active Living* participants were involved in volunteer work or attended community groups. They saw their ability to do so as being diminished by functional decline associated with their illness.

### Health care providers

Few participants reported that their general practitioners (GPs) were a source of motivation. There were no reports of GPs who initiated discussion of the benefits of regular exercise and physical activity, or provided health information on physical activities. A number of participants expressed frustration and disappointment at what they saw as the attitudes of some GPs and also pharmacists. There were comments that pharmacists were overly concerned with dispensing medication.

Only three of the eighteen *Active Living* participants said their GP regularly asked them about physical activity levels and the *Never Too Late* participants did not report such encounters. *Active Living* participants reported having gained more constructive information from health care providers other than doctors, e.g. from rehabilitation coordinators and physiotherapists.

### *Perceived Barriers*

Barriers to physical activity were grouped thematically and described as being either associated with health, the family, the physical environment or with a lack of interest. Table 2 summaries the key notions within these themes.

[table 2 here]

Participants from both groups reported that they had had to stop various activities because of injury or “wearing out”: declining health status was regarded as the main barrier to physical activity. All expressed frustration about not having ready access to health information and details of health services and fitness programs. The “walkability” of neighbourhoods was seen as a barrier by many, and participants discussed issues such as the condition of footpaths, lighting, and access to pleasant environments. Issues of access, cost and transport were also identified as barriers to participation.

*Active Living* participants were frustrated with their deteriorating health and described a general loss of confidence in their ability to self manage their disease process. Most expressed passive attitudes to their health, feeling that they had little control over changing functional levels, and regarding their health and well-being as being constantly eroded and challenged by ill-health. Some described self-management strategies adopted during periods of poor health, but others were more likely to defer their physical activity schedules when they felt un-well.

*I'm worried that I might get into difficulties*

Some *Active Living* participants were surprised to realise that they were able to undertake physical activity in spite of their illness.

## DISCUSSION

All participants affirmed that physical activity was critical for good health. The focus groups underscored both the importance of supportive environments and social support in relation to promoting opportunities for participation in physical activity whether that support comes from partners, peers, or family members.

These discussions informed understanding of the factors that predict and mediate physical activity, and promote healthy ageing. The findings highlighted differences between healthy and less healthy older people [30]. For instance there was less diversity in types of physical activity reported by the less healthy who preferred to exercise alone in more purposeful ways. On the other hand, relatively healthier participants preferred to have a greater level of social contact and more variety when undertaking exercise. While there was broad agreement amongst all participants that physical exercise can be a means of maintaining independence and functional abilities while improving overall health, the healthier *Never Too Late* participants felt they had both choice and control over the type of activity in which they were involved and the frequency and pace of their approach. They reported incidental activities e.g. walking to the shops, as a valuable form of physical activity. The less healthy *Active Living* participants described a purposeful approach to their physical activity, and were more motivated to maintain their functional status than they were to engage in social or leisure activities.

All participants were aware of “barriers” to regular physical activity. They revealed that the main barriers to participation in physical activity were deteriorating physical function, diminishing social networks and a lack of willingness to become involved in, or take control of, the management of their

health. Some lacked confidence in their ability to maintain an exercise program, and were unclear about the intensity and duration required to confer health benefit. For *Active Living* participants hospitalisations decreased enthusiasm for exercise, and bouts of illness challenged their confidence in relation to sustaining an exercise program.

Few reported being actively encouraged to adopt self-management strategies by health practitioners. Many described their GP as being “indifferent” to their condition, and a number recounted how their doctors had counselled them to accept their level of disability, and adapt to a reduced functional capacity. This experience concurs with the findings of other research suggesting that motivators may be found amongst friends who are interested in becoming active, or who may be already active [29].

Most participants expressed awareness of ways in which they should be managing their health, and discussed how they could confer health benefits. However there was little understanding of what the appropriate levels of physical activity and exercise intensity for their age and condition, actually were.

Participants confirmed the view that while education programs and mass media may raise awareness of the importance of exercise, these strategies alone are insufficient to produce the behaviour change. While recall of media advertisements advocating physical activity was high, few had translated these recommendations to action.

