EXPERIENCES OF PHYSICAL ACTIVITY AMONG OLDER ADULTS WITH MULTIPLE CHRONIC CONDITIONS

by

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ABSTRACT

This study investigated the barriers to and facilitators of participation in physical activity and/or exercise among older adults with multiple chronic conditions (MCC). According to the Health Council of Canada (2007), more than half of all Canadians 65 years and older have two or more chronic conditions, while 27% of older men and 33% of older women have three or more chronic conditions (Moore et al., 1999). To date, there has been little investigation of the impact of having MCC on exercise and activity patterns since most studies have tended to focus on the relationship between a single chronic condition and participation in physical activity.

Using symbolic interactionism as the theoretical framework, the present study investigated the factors that encouraged and discouraged older men and women who have MCC from being physically active. Semi-structured in-depth interviews were conducted with 10 older women and 10 older men 65 years of age and older. Participants had between seven and 17 multiple chronic conditions (average of 12) and were diverse with respect to age, country of birth, educational attainment, household income, and marital status.

While the participants identified the physical symptoms accompanying their MCC as the strongest barrier to participation, other barriers included fear, lack of social support, and transportation issues, particularly for the women. The men reported more motivators to being physically active than the women, and these factors included improving their health and preventing further health deterioration. The women reported that having a companion or health care professional participate or supervise their participation was their strongest motivator. The pattern of participation was dynamic across the participants' lifetimes.

The theoretical implications of my findings reveal that the meanings older adults with MCC attribute to their experiences of participating in physical activity are diverse and underpinned by cultural norms of healthism and successful aging. From a more practical perspective, my findings suggest that educating and sharing knowledge of the benefits of participating in physical activity and/or exercise in personally modified ways according to individual's MCC would contribute to motivating and providing hope for health improvement among older adults with MCC.
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Chapter One: Introduction

This study investigated the barriers to and facilitators of participation in physical activity and/or exercise among older adults with multiple chronic conditions. Canada, as in other nations, is witnessing a demographic shift toward an aging population and greater life expectancy (Shields & Martel, 2006; World Health Organization, 2008). This trend has led to increased attention in the health and well-being of older adults (Health Council of Canada, 2007; National Research Council, 1999; Statistics Canada, 2005; World Health Organization, 2008). Research has shown an association between increased age and chronic conditions (Marengoni, Rizzuto, Wang, Winblad, & Fratiglioni, 2009; Moore, Rosenberg, & Fitzgibbon, 1999; Ory, Kinney Hoffman, Hawkins, Sanner, & Mockenhaupt, 2003; Shields & Martel, 2006). More recently, studies have established that an increasing number of older adults have two or more chronic conditions (Ashe, Eng, Miller, & Soon, 2007; Bayliss, Steiner, Fernald, Crane, & Main, 2003; Marengoni, 2008; van den Akker, Buntinx, Metsemakers, Roos, & Knottnerus, 1998). Furthermore, regular participation in physical activity and/or exercise has been shown to be an important strategy for improving the health of people with chronic conditions by simultaneously preventing the onset and slowing the progression of many chronic conditions (Fiatarone Singh, 2002a; Hudon, Soubhi, & Fortin, 2008; Jerome, Glass, Mielke, Xue, Andersen, & Fried, 2006; Warburton, Nicol, & Bredin, 2006; Zuzanek, Robinson, & Iwasaki, 1998). However, older adults remain physically inactive (Ashe, Miller, Eng, & Noreau, 2009; Canadian Community Health Survey, 2002/2003). Therefore, it is important to gain a deeper understanding of the physical activity participation of older women and men who have multiple chronic...
conditions. The purpose of this study was to investigate the pattern of participation in physical activity and/or exercise of older adults with multiple chronic conditions, the barriers and motivators encountered to participating in physical activity / or exercise, and the means by which older adults with multiple chronic conditions negotiated these barriers and motivators. With these objectives in mind, the following research questions guided the study's investigation:

**Research Questions**

(1) How are the barriers to physical activity and/or exercise encountered by those older adults with multiple chronic conditions who currently participate in physical activity and/or exercise and by those older adults who are NOT currently participating in physical activity and/or exercise?

(2) How are the motivators to participating in physical activity and/or exercise encountered differently or similarly by those older adults who currently participate in physical activity and/or exercise and those older adults who do NOT currently participate in physical activity and/or exercise with multiple chronic conditions?

(3) What is the pattern of participation in physical activity and/or exercise for older adults who have multiple chronic conditions?
Chapter Two: Literature Review

Chronic Conditions

Chronic conditions are a leading concern of human health and development worldwide (World Health Organization, 2008). They require ongoing care and management over a period of years or decades (World Health Organization, 2009). A chronic condition, from this perspective, is an enormously broad category that covers many health concerns including non-communicable conditions (e.g. cardiovascular disease, diabetes, cancer, arthritis), persistent communicable conditions (e.g. HIV and AIDS), certain mental disorders (e.g. depression and schizophrenia), and ongoing impairments in structure (e.g. amputations, blindness, and joint disorders) (WHO, 2005).

Chronic non-communicable conditions are now a major cause of death and disability worldwide (World Health Organization, 2008). The World Health Organization (WHO) defines chronic non-communicable conditions as having one or more of the following characteristics: they are permanent, leave residual disability, are caused by nonreversible pathological alteration, and require special rehabilitation training of the patient who may be expected to require a long period of supervision, observation, or care (WHO, 2005). Similarly, Health Canada (2004a) defines chronic (non-communicable) conditions as having “an uncertain etiology, multiple risk factors, long latency, prolonged affliction, a non-infectious origin, and may be associated with impairments or functional disability” (Public Health Agency of Canada, 2007).

According to the WHO, the world’s most prevalent chronic conditions are cardiovascular disease, diabetes, obesity, cancer, and chronic respiratory disease.
These chronic conditions now account for 35 million deaths each year or 60% of all deaths globally (World Health Organization, 2009). Worldwide, chronic conditions affect men (53%) and women (47%) almost equally (World Health Organization, 2009). The prevalence of chronic conditions is predicted to increase 17% globally over the next ten years (World Health Organization, 2008).

In Canada, more than nine million individuals 12 years of age and older have one or more of the country’s leading chronic conditions, which include arthritis, cancer, diabetes, high blood pressure, heart disease, chronic obstructive pulmonary disease, and mood disorder (Health Council of Canada, 2007). Furthermore, the prevalence and rate of having two or more chronic health conditions has been steadily increasing over time, particularly among older Canadians (Fried, Bandeen-Roche, Kasper, & Guralnik, 1999; Health Council of Canada, 2007; Hudon, et al., 2008; Marengoni et al., 2009). Consequently, in recent years, public stakeholders including federal and provincial health related agencies, health policy makers, and researchers have focused their efforts in the area of chronic health conditions.

Canada, like other nations, has a serious interest in improving the health of its older population, not only because rates of chronic conditions are predicted to continue to rise resulting in enormous personal, physical and emotional suffering and loss, but also because the economic cost associated with chronic conditions is a growing concern. The most recent report on the total cost of illness in Canada was estimated to be $159.4 billion: $83.9 billion (52.7%) in direct costs (hospital care, drugs, and physician care expenditures, expenditures for care in other institutions, and additional
direct health expenditures) and $75.5 billion (47.3%) in indirect costs (work lost due to
disability) (Health Canada, 2002). The three most costly illnesses were cardiovascular
disease, musculoskeletal diseases, and cancers, with corresponding financial costs of
$18.5 billion, $16.4 billion, and $14.2 billion respectively (Health Canada, 2002).
Furthermore, having multiple chronic conditions adds an additional complexity to human
health and health care. Multiple chronic conditions have been associated with
increased disability (Freedman, Schoeni, Martin, & Cornman, 2007; Martin, Meltzer, &
Elliot, 1988; Peek & Coward, 2000; van den Akker et al., 1998; Wu, Huang, Wu,
McCrone, & Lai, 2007), risk for drug interactions (Zhan et al., 2001), acute
deteriorations (Rochon et al., 1996), and increased medical care in terms of medical
appointments, care, and hospitalization (Grumback, 2003; Health Council of Canada,
2007; Rochon et al., 1996). This translates into a significant loss of productivity and
forgone income among Canadians (Health Canada, 2002).

The WHO (2008) stated that although chronic health conditions “are a global
burden that continues to grow” (World Health Organization, 2008, p. 2), they are also
largely the most preventable health concerns facing the world in the twenty-first century.
Supported by global scientific evidence, the WHO devised a 2008-2013 Action Plan
(World Health Organization, 2008) that outlined steps that “when performed collectively
by Member States and other stakeholders, would tackle the growing public health
3). The Action Plan (2008) advocated the “prevention and control” of chronic conditions
by making “healthier choices that follow patterns of good health” and highlighted four
“modifiable risk factors” that included reducing tobacco use, harmful alcohol
consumption, unhealthy diet, and physical inactivity (World Health Organization, 2008). In addition to these four modifiable aspects of human lifestyle, the Action Plan (2008) cited “strengthening health care for people with non-communicable diseases,” “mapping the emerging epidemics of non-communicable diseases,” and “analyzing the social, economic, behavioural and political determinants” of the emerging epidemics of non-communicable diseases (World Health Organization, 2008, p. 3). Although the WHO’s Action Plan (2008) addressed some of the social factors that may contribute to the increase in chronic conditions worldwide, the Action Plan (2008) placed a great deal of emphasis upon individuals’ ability to choose a healthier lifestyle, including participating in physical activity and modifying diet. This idea of increased personal responsibility is contentious and will be developed later in this section. Notably here, the WHO (2008) along with other international public health agencies and stakeholders promoted and encouraged the idea of healthism (Vertinsky, 1985, p. 72). The ideology of “healthism” is a system of beliefs that defines health-promoting activities including exercise, diet, stress management programs, and the avoidance of disease, as an individuals’ “moral obligation” (Crawford, 1980; White, Young, & Gillett, 1995). The present study focused on one of these “modifiable risk factors” associated with chronic conditions, namely physical activity.

Physical activity has been defined in the literature in various ways. The Public Health Agency of Canada (2003) along with Canadian Society for Exercise Physiology (2009) and American College of Sports Medicine (2008) define physical activity as "bodily movement that is produced by the contraction of skeletal muscle and that
substantially increases energy expenditure” (Public Health Agency of Canada, 2003). Physical activity is considered to encompass both leisure-time activity such as exercise and sports as well as activities of daily living including household tasks and transportation (Ashe et al., 2007). Similarly, exercise is defined as "a form of leisure-time physical activity that is planned, structured, and repetitive" (Public Health Agency of Canada). Adhering to these definitions, this study investigated the relationship between multiple chronic conditions in older adults and participation in physical activity and/or exercise. The following section will review the relationship between multiple chronic conditions, physical activity, and aging.

**Multiple Chronic Conditions, Physical Activity, and Aging**

It has been well established that certain chronic conditions tend to “cluster in individuals” (Broemeling, Watson, & Black, 2005, p. 2; van den Akker et al., 1998). Traditionally, the term comorbidity has been used to refer to “any distinct additional entity that has existed or may occur during the clinical course of a patient who has the index disease under study” (Feinstein, 1970, p. 455). Similarly, multimorbidity has been defined as the “co-occurrence of two or more chronic diseases in one person” (Fortin et al., 2006; Marengoni, Winblad, Karp, & Fratiglioni, 2008; van den Akker et al., 1998). However, these definitions are ambiguous and have been used in various ways in previous studies to imply coexistence of several diseases or occurrence of additional diseases and/or sometimes refer to differences in population and number and type of disease under study (van den Akker, Buntinx, & Knottnerus, 1996). Hence, both these terms, comorbidity and multimorbidity, are vague and sometimes misleading. In
addition, comorbidity and multimorbidity carry an association with “morbidity” meaning the state of being sick or diseased. Consequently, in the present study I have chosen to use the term 'multiple chronic conditions’, which I define as two or more co-existing chronic conditions.

In Canada, more than half of all adults 65 years and older have two or more chronic conditions (Health Council of Canada, 2007). Specifically, three-quarters of all Canadians with diabetes, heart disease, cancer, and chronic obstructive pulmonary disease (COPD) also have another chronic condition (Health Council of Canada, 2007). For example, 20% of Canadians with diabetes also report having high blood pressure, and 10% of those with diabetes also report having arthritis (Health Council of Canada, 2007).

The prevalence of multiple chronic conditions has been shown to increase steadily with age (Boyd et al., 2007; Fortin et al., 2006; Fried et al., 1999; Health Council of Canada, 2007; Hudon, et al., 2008; Marengoni et al., 2009; van den Akker et al., 1998). According to the 2005 Canadian Community Health Survey (CCHS), 13% of Canadians ages 20-39 reported having one or more chronic conditions, while 71% of Canadians 60-79 years of age and 82% of Canadians 80 years and older reported having one or more chronic health conditions. The total prevalence of one or more chronic conditions among Canadians 65 years of age and older, diagnosed by a health care professionals in 2005, was 91%. Analyzing three Canadian health surveys, the General Social Survey (GSS) from 1985 and 1991, the Health and Activity Limitation Survey (HALS) from 1986 and 1991, and the National Population Health Survey
(NPHS) from 1994 and 1995, Moore, Rosenberg, and Fitzgibbon (1999) found that 72% of men and 78% of women aged 55 and over, living in Canadian communities, reported having at least one chronic condition, while 27% of men and 33% of women in the same age range experienced three or more chronic conditions.

Although, genetic and environmental factors are known to contribute to the prevalence of multiple chronic conditions (Fiatarone Singh, 2004; Fiatarone Singh, 2002a; Fiatarone Singh, 2002b; Pate et al., 1995; Seeman & Chen, 2002), "most of the major contributors to the development or severity of chronic conditions are in some way related to habitual levels of physical activity" (Fiatarone Singh, 2004, p. 206). In recent years, the extant scientific research has provided overwhelming evidence that supports this statement (see Hillsdon, Brunner, Guralnik, & Marmot, 2005; Hudon et al., 2008; Jerome et al., 2006; Joseph, Zimring, Harris-Kojetin, & Kiefer, 2005; Kruk, 2007; Oguma, Sesso, Paffenbarger, & Lee, 2002; Paterson, Jones, & Rice, 2007; Taylor, Cable, Faulkner, Hillsdon, Narici, & Van Der Bij, 2004; Trost, Owen, Bauman, Sallils, & Brown, 2002; Warburton et al., 2006). According to the WHO (2008), up to 80% of heart disease, stroke, and type 2 diabetes and over a third of cancers could be prevented by eliminating certain lifestyle risk factors including physical inactivity (World Health Organization, 2008). Physical inactivity as a lifestyle or behaviour is recognized as one of the major causes and risk factors that lead to multiple chronic conditions (WHO, 2003).

Despite the importance of physical activity, research since the 1980s has overwhelmingly established that as people age their participation in physical activity
and/or exercise decreases (Curtis, White, & McPherson, 2000; McPherson, 1984; McPherson & Kozlik, 1980; Rudman, 1989). Older adults have been identified as having one of the lowest rates of physical activity in society (Berk, Hubert, & Fries, 2006; Broemeling et al., 2005; National Advisory Council on Aging, 2006; Taylor, Cable, Faulkner, Hillsdon, Narici, & Van Der Bij, 2004; Victorino & Gauthier, 2005; Wister & Wanless, 2007). In Canada, national population health surveys over the last two decades have consistently found that older adults are the least physically active of Canadians (Canadian Community Health Survey, 2002/2003; Moore et al., 1999; National Advisory Council on Aging, 2006; Schultz & Kopec, 2003; Statistics Canada, 2001; Statistics Canada, 2003). The most recent statistics from the Canadian Community Health Survey (2005) reported that 62% of Canadians 65 years of age and older are physically inactive (National Advisory Council on Aging, 2006).

The Barriers and Motivators to Participation in Physical Activity

The research has found that the barriers and motivators to engaging in physical activity and/or exercise are often related and sometimes even identical (Cohen-Mansfield, Marx, & Guralnik, 2003). Acknowledging the complexities and interrelatedness of these factors, in the sections that follow, I will outline the various factors that have been found to motivate or limit participation in physical activity among older adults.

Physical Barriers

Many older adults cite a variety of physical barriers as factors that delimit or prevent their involvement in physical activity or exercise. To begin, poor health is
frequently cited by older adults as one of the most important barriers to participating in physical activity and/or exercise (Booth, Bauman, Owen, & Gore, 1997; Booth, Bauman, and Owen, 2002; Hirensalo, Lampinen, and Rantanen, 1998; Newsom and Kemps, 2007). Cohen-Mansfield, Marx, and Guralnik (2003) found that 52% of women compared to 33% of men identified poor health as a barrier despite the fact that 43.2% of the older women and men characterized their health as “excellent / very good”, 39.8% characterized their health as “good”, and only 17.1% characterized their health as “fair/ poor health” (Cohen-Mansfield et al., 2003, p. 250).