There is considerable evidence in the literature that supports broad physical activity programs that include lifestyle and behavioural components [12, 29, 45, 46] and the approaches demonstrate that sustained behaviour change requires a mix of strategies. The constructs in Figure 1 were informed by qualitative assessment of the results of the focus groups reported here, using a conceptual framework based on the Transtheoretical Model [41], the Health Belief Model

[42] and Bandura's Social Cognitive Theory [43]. These constructs represent an "Active Living Framework" which provides a basis for better understanding factors that are important for promoting health through active living: a way of life that integrates physical activity into daily routines.

[insert Figure 1 here]

The *Systems of care* construct refers to the connections with other disciplines that share an interest or stake in the population of interest. Behaviour change barriers can be system based or socio-ecologically based [47]. System barriers, such as a lack of time, resources and guidelines, can limit people's abilities to manage their health. Socio-ecological barriers, which can include restrictions in the physical environment as well as limited social support, can influence *systems of care*.

The *People and communities* construct include individuals' situational context (e.g. marital status, number living at household, income, self-efficacy) as well as their knowledge of disease management and community services, and also cognitive skills (e.g. mental maps of neighbourhoods).

The findings of the focus groups reported here suggest that factors that encourage or impede exercise participation can differ between older people depending upon levels of illness and functional impairment. Of major importance for both healthy and less healthy participants was knowledge of an appropriate exercise regime, confidence in their ability to achieve exercise goals, and the availability of both social and environmental support needed in order to undertake regular physical activity. These focus groups highlighted the importance of developing opportunities for physical activity consistent with the interests and characteristics of older people whether or not they are compromised by chronic illness.



Despite attempts to include participants from all walks of life in these focus groups, the participants were relatively active compared with other older adults in the community with and without chronic illnesses. Although their health was clearly compromised, the *Active Living* participants were a relatively healthier less sedentary group of older adults with chronic illnesses. While focus groups are a very important way of gathering rich and informative qualitative information, the lack of generalisability of the findings is a limitation.

## CONCLUSIONS

Clearly a major challenge for public health practitioners is to use a variety of tools and methods to collect data that can be used to inform policy and practice. This paper shows the importance of using qualitative methods to better understand factors associated with promoting lifestyle and behavioural change in older adults with and without chronic illness.

The Active Living Framework identifies a number of factors that appeared to operate as predictors of physical activity, including self management lifestyle behaviours, supportive environments and maintenance strategies. This ecological approach recognises the importance of targeting strategies to the individual, the family and to the broader community, and provides a foundation for the development of an Active Living Intervention to encourage older adults with chronic conditions to sustain levels of physical activity that will be beneficial to their health over time. The Active Living Intervention is the subject of ongoing research.