Additionally, physical pain and shortness of breath have also been found to limit the physical activity and exercise behaviours of older adults. For example, Cohen-Mansfield et al. (2003) found that among their 74 to 85 year old participants pain and painful joints emerged as a common barrier to exercise (Cohen-Mansfield et al., 2003). Clark (1999) found that more of the women “complained of knee pain, back pain, leg swelling, fatigue” (Clark, 1999, p. 58) while men reported “shortness of breath and back pain” (p. 58) as substantial barriers to walking. Crombie et al. (2004) also found that physical symptoms including shortness of breath, joint pain, and lack of energy were the most “powerful deterrents” (Crombie et al., 2004, pp. 288 - 290) to physical activity among older 65 to 84 year Scottish men and women. Pain and fatigue have been found to be of particular importance for older adults who suffer from arthritis (Ananian, Wilcox, Watkins, Saunders, and Evans, 2008; Wilcox, Ananian, Abbott, Vrazel, Ramsey, and Sharpe, 2006; Wilcox, Ananian, Sharpe, Robbins, and Brady, 2005) and Multiple Sclerosis (Stuifbergen, 1999).
Psychological Barriers

There are a number of psychological barriers that limit older adults' participation in physical activity and exercise. Two common psychological barriers are negative affect (i.e. fear, depression, no motivation, feelings of embarrassment) and lack of self-efficacy, defined as the "belief in one's ability to perform a particular behavior" (Bandura, 1986, p. 391) or "specific task" (Orsega-Smith, Payne, Mowen, Ho, & Godbey, 2007, p. 710), such as physical activity or exercise, "despite obstacles and aversive experiences," (p. 710) like inclement weather or the loss of an exercise partner (Wilcox, Tudor-Locke, & Ainsworth, 2002). Bandura (1986) identified four principle sources of self-efficacy including performance attainment, vicarious experience, verbal persuasion, and physiological state. Briefly, performance attainment, based on the experience of mastery, explains that if an individual experiences success in performing a task, their self-efficacy will increase, yet repeated failure will lower self-efficacy appraisal (Bandura, 1986). Repeated success is likely to develop a strong sense of self-efficacy so that occasional failures are unlikely to influence one's perception of their capabilities and a strong sense of self-efficacy tends to carry over to other activities (Bandura, 1986). Vicarious experiences raises self-efficacy in observers since they believe that they can master comparable tasks (Bandura, 1986). Verbal persuasion is employed to try to talk individuals into "believing they possess capabilities that will enable them to achieve what they seek" (Bandura, 1986, p. 400) which in turn raises their level of self-efficacy. In addition, an individual's physiological state provides information in judging capabilities (Bandura, 1986). This is particularly important among older adults with multiple chronic conditions since if a man or woman reads their physiological state such
as pain, fatigue, or shortness of breath as signs of incapability, their efficacy will decrease (Bandura, 1986) and will unlikely engage in physical activity and/or exercise. Examining the experiences of older individuals who had arthritis, Wilcox et al (2006) found that participants cited fear (i.e. of experiencing pain or of the water) and perceived negative outcomes (i.e. that they were going to “pay for it” afterwards) as important barriers to participating in regular experience. Authors noted that fear was cited more frequently by nonexercisers than exercisers (Wilcox et al., 2006, p. 618).

Similarly, Rasinaho, Hirvensalo, Leinonen, Lintunen, and Rantanen (2006) found that fear and negative experiences were reported by the majority of older participants with both severe and moderate mobility limitations (Rasinaho, Hirvensalo, Leinonen, Lintunen, & Rantanen, 2006, pp. 97 - 98). Lees, Clark, Nigg, and Newman (2005) found that older participants reported fear of injury or falling, inertia, and negative affect (“no motivation,” “being embarrassed,” and “feeling down”) (p. 28) as the most significant barriers inhibiting their participation in regular exercise. Cohen-Mansfield et al. (2003) importantly suggested from their research showing a “highly significant relationship between general health, pain, lower physical ability, and depressed affect” that a “combination of these factors might have introduced a vicious cycle in which health problems are associated with physical health, causing depression and relative inactivity, which might then exacerbate the health condition” (pp. 250 – 251).

**Social and Environmental Barriers**

Social and environmental factors have also been reported in the literature to be important barriers to participating in physical activity and/or exercise among older
adults. To begin, lack of social support from family, friends, and health care providers discourages older adults from participating in physical activity (Wilcox, Oberrecht, Bopp, Kammermann, & McElmurray, 2005b; Wilcox et al., 2006). With respect to health care providers, Wilcox et al. (2006) found that health care providers emphasized medication and failed to prescribe exercise as a method of treatment for arthritis (Wilcox et al., 2006). The role of health care providers such as physicians, medical specialists, nurses, and other health care workers to encourage and promote participation in physical activity and/or exercise among older adults has been shown to be an important motivator and will be discussed later in this chapter (Hirvensalo, Heikkinen, Lintunen, & Rantanen, 2003; O'Brien Cousins & Vertinsky, 1995; Wechsler, Levine, & Idelson, 1996; Wilcox, et al., 2005b).

Similarly, the lack of someone to exercise with is an important social barrier to physical activity (Alcala, 2007; Ananian, Wilcox, Watkins, Saunders, & Evans, 2008; Booth, Bauman, & Owen, 1997; Clark, 1999; Cohen-Mansfield et al., 2003; Satariano, Haight, & Tager, 2000; Wilcox, et al., 2005; Wilcox et al., 2006). Although Wilcox et al. (2006) found that both exercisers and nonexercisers reported lack of company as a barrier, this theme was more commonly mentioned by nonexercisers. Participants described the ideal exercise partner as someone who had similar exercise schedules (Wilcox, et al., 2005), lived close by (Wilcox et al., 2006), was not “some skinny young thing jumping around” (Clark, 1999, p. 59), or was an instructor with knowledge of particular health conditions among older adults (Wilcox et al., 2006).
Ageism, defined as a “set of social relations that discriminate against older people and set them apart as being different by defining and understanding them in an oversimplified, generalized way” (Minichiello, Browne, & Kendig, 2000, p. 253), is another social barrier to physical activity in later life. It is well documented that ageist stereotypes of older men and women are dominant in western society (Bowd, 2003; Butler, 2005; Gullette, 1997; Hummert, Garstka, & Shaner, 1997; Minichiello et al., 2000; Nelson, 2005; Palmore, 2003). Later life is assumed to inevitably be a time of disease and frailty. Older women and men are assumed to be more diseased and dependent than the young and later life is assumed to be a time of physical decline and disengagement from activities. The literature is replete with examples of the influence of ageism. For example, Wilcox et al. (2005) found that stereotypes regarding aging were barriers to participating in physical activity and/or exercise among African American and white women. Specifically, both the African American and white women cited the theme of “overdoing it for their age” (Wilcox, et al., 2005b, p. 44) as a risk of participation. Grant (2001) found that older men and women’s experiences of being physically active and playing sports in later life revealed that “ageism and age discrimination provided a significant barrier for older people wanting to adopt a more physically active lifestyle” (Grant, 2001, p.793). For example, one male participant reported that he “hated people saying that ‘at your age you shouldn’t be doing this or that ‘I don’t understand why because I feel fine” (Grant, 2001, p. 785). Other participants similarly reported receiving mixed messages from their families and the popular media regarding “social and cultural values as to how an older person should behave” (Grant, 2001, p.793). O’Neill and Reid (1991) found in their sample of older
adults 55 years of age and older, that 14% stated that they felt that they were “too old” to exercise and 23% said that they did not need as much physical activity at this stage of their lives (O'Neill & Reid, 1991). Comparably, Booth et al. (2002) found that 20.4% of inactive older women and 16.3% of inactive older men reported that that felt that they were “too old” to be active and this increased with increasing age (from 5% among all participants 60 to 64 year olds to 36% among all participants 70 years old and older) (Booth, Bauman, & Owen, 2002).

Finally, older adults’ participation in physical activity has been found to be limited by a variety of environmental barriers, including geographical location, neighbourhood conditions, transportation, places to participate, access to these facilities, programs, and equipment, as well as poor weather conditions (Clark, 1999; Cohen-Mansfield et al., 2003; Lees et al., 2005; Newson & Kemps, 2007; Rasinaho et al., 2006; Rasinaho et al., 2006; Satariano et al., 2000; Stuifbergen, 1999; Wilcox, et al., 2005b; Wilcox, Der Ananian, Sharpe, Robbins, & Brady, 2005). Stuifbergen (1999) found that geographical location, rural versus urban residence, influenced the ability of individuals with Multiple Sclerosis (MS) to participate in physical activity or exercise due to lack of convenient facilities among other factors including money, information, and help from health care professionals (Stuifbergen, 1999). Similarly, rural dwelling African American and white women have been found to cite a lack of sidewalks, safety issues, stray dogs, lack of transportation, and lack of facilities or places to exercise as common barriers (Wilcox, et al., 2005).
Older adults living in urban areas report similar environmental barriers. For example, Clark (1999) found that environmental barriers (time, places for activity, sidewalk conditions, and bad weather) were cited among older low income men and women, but were regarded as less influential than physical and psychological barriers. With respect to transportation, driving has been found to of particular importance (Wilcox, et al., 2005; Wilcox et al., 2005). Once older women and men cannot drive anymore, much of their independence is lost and they come to rely on family members, friends, and public transportation services that can be costly for older adults with limited incomes. Finally, weather conditions such as rain, and cold or hot temperatures may discourage older adults from participating in physical activity (Grossman & Stewart, 2003).

**Physical Motivators**

The research suggests that comparable to physical barriers that limit older adults' participation in physical activity, the alleviation or improvement of these physical symptoms often motivates or encourages older adults to participate in physical activity. Maintaining and improving health, and preventing disability or illness are commonly reported motivators to participating in physical activity and/or exercise among older adults (Clark, 1999; Shephard & Montelpare, 1988). For example, Hirvensalo, Lampinen, and Rantanen (1998) found that the most important motivator to exercise among older adults 65 to 84 years of age was “health promotion” (Hirvensalo, Lampinen, & Rantanen, 1998). In this study, health promotion was reported by 80% of older men and women who were participating in regular exercise. Similarly, Cohen-Mansfield et al. (2003) found that the most often-reported motivator to exercise was
“improved health” or “feeling better physically” (Cohen-Mansfield et al., 2003, p. 248) among older adults who were living in the community. Scharff, Homan, Kreuter, and Brennan (1999) also found that for women aged 60 and older, the primary motivator for becoming more physically active was to improve health.

Reducing or managing symptoms of pain, discomfort, and fatigue is another common physical motivator to participating in physical activity and/or exercise for older adults. For example, in their study of older adult exercisers with arthritis, Wilcox et al. (2006) found that participants often described how exercise reduced their pain, especially in terms of the severity and intensity. This reduction in pain in turn made coping with chronic conditions including arthritis more manageable (Wilcox et al., 2006). Similarly, Rasinaho et al. (2006) found that almost half of the older adults with severe (49%) and moderate (46%) mobility limitations reported disease management as a motivator to engaging in exercise (Rasinaho et al., 2006).

**Psychological Motivators**

Older adults also tend to cite psychological factors as a source of motivation for their engagement in physical activity or exercise. These include improved self-confidence (Wicox et al., 2006), more positive attitudes towards one’s health (Wilcox et al., 2005b, Wilcox et al, 2006), and personal enjoyment from physical activity or exercise (Wilcox et al., 2006). For example, Wilcox et al. (2005b) found that the participants in their study commonly discussed how the potential to “feel better” was an important motivation to be more active. Both the African American and white women expressed the belief that exercise “is a mind thing”, “if you want to exercise, you can”
Older adult exercisers with arthritis also expressed “feeling better” or “feeling good” during and after activity (Wilcox et al., 2006). This group of adults further described the link between exercise as a “stress relief” and means of “relaxation” in the way it helped them forget about their pain (Wilcox et al., 2006, p. 625).

In a small exercise intervention study with low income African-American older adults, Clark (1999) found that within the first two weeks of beginning the program the women reported “feeling better overall, more relaxed, and less anxious” (Clark, 1999, p. 60). Clark (1999) found that the low income older men commonly cited only their “own motivation” and “willpower” (Clark, 1999, p. 59), as the primary facilitator to their engagement in exercise. Furthermore, Netz, Wu, Becker, & Tenenbaum, (2005) found that self-efficacy, overall well-being, and view of self were strongly affected by exercise in a positive way. Psychological benefits such as “feeling better”, having improved self-confidence and self-efficacy, and having fun were important motivators to participating in physical activity and/or exercise among older women and men.

Social and Environmental Motivators

Similar to the other categories of barriers and motivators to exercise, the social and environmental motivators to participation in physical activity and/or exercise are comparable to the social and environmental barriers. For example, having someone to exercise with is a fundamental motivator among older adults, especially for older women (Wilcox, et al., 2005; Wilcox et al., 2006). Grossman and Stewart (2003) found that adults 75 years of age and older discussed how maintaining family relationships and
particularly watching grandchildren grow, helping out, and keeping up with family were important motivators for both the men and women to participate in physical activity (Grossman & Stewart, 2003).

Additionally, the research suggests that health care professionals are particularly important when it comes to encouraging physical activity among older adults. Rasinaho et al. (2006) found that being advised to exercise by a physician or other health care professional positively influenced older adults to participate in exercise and/or physical activity (Rasinaho et al., 2006). This was comparable to earlier studies by Hirvensalo, Lampinen, and Rantanen (1998) who found that advice or referrals from health care professionals was an important motivator to exercise (Hirvensalo et al., 1998).

Finally, environmental motivators such as pleasant and safe neighbourhoods (Rasinaho et al., 2006), good weather, easy transportation, low cost or free facilities, and specific programs designed for older adults with chronic conditions have been reported in the literature as important motivators to participation. Rasinaho et al. (2006) found that participants with severe (68%), moderate (78%), and no mobility (85%) indicated that having suitable environments was an important motivator for engaging in physical activity. Clark (1999) found that environmental facilitators such as places for activity, sidewalk conditions, and weather were important. Additionally, Wilcox (2005b) found that transportation, namely driving, the cost of the exercise program, and the fitness leader of exercise classes are important social motivators to physical activity (Wilcox, et al., 2005).
Social Position and Physical Activity in Later Life

Specific barriers, motivators, and patterns of participation in physical activity and/or exercise among older adults with multiple chronic conditions are influenced by individuals' social positions. In addition to age, which has already been discussed, an individual's gender, marital status, educational attainment, and household income are important factors that underscore his or her engagement in physical activity and exercise. Each of these factors is discussed below.

Gender

Although older adults have been shown to be among the most sedentary, there is a strong relationship between engagement in physical activity or exercise and gender. Indeed, the extant scientific and epidemiological studies have shown that women participate overwhelmingly less than men in physical activity (Chad et al., 2005; Chogahara & Yamaguchi, 1998; Clark, Patrick, Grebowski, & Durham, 1995; Curtis, McTeer, & White, 1999; Curtis et al., 2000; King et al., 1992; Oguma et al., 2002; Rudman, 1989). These studies further show that women, in comparison to men, are far less likely to participate in physical activity and/or exercise throughout their life course, from early childhood to later adulthood (Chad et al., 2005; Curtis et al., 1999; Curtis et al., 2000; King et al., 1992; McPherson, 1984; McPherson, 1985; Oguma et al., 2002; Rudman, 1989).

It has been argued that patterns of participation in physical activity throughout life and importantly in later life (O'Brien Cousins & Vertinsky, 1995) are influenced particularly by dominant beliefs associated with gender and physical activity. West and
Zimmerman's (1987) analysis of sex categorization and gender socialization explained that "doing gender" is a means of "creating difference between girls and boys and women and men, differences that are not natural, essential, or biological" (p. 137). From early life little boys "appropriate the gender ideal" (p. 141) through the "exercise of physical strength or appropriate skills" and little girls "learn to value appearance … managing themselves as ornamental objects" (p. 141). These "normal and natural differences" of "doing gender" are powerfully reinforced and legitimated in the resultant social order and hierarchical arrangement of western society (p. 146).

O'Brien Cousins and Vertinsky's (1995) analysis of the narratives of three women born in or before 1900, showed how gender norms, although powerful, could be constructed in various ways. They found that women who were provided with the opportunities and social support (i.e. family, spouses, etc) to participate in “sport-type activities” or who were physically challenged in “domestic or farm labor” appreciated and continued to seek health promoting aspects of exercise over 80 years later (O'Brien Cousins & Vertinsky, 1995). O'Brien Cousins and Vertinsky (1995) suggested that these women were exceptional and Vertinsky (1995) later argued that historically older women accepted traditional prevailing stereotypes that associated aging with disuse, disease, and physical decline tended to remain or become sedentary because they believed it was inappropriate or dangerous to be physically active”. Vertinsky (1995) further suggested that girls and women were not commonly encouraged to participate in exercise, sports, or physical activities but rather spend their time learning and acquiring domestic skills such as sewing and cooking that would benefit their future roles as wives.
and mothers in turn contributing to the greater productivity of emerging industrial society.

In contrast, sport, and related physical activity and exercise, in western culture was and, in some spaces, continues to be viewed as a “masculinizing project” (Hall, 2007, p. 56) where boys learn to be “men” and where “male solidarity is forged” (Hall, 2007, p. 56). Sport, and also physical activity and exercise in similar ways, are sites for maintaining masculine or male hegemony (Hall, 2007). The concept of hegemonic masculinity was developed by Robert Connell’s (1987) based on Antonio Gramsci’s (1971) work on social class relations that looked at how unequal relationships are maintained by consent of those “subordinated to forms of domination” (Wamsley, 2007, p. 76; Connell, 1987; Gramsci, 1971). Hegemonic masculinity is an idealized form of masculinity at a given time and place (Connell, 1987). It includes such characteristics as physical strength, aggression, virility, professional success, wealth, heterosexual prowess, and self-control over emotions such as pain, hurt, grief, or shame (Calasanti, 2004). These dominant cultural notions of masculinity or hegemonic masculinity are ideologies that serve and maintain the interests of dominant male groups and leaders in society (Parker & White, 2007). Hegemonic masculinity is about power. It is a socially constructed pattern of power relations between men and women but also between elite men and lesser-status men (Calasanti, 2004; Sabo & Gordon, 1995; Sabo, Gordon, & Men’s Studies Association (US), 1995). Hegemonic masculinity reflects, supports, and actively promotes inequalities in society (Sabo & Gordon, 1995). It allows males in privileged positions to exert their influence and control over women but also over other males in lesser-status positions in society (White & Young, 2007). However, these
ideals characteristic of hegemonic masculinity can be problematic for older men who have multiple chronic conditions. Masculinity reflects lifelong participation in the gender order and are "taken for granted by men when their identities remain stable" (Charmaz, 1995, p. 268). Illness and chronic conditions can attenuate "taken-for-granted [masculine] identities" (p. 268), change or terminate men's participation in work, physical activity, exercise, sports, consequently reduce a "man's status in masculine hierarchies, shift his power relations with women [and other men], and raise his self-doubts about [his] masculinity" (p. 268). Nevertheless, playing sports and games is a fundamental socializing factor with respect to hegemonic masculinity, which privileges the ability to tolerate pain and the exhibiting of physical toughness on the field, court, or in the weight room (Hall, 2007; Vertinsky, 1995). In contrast, hegemonic femininity stresses "passivity, physical frailty, dependence (on men), nurturance, cooperation, and sexual submissiveness" (Sabo & Gordon, 1995, p.18).