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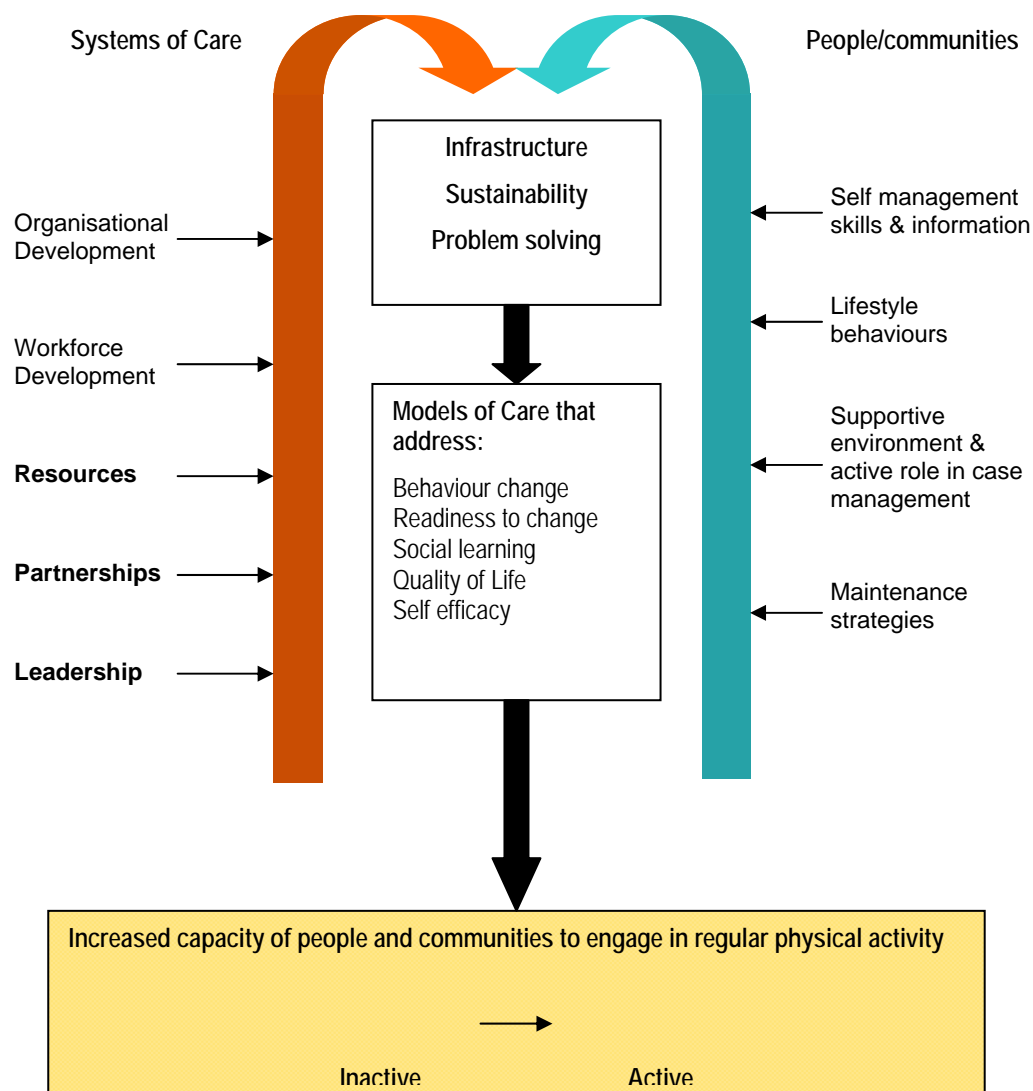
**Table 1. Perceptions of factors that promote and maintain health**

Intrinsic factors	Extrinsic factors
Exercise	Being outside
Happiness in yourself	The weather conditions (fresh clean air)
Your state of mind / mental attitude	Social contact
Sense of well-being	Someone to talk to
Positive self-talk	Contact with others
Having a balance in everything you do	Support and motivation of friends/family
Learning to do things at the right pace	Being tolerant of others
Sense of achievement	Grandchildren
Setting appropriate goals for activity/exertion	Child-minding and being involved in their activities
Stress levels	The environment (ie if supportive)
Working out what's important	Connectedness to place/ community
Dodging trouble! – knowing what to avoid	Sense of place
Recognition of when you're down – and acting on that	Regular outings
Nutrition/diet	
Having a variety of interests	

**Table 2. Factors identified as barriers to physical activity**

	Never Too Late	Common barriers	Active Living
<i>Health</i>	Joint mobility, stiffness, arthritis Aches and pains Age Acute / chronic illness		Stress / worry Illness / hospitalisations Being alone Over-exertion Reduced functional ability Changes in functional levels – difficult to select an activity to accommodate changes Fear of panic / anxiety Lack of control Loss of confidence Medication
<i>Family</i>	Change in partner's fitness/ mobility/ health Caregiving "Babysitting" grandchildren		Not having partner/ family to exercise with Already commitments, and not enough time Feel too restrictive: over protective Loss of independence
<i>Environment and choices</i>	Lack of specific facilities (e.g. walking trails, bike tracks, classes for elderly) Poor access to halls, pools etc Inappropriate class times, activities, leaders, location Services not advertised/promoted Cost Terrain (steep hills) Unrestrained dogs	Weather (hot, cold, rainy)  Lack of public transport  Fear of threat to personal safety Footpaths/ lighting	Dependent on others for transport Ready access to assistance Unsupervised, or without guidance of trained fitness leader Unaware of local services/facilities Cost If environment is inappropriate e.g. not smoke-free
<i>Lack of interest</i>	Not interested Can't see the value Can't see the point		Reduced enthusiasm  Feeling of not being valued





**Figure 1 Active Living Framework – emerging constructs and items**