**Marital Status**

In addition to gender, marital status has been found to be an important variable that influences older adults' engagement in physical activity or exercise. Goldman, Korenman, and Weinstein (1995) found that married people enjoy better health, make fewer demands on the health care system, experience lower death rates, and have fewer chronic illnesses than do single, widowed, and divorced persons. Differences were explained by two processes, first, by “marriage selection”, which refers to the greater “propensity of healthier individuals to marry” (Schone & Weinick, 1998, p. 618), and, second, by “marriage protection” which refers to the “protective benefits” from the social, psychological, and physical environments in which individuals live, and that
positively influence their health (Schone & Weinick, 1998, p. 618). Furthermore, both Goldman et al. (1995) and Schone and Weinick (1998) found that the health varied by gender in that compared to married or single women and single men, that the influence of marriage on positive health and health behaviours was much larger for married men. Married men were 70% more likely to participate in physical activity than widowed men (Schone & Weinick, 1998) while widowed men had a much higher risk of disability and dying (Goldman, Korenman, & Weinstein, 1995). These researchers speculated that traditional gender roles play a key role in influencing married older men's and women's health, since wives often take on responsibility for overseeing their husbands' health (Arber, 2004; Goldman et al., 1995; Schone & Weinick, 1998), as well as the health of their children, and tend to maintain and promote social connections with family and friends more so than husbands (Chipperfield & Havens, 2001).

The research suggests that the situation for older women is complex. Older married women have often described how earlier life experiences of working a “double day” (Denton & Walters, 1999, p. 1225) by working full or part-time outside and inside the home and caring for their families influence their opportunities to participate in physical activity and/or exercise (Denton & Walters, 1999). Ballantyne’s (1999) study showed that the costs of marriage to women are related to differentiated gender roles that place married women in a disadvantaged social and economic position relative to their spouses and to unmarried women. A married woman’s life-work associated with her family is “invisible and conducted in relative isolation” (Ballantyne, 1999, p. 293), regardless of whether or not she works outside the home. Furthermore, married women are often economically dependent on their spouses and women working in paid
employment face obstacles regarding quality of work, lack of control over decision-making, and environmental constraints that are commonly associated with low status jobs, in which women tend to be employed, adversely affecting their health as a consequence (Ballantyne, 1999). Thus, while marital status appears to benefit the health of older men, in terms positive health behaviours in later life, the relationship between marital status and health status is more complicated for older women.

**Educational Attainment and Income**

Educational attainment has also been found to be associated with physical activity and/or exercise participation and health in older populations since education has been shown to influence “adult occupation, income, and wealth” (Herd, Goesling, & House, 2007, p. 225; Droomers, Schrijvers, & Mackenbach, 2001; House, Lantz, & Herd, 2005; Shaw & Spokane, 2008). The relationship between high educational attainment, positive health, and participation in physical activity and/or exercise is often explained by increased knowledge regarding the benefits of physical activity, having a greater exposure to health messages that instill higher levels of perceived benefits of physical activity (Cerin & Leslie, 2008; Kwon, 2002; McAuley et al., 2006), having a stronger sense of personal control and self-efficacy for physical activity (Clark et al., 1995; Kwon, 2002; McAuley et al., 2006; McAuley et al., 2005), having healthier influences in terms of social networks (Cerin & Leslie, 2008; McAuley et al., 2006; Shaw & Spokane, 2008), and having a greater access to resources that facilitate physical activity and/or exercise participation (McAuley et al., 2006; Mirowsky & Ross, 2003; Shaw & Spokane, 2008).
In addition, research has explored the relationship between education and the onset and progression of health problems in later life. Herd et al. (2007) found that older women without high school degrees and those with high school degrees were 100% and 61%, respectively, more likely to develop functional limitations when compared to older adults with college degrees. Education also predicted the onset of health problems, where those without high school degrees and those with high school degrees were 81% and 56%, respectively, more likely than those with college degrees to experience the onset of health problems in later life. Looking specifically at the relationship between education and the likelihood of developing chronic conditions, those with less than high school degrees had 48% greater odds of developing a chronic condition than individuals with college degrees. In contrast, Shaw and Spokane (2008) found that those older adults with lower levels of education but who had continued to work for pay were more physically active than those who had not continued to work for pay or had lost their jobs. The authors speculated that older adults with low education tended to “rely on employment as a major source of physical activity” (p.783).

Similarly, income has been shown to be a fundamental predictor of health and participation in physical activity and/or exercise in later life. The research reveals that those with higher incomes, who are more likely to be men, participate more frequently in physical activity and/or exercise, and in turn have better health than those with lower incomes, who are more likely to be women. Comparable to the association between health and high levels of educational attainment, the health benefits associated with higher income include having access to a variety of health care resources and health information networks, recreational and sports facilities and the ability to purchase
related equipment and gear, as well as the ability to afford to live in safe and nontoxic environments (Cerin & Leslie, 2008; Herd, 2006; Herd et al., 2007; Matthews, Smith, Hancock, Jagger, & Spiers, 2005).

Furthermore, once an individual is diagnosed with a chronic health condition, income provides an important resource for coping with the health conditions by enabling individuals to access necessary health care including specialists, treatments, and medications which can be costly, as well as to adapt their homes and work environments in ways that accommodate their health conditions (Herd et al., 2007). Zimmer and House (2002) found that low incomes, rather than lower levels of education, were a key indicator of worsening functional health. Other studies have found that income more than education is linked to mortality risk (House et al., 2005; Lantz et al., 1998; Zimmer & House, 2003). Because income accumulates over time and usually does not peak until an age when an individual may have already experienced the onset of health conditions (Duncan, 1988), income may be more important than educational attainment in the further progression and worsening of physical health but not with regards to onset of chronic conditions.

Herd et al. (2007) found that income, specifically having a lower income, was more strongly associated with the further progression of both functional limitation and chronic conditions than education (Herd et al., 2007). The likelihood of further functional decline was 195% higher for those with incomes under $10,000 compared to those with incomes over $30,000 and those with less than $10,000 income were 49% more likely to develop a chronic conditions compared to those with income above $30,000. The authors concluded that income is a stronger predictor of illness.
progression than education since at every stage of health decline, from the onset of chronic conditions to death, income showed a greater significance in comparison to educational attainment.

**Healthism and Successful Aging**

In addition to known barriers and facilitators of physical activity and exercise, underlying cultural norms shape the experiences of older adults. Since the 1970s, there has been a growing shift from a medical approach to health care to a personal lifestyle approach. Developments in the political economy of the medical sector and western governments promoted the ideology of “individual responsibility for health” (Crawford, 1980, p. 367) through the proliferation of health promotion media campaigns and advertisements. Healthism as an ideology, is a system of beliefs that defines health-promoting activities including exercise, diet, stress management programs, and the avoidance of disease, as an individuals’ “moral obligation” to achieve prosperous health and well-being (Crawford, 1980; White et al., 1995). Dominant ideas of health became inherently related to forms of self-control, self-discipline, self-denial, and will power (Crawford, 1984). Healthism encourages “judgment of others and self-blame” and a “general moralization of health under the rubric of self-responsibility” (Crawford, 1984, p. 70). Positive health behaviours and lifestyle choices, including nutritious diet and regular exercise, have become a “moral duty” and illness or chronic conditions, in contrast, “an individual moral failing” (Crawford, 1984, p. 70).

The concept of healthism is directly linked to the notion of successful aging, which dominates much of the medical and gerontological literature and research.
Successful aging has been defined in various ways, from a biomedical and psychosocial perspective (Franklin & Tate, 2009). However, Rowe and Kahn (1997) developed the “leading biomedical model for successful aging” based on their MacArthur longitudinal studies that have been supported by a large body of research and theoretical literature, confirming that “physical, cognitive, and social functioning” are “key factors of successful aging and that multiple lifestyle choices, behaviours, and psychosocial factors influence them” (Franklin & Tate, 2009, p.8). Rowe and Kahn (1998) defined successful aging as the ability to maintain the combination of three fundamental behaviours and characteristics, including the “avoidance of disease and disability, the maintenance of high physical and cognitive function, and sustained engagement in social and productive activities” (p. 433). Although, this concept offered an alternative view of aging as a medical problem linked to disease, deterioration, and inactivity, it too was problematic for several reasons, primarily because it created a framework of moral obligation and individual responsibility to choose to age “successfully”.

Successful aging has been touted as the ultimate goal of later life. In gerontology literature, physical activity is identified as a central component for aging successfully. Chodzko-Zajko (2000) says that “good nutrition, preventive medicine, smoking cessation, and reduced alcohol consumption all have the potential to impact positively on the aging process”, though “physical activity is the single most effective means whereby individuals can influence their own health and functional abilities” (p.335). This statement is reflective of the moral imperative theme commonly found in the successful aging literature.
Successful aging and physical activity have been cast as moral imperatives for older people. Physical activity has been framed as a moral responsibility and the one “right” behaviour that older people should regularly engage in for long term positive health. Chodzko-Zajko (2000) is one of the many researchers in the area of geriatrics and gerontology that advocates physical activity for both the prevention and treatment of disease and disability (see Buchner, 2003; Fiatarone Singh, 2002; Fiatarone Singh, 2004, Jones & Rikli, 1999, Rejeski, Brawley, & Haskell, 2003). While these studies offer alternatives to the traditional stereotypes of later life that equate old age with the inevitability of disease and functional limitation, they also situate “good” health in the framework of individual responsibility and moral obligation, as in the ideology of healthsim.

An underlying assumption of successful aging is that older individuals possess “agency” whereby they can do much to “influence the direction” of their aging (Chodzko-Zajko, 2000, p.335). The result is that “good” health is not only presented as an individual responsibility, but also as a choice. Older people and their bodies are isolated to an idealistic space where old age and “retirement” years are constructed as another period of empowerment and opportunity. There is little regard for individual social and economic location, which fundamentally influence and determine levels of access and opportunity. In addition, like healthism, successful aging overlooks a lifetime of "social constraints" (Crawford, 1980, p.380) and "structural causes" (Lupton, 2005, p. 428) of becoming ill and putting the self at “risk” by choosing unhealthy life habits (Crawford, 1980). Risk is internally imposed as a result of "lack of willpower, moral weakness, venality, or laziness" (Lupton, 2005, p. 425). Consequently, older
people are presented as free actors with access to limitless time, money, and resources. Considered as a homogeneous group, they are portrayed with similar access, experiences, and knowledge and the ability to put these resources to work. Older individuals' unique life histories and personal experiences of physical activity and health are disregarded.

Katz (2000) has argued that activity theory, which promotes old age as a time of lively and creative experience (Havighurst & Albrecht, 1953), constructs an active ‘busy ethic’ in retirement as a “form of moral regulation akin to the work ethic” (Katz, 2000, pp. 138-139). This moral regulation is revealed daily, whereby to be “functional,” aging bodies must be “busy bodies”, regulated and scheduled with activity (Katz, 2000, p.142). Through current “neoliberal anti-welfarist agendas” older bodies are problematized as “dependency prone and at risk.” Older individuals are responsible for avoiding health risks and thus are perceived to be in “need” of government intervention programs and policies in order to be activated and managed (Katz, 2000, p. 147). In this way, physical activity has not only been constructed as an individual responsibility, but also “sold” as the new “positive” investment in later life. A physically active body is a productive body. Within this nexus of physical activity, health, and moral responsibility, aging bodies are caught in a binary between positive, successful aging, and negative degeneration. Those who do not conform or cannot engage in “non-stop activity” are considered “problem persons” in need of regulation and management (Katz, 2000, p.148). Physical activity and the regulation of the aging body have been socially and culturally constructed as a moral obligation of the greatest political value.
Although, notions of successful aging and healthism offer new ways for older people and their bodies to resist and “retain a place in the mainstream society” by encouraging older men and women to “take control” and discipline their bodies, these notions are essentially problematic for fostering a continued “depoliticization therefore undermining social efforts to improve health well being” (Crawford, 1980, p. 368).

Notions and expectations of healthism and successful aging are limiting for older people. Within this current cultural context of healthism and successful aging, older people, especially those with multiple chronic conditions, provide evidence that they have "failed to comply with the directives to reduce health risks" and, therefore, are "blamed for their predicament" (Lupton, 2005, pp. 425-426). Older adults with multiple chronic conditions who may not be able to present themselves as productive, busy members of a product-oriented society (Hillyer, 1998), by "keeping watch" (Minichiello et al., 2000, p. 269) of their physical presentation and engagement in meaningful activity, including physical activity and diet, are problems "incurring costs upon the public purse" (Lupton, 2005, p. 425). Furthermore, they are at “risk” of social and cultural segregation and isolation. Unproductive older people are thus blamed for not controlling or disciplining their bodies, according to societal expectation.

Summary

The extant research has identified many of the physical, psychological, social, and environmental barriers and motivators to physical activity and/or exercise that are associated with a single chronic conditions and aging. However, to date, there has been little investigation of how older women and men who have multiple chronic conditions participate in physical activity and/or exercise. Addressing this gap in the
research, this study aims to provide insights into the factors that delimit and foster the participation of older adults with multiple chronic conditions in physical activity and exercise.
Chapter Three: Methods

In this chapter, I outline the theoretical frameworks and research methods that were employed in the study. Beginning with a discussion of symbolic interactionism, I will also explicate the study’s method and sample including participant selection, sample characteristics, interview structure, interview schedule, interview experience, and data analysis. The chapter will conclude with a discussion of my own reflexive position as it has guided my research.

Theoretical Framework

This study was informed by symbolic interactionism, which is an “approach to the study of human group life and human conduct” (Blumer, 1969, p. 1) that explores the construction, negotiation, and interpretation of meaning, identity, and behaviour in everyday life (Berger, 1967; Blumer, 1969; Mead, 1934). Symbolic interactionism’s basic premise is that “humans create meanings through social interaction” (Beal, 2002, pp. 353 - 354). Blumer (1969) identified three premises of symbolic interactionism, which highlight the “interpretive and negotiated processes in the construction of social reality” (Beal, 2002, p. 354). Blumer’s first premise is that “human beings act toward things on the basis of the meanings that the things have for them” (Blumer, 1969, p. 2). He suggests that these things include other people and their behaviours, objects in the physical world, institutions, and concepts. Blumer asserts that there is no inherent meaning in these things, rather that meaning is generated through “human interaction” and is “negotiated over time” (Beal, 2002, p. 354). Consequently, Blumer’s (1969) second premise is that “the meaning of such things is derived from, or arises out of …
social interaction” (p. 2). Blumer recognizes that human life is “community life” (Prus, 1996, p. 10) and that humans and human behaviour cannot be understood when disconnected from the community context in which they live. Humans acquire “their (social) essences from the communities in which they are located, and human communities are contingent on the development of shared (or intersubjectively acknowledged) symbols or languages” (Prus, 1996, p. 10). Blumer’s (1969) third premise is that “these meanings are handled in, and modified through, an interpretive process” (p. 2) by humans when dealing with the things and people, they encounter. Blumer views humans as “purposive agents” engaged in “minded,” “self-reflexive behaviour” (Blumer, 1969, p. 81). He suggests that humans actively construct and interpret their worlds rather than responding to an environment forced upon them (Schwandt, 1994). Hence, symbolic interactionists hold deep respect for the “empirical world” (Schwandt, 1994, p. 124) and strive to enter the worlds of the individuals they study in order “to see the situation as it is seen” (Schwandt, 1994, p. 124) by the individual, to observe what is meaningful to the individual, and to identify how the individual “interprets what is taken into account” (Schwandt, 1994, p. 124). Symbolic interactionism is the study of “human lived experience” (Prus, 1996, p. 9) and the processes by which people create identities, meanings, and behaviours (Blumer, 1969). In this way, symbolic interactionism’s core objective, to understand the “complex world of lived experience from the point of view of those who live it” (Schwandt, 1994, p. 124), provides a lens to focus the exploration and deepen the analysis of the factors that hinder and facilitate older adults with multiple chronic conditions to participate in physical activity or exercise.
Participant Selection

This research study is the final stage of a three-part interdisciplinary study of physical activity and multiple chronic conditions in older populations (65-90 years of age). The first stage involved using the Canadian Community Health Survey (CCHS) Cycle 1.1 2000/2001 to quantify and explore the interrelationships among physical activity, health resource utilization, and quality of life of Canadians with chronic conditions. The second stage entailed exploring the relationships between specific measures of body structure/functioning (impairments) and activity and participation restriction, physical activity, health resource utilization, and quality of life in community dwelling individuals living with multiple chronic conditions. The principle investigators of this interdisciplinary study included Janice J. Eng and William C. Miller along with co-investigators, Judith A. Soon, Maureen C. Ashe, Carlo Marra, and Laura Hurd Clarke.

The older women and men who participated in the present, third stage, were drawn from the participant sample of the second stage. Two hundred older men and women from the Greater Vancouver community participated in the second stage. They were recruited from community pharmacies using “shelf talkers” (Tsuyuki et al., 2002) and by pharmacists who identified and discussed the study with older customers with multiple prescriptions (Ashe, et al., 2007). Once a list of potential participants was gathered, a research investigator conducted a telephone interview with each older adult. Inclusion criteria were that individuals must (1) be 65 years of age and over, (2) have two or more chronic conditions (based on the Canadian Community Health Survey criteria), (3) live in their own homes (apartment, house, owned, or rented), (4) be ambulatory and able to walk for a minimum of 10 meters with or without assistive devices, (6) able to follow
three step commands in English, and (7) agree to give researchers permission to access information within the BC Health link database. Individuals were excluded if they had cognitive impairment as indicated by a score of less than 24 on the Folstein Mini-mental Test (Folstein, Folstein, & McHugh, 1975) or they were unable to communicate with the investigator over the telephone.

For the third stage of the study, the older adults who participated in the second stage of the research study were invited by the Principle Investigators and project coordinator during testing to participate in individual interviews to learn more about their experiences with physical activity and exercise. From the 200 participants, 10 older women and 10 older men were "purposively selected" (Ritchie & Lewis, 2003) to participate in face-to-face in-depth interviews. Purposive sampling is a type of non-probability sampling well established in qualitative research (Ritchie & Lewis, 2003). Participants were purposively selected based on characteristics to ensure that all key groups central to the study's purpose and research questions were addressed and to achieve diversity within each criteria so that characteristic(s) concerned could be explored in detail (Ritchie & Lewis, 2003). Accordingly, quantitative results and characteristics from stage two of the interdisciplinary study pointed to important criteria that informed the participant selection for qualitative in-depth interviews. Specifically, participant scores showed that the strongest predictors of physical activity were measures of self-efficacy (Lorig, Stewart, Ritter, Gonzalez, Laurent, & Lynch, 1996) and the time it took for participants to get up out of a chair and walk 3 meters and back (Shumway-Cook, Brauer, & Woollacott, 2000).
Initially, participants were selected based on both high and low scores of the two measures (i.e. self-efficacy and Time up and go test) as well as diversity in terms of age, ethnicity, educational level, and household income (all of which will be discussed further in the next section). However, after three interviews had been conducted and transcribed, the Principle Investigators, co-investigators, and myself decided that interviewing participants with a higher number of chronic conditions reported would ensure key groups among the larger participant sample were selected while capturing more of the personal complexities of participating in physical activity or exercise. Furthermore, this decision was reached because during two of the three initial interviews with participants who had lower number of chronic conditions, seven compared to the mean of twelve, participants reported few barriers to participating in physical activity or exercise. Therefore, the criteria that were considered for purposively selecting participants to be interviewed included the number and severity of multiple chronic conditions self-reported by the participants during the initial telephone interview, high scores of the Time-up-and-Go (Shumway-Cook, Brauer, & Woollocott, 2000) and Six Minute Walk test (Enright, 2003a; Enright, 2003b), as well as measures of Body Mass Index (Ashe et al., 2007), Physical Activity Scale for Individuals with Physical Disabilities (PASIPD) (Washburn, Zhu, McAuley, Frogley, & Figoni, 2002), Instrumental Support Evaluation List (ISEL) (Heitzmann & Kaplan, 1988), Self-efficacy for Managing Chronic Disease (Lorig et al., 1996; Stanford Chronic Disease Self-Management Study, 1996) and number of medications.
Sample Rationale

The data from the interviews with these 20 participants’ achieved theoretical saturation (Glaser and Strauss, 1967). Theoretical saturation (Glaser and Strauss, 1967) is the point in the research process, during data collection and analysis, when no additional data can be found that will develop and add properties of categories (Glaser and Strauss, 1967). In other words, data saturation is established when new information (i.e. conducting additional interviews) produces little or no change to the codebook (Guest, Bunce, & Johnson, 2006). Although, data saturation has become the standard method by which purposive sample sizes in qualitative research are determined, in practice, the concept is vague and problematic, as it varies according to the purpose and type of investigation being carried out (Guest et al., 2006). Guest et al (2006) suggested that the problems in using data saturation as a guide for sample size can be addressed by systematically documenting the degree of data saturation and variability over the course of their study and analysis. Analyzing 60 interviews with a relatively homogenous group of participants, Guest et al (2006) found that “high-level, overarching themes” (p. 21) were achieved only after six interviews, their codebook was “fairly complete and stable” (p. 21) after only twelve interviews, and that “variability of code frequency” (p. 17) was stable by the twelfth interview. Attending to these benchmarks in my own study, I found that data saturation was achieved by conducting 25 interviews with the older men and women.

Sample Characteristics

My sample included 10 males and 10 females who were diverse in terms of age, country of birth, educational attainment, marital status, and household income (see
Table 1 Participant Demographic Characteristics at the end of this chapter). These characteristics were based on participants’ own self-defined and observer-identified categories (Hammersley & Atkinson, 1995), as recorded by research investigators during the initial telephone interview, through the completion of a series of questionnaires during stage two of the research study, and again during the face-to-face interview. Participant demographic characteristics were confirmed and/or adjusted if necessary at each stage of the research. A short descriptive sketch of each participant can be found in Appendix D.

Two women were between ages 68 - 69, two women and three men were between ages 70 - 74, two women and three men were between ages 75 - 79, three women and one man were between 80 - 84, and one woman and three men were 85 years of age and older. Twelve of the 20 participants were born in Canada, two were born in European countries (England and Hungary), four were born in Asia or South Asia (China, Malaysia, India, and Mongolia), and two were born in the United States. The participants had an average of 12 multiple chronic conditions and a range of seven to 17 multiple chronic conditions. All 10 of the men and all 10 of the women reported having various types of musculoskeletal disorders including the arthritis, rheumatism, back problems, fibromyalgia, osteoarthritis, and joint replacements. Nine men and nine women reported cardiovascular diseases including angina, myocardial infarction, congestive heart failure, hypertension, and arrhythmias. Under endocrine or metabolic disorders, five women and four men reported type II diabetes and five women and three men reported osteoporosis. Disorders related to the respiratory system (i.e. asthma, chronic obstructive pulmonary disease) were common among the men and women as
was disorders of the digestive system (i.e. ulcers, hernias). In addition, eight of the men and five of the women reported neurological disorders such as Parkinson's, peripheral neuropathy, cerebral ischemia/infarction (stroke), and dystonia. Notably, five men but no women reported having cancer and eight women but only one man reported experiencing migraine headaches. The majority of both the men and women reported experiencing impaired vision and hearing loss.

Patterns of physical activity followed levels of income and education, although the latter factor was only evident among the men. The average household income among the women was $40,000 while the average household income for the men was $65,000. The one woman who was participating in physical activity had a household income well above the average, between $60,000 and $80,000 and had achieved a college education. Similar to the older women, the two men who were physically inactive had household incomes under $20,000 while those who were physically active had higher incomes than either the two physically inactive men or the female participants. Additionally, the two physically inactive men had less than high school educations whereas the physically active men tended to be better educated.

**Interview Structure**

Fifteen of the 20 participants were interviewed once, while five were interviewed twice in order to accommodate their physical limitations. The participant interviews were an average of two hours each and totaled approximately 40 interview hours. Twenty-three of the interviews were conducted at the participant’s homes, while one was conducted on the University of British Columbia campus, and another was conducted at G. F. Strong Hospital. Prior to the interviews, I provided participants with
a letter of introduction (see Appendix A) and a letter of consent (see Appendix B) describing the study in more detail, including the purpose of the interviews, why I would like them to participate, what the process of the interviews would be in terms of time and commitment, and requesting their permission to digitally record and transcribe the interview. The letter of consent also explained and guaranteed their confidentiality, their freedom to withdraw from the interview, and their anonymity. This third qualitative part of the interdisciplinary study and accompanying documents, including interview schedule, letter of introduction, and letter of consent, was approved by the university and hospital ethics review boards.

**Interview Schedule**

The interviews were semi-structured, which provided me the flexibility to follow up ideas, probe responses, and ask for clarification or further elaboration (Arksey, 1999). The interview schedule (see Appendix C) was a guide for my discussions with participants and was added to and amended during the course of data collection in order to respond to emergent themes. The first part of the interview schedule asked questions regarding the participant’s health, experience of living with multiple chronic conditions, and his/her level of daily physical activity. Beginning the interview with open-ended questions such as “tell me about your health”, “tell me the story of how you came to have chronic conditions”, and “tell me about the activities you do on a daily or weekly basis”, I gained some insight into their personal lives and began to establish rapport and trust, which I will discuss in further detail in the next section. The second part of the interview schedule asked more specifically about the factors that limited or motivated participation in physical activity or exercise. Although I referred to the
interview schedule to ensure that all topics were covered, the exact wording, order of questions asked, and probes (Kaufman, 1994) were unique to each interview and depended upon the nature of the participant’s responses.

Data Analysis

Analysis of the data employed Glaser and Strauss’ (1967) grounded theory, which is an inductive approach to handling qualitative data whereby the researcher reads and rereads interview transcripts allowing concepts and themes to emerge rather than imposing predetermined themes during the data analysis (Charmaz, 2000; Charmaz, 2003; Glaser, 1967). In this study, interviews were digitally recorded and then transcribed verbatim. Each transcription was read and reread line-by-line multiple times in order to establish preliminary themes and concepts embedded in the text and to construct an initial codebook. This process is often referred to as open coding whereby the researcher “fractures” (Jeon, 2004, p. 253) data line by line in order to explore all possible aspects of “issues and ideas” (p. 253) in the data, and to develop descriptive codes as labels for the “meanings of the issues and ideas” (p. 253). In addition, I adopted the “constant comparative” method where I examined each item of “data coded in terms of a particular category” (Hammersley & Atkinson, 1995, p. 213) and noted comparisons with other data that were similarly coded. I proceeded until no new codes or themes emerged from the data. Thus, four major codes were inductively established, namely barriers to physical activity or exercise, motivators to physical activity or exercise, experiences of multiple chronic conditions, and experiences of physical activity or exercise. These codes were further broken down into 50 subsidiary codes, which are listed in Table 2. Although, the coding process established 50
subsidiary codes, I will only focus my discussion on 16 subsidiary codes (identified with an asterisk) in order to answer the present study's three primary research questions.

I used Nvivo 7, a computer software program designed to assist with the coding and organizing of qualitative data such as interviews. This software program also allowed me to import participant’s sociodemographic and socioeconomic information as well as quantitative scores from part two of the study. This assisted me in drawing comparisons among the participants in terms of gender, age groups, marital status, education, income, multiple chronic conditions as well as scores of BMI, Timed-up-and-Go, Six Minute Walk, PASIPD, ISEL, Self-efficacy for Managing Chronic Disease and the number of pharmaceutical medications across emergent themes.

After coding each of the 20 transcripts in detail and examining the types of barriers and motivators the participants discussed, I further investigated the pattern of physical activity or exercise over the participants' lifetimes and earlier types of motivators and barriers they reported. I reviewed and analyzed each of the coded transcripts individually in order to answer my three research questions. Tending to the definitions of physical activity and exercise frequently employed in the academic literature pertaining to sports medicine and health promotion, I paid particular attention to how each older woman and man personally defined physical activity and/or exercise. Their descriptive stories and personal definitions of physical activity and exercise revealed a great deal about the meanings they associated to their past and current experiences of participating in physical activity and/or exercise identifying the barriers and motivators to participation. Furthermore, I gained insight into their personal experiences of participation in physical activity and/or exercise across their lives,
particularly at various life stages (childhood, adolescence, adulthood, later adulthood prior to onset of multiple chronic conditions, and time of interview). Consequently, I was able to attain a sense of each of the women and men’s encounters with participation in physical activity and/or exercise during these time periods and compare them.

**The Interview Experience**

Previous studies have suggested that conducting qualitative research with older adults is unique in that it presents particular opportunities as well as dilemmas (Holstein & Gubrium, 2003; Hurd Clarke, 2003). Older adults have been referred to as a vulnerable population (Russell, 1999) not only because of possible physical and cognitive conditions but also financial issues and social support networks that make them potentially subject to exploitation and abuse (Gubrium & Sankar, 1994; Gubrium & Holstein, 2003). Consequently, beyond ethical issues that include careful informed consent of voluntary cooperation and the balance between risks and benefits associated with participation, researchers interviewing older adults must consider each participants’ individual physical health conditions (Wenger, 2003). This was particularly important to recognize in my research, since I was interviewing older adults with multiple chronic conditions. The women and men who participated in the present study were diverse with regard to their multiple chronic conditions, including type, severity, and function. As a result, I made every attempt to accommodate their abilities. For example, some of the participants preferred to be interviewed in the morning as their fatigue and experience of pain often became unbearable by the afternoon. In contrast, other participants preferred meeting later in the day, as they needed a greater amount of time in the morning to dress, eat breakfast, and take medications before I arrived.
also learned that most of my scheduled interview appointments were tentatively planned in that our meeting would depend upon how they were feeling that day. I learned midway through collecting my data that calling the day of our appointment was necessary, since they might not be “having a good day” or “not up to” meeting. This at times was disappointing for me as a researcher, as it delayed the data collection stage of the study but also recognized that their well-being was paramount.

Furthermore, it was important to be accommodating during the face-to-face interview since some of the participants had impaired hearing, vision, and speech as a result of their multiple chronic conditions. For example, during the interview, I was patient, allowing each participant to take as much time as she or he needed to answer my questions as well as adjusting the volume of my voice and the location where I was sitting so that each participant could hear and see me clearly. I would often ask the participant if I could pull-up a chair from their kitchen or dining room so that I could face them closely rather than from a sofa across the room. My aim was to create the best possible environment to facilitate ease of communication and level of comfort between the participant and myself. I would also check with them occasionally throughout the interview as to how they were doing in terms of pain threshold and fatigue.

Much has been written about the qualities and importance of establishing and maintaining rapport and trust throughout the research process. Rapport consists of the following characteristics: (1) “communicating a feeling of empathy for informants and having them accept it as sincere,” (Taylor & Bogdan, 1998, p. 48); (2) having people “open up about their feelings, about the setting and others” (p. 48); and (3) sharing in “informants’ symbolic world, their language, and their perspectives” (p. 48). Morse,
Barrett, Mayan, Olson, and Spiers (2002) have argued, that “research is only as good as the investigator” (p. 10) or researcher. Establishing rapport and trust with participants is critical to achieving sound research and credibility or the “truth as known, experienced or deeply felt by the people being studied” (Leininger, 1994, p. 105; Fontana & Frey, 2000; Hurd Clarke, 2003). Ways of establishing rapport and trust with participants include accommodating participants’ routines and ways of doing things, acknowledging what the researcher has in common with the participants, helping participants by doing favours or errands, being humble or open to participants’ feelings and experiences, and being genuinely interested in what the participants are saying (Hurd Clarke, 2003; Taylor & Bogdan, 1998). I employed these methods throughout the data collection process and during each of the interviews. In addition to accommodating to my participants’ daily routines and abilities, I also acknowledged our common experiences. For example, one woman who had lived on the Sunshine Coast described how it had been difficult for her to “plug into” physical activity since she had moved to Vancouver. She asked me if I had been to the Sunshine Coast and if I was familiar with the "small-town feeling" of the area. I told her that I had grown up in Powell River, which is nearby. She immediately seemed to soften and said, “Well, you know what I mean when I say that living in Vancouver is different than the Sunshine Coast”.

**Reflexivity**

It is important for researchers to be conscientious of the fact that they are part of the social world in which they study (Hammersley & Atkinson, 1995). Reflexivity is about “reflecting on power – a researcher’s power to perceive, interpret, and communicate about others” (Frisby, Reid, Millar, & Hoeber, 2005, p. 381). Throughout
the research process, I took reflexive notes where I recorded my experiences of each interview, initial reactions, as well as my thoughts, emotions, and ideas as they evolved. By reflecting upon my personal location in terms of my student "researcher" status as well as my gender and health I aspire to “make explicit the power relations and the exercise of power in the research process” (Ramazanoglu & Holland, 2002, p. 118).

I recognized that issues of power were inherent throughout the research process of the present study. I was continually negotiating my position as student researcher or empathetic listener (Hutchinson & Wilson, 1994). Fontana and Frey (2000) noted that although “close rapport” (p. 655) with participants “opens the doors to more informed research” (p. 655), the researcher may risk losing their distance and objectivity and consequently relinquish their academic role. With this in mind, I presented myself as an “acceptable stranger” (Hurd Clarke, 2003, p. 731) where I attempted to make respondents feel more relaxed about sharing personal information with me since I would not hold any “power or social control” (Hurd Clarke, 2003, p. 731) over them and whatever they told me would remain confidential (Cotterill, 1992).

Furthermore, from the beginning of our researcher-researched relationship I made a conscious effort to be attentive and respectful about what they were sharing with me and about their diverse health abilities. By probing and following up issues that the participants raised with further exploratory and clarification questions, I hoped to convey my genuine interest in their personal experiences as well as encouraged participants to provide further details of their experiences (Taylor & Bogdan, 1998). Taylor and Bogdan (1998) recommended that the interviewer should continue to probe for clarification until they are certain “what exactly the informant means” (Taylor &
Bogdan, 1998). My overall goal was to create a nonjudgmental environment where the participants felt safe to share whatever they felt was important.

In fact, I was surprised by how happily participants met with me and shared details regarding their personal experiences since the methodology handbooks I referred to tended to suggest that the processes of recruiting participants and gaining trust and rapport were challenging (Fontana & Frey, 2000; Wenger, 2003). I suspected that since the older adults I interviewed had participated in stage two of the interdisciplinary study at GF Strong, they were already familiar with participating in research studies, had some idea as to what I would expect of them as research participants, and had established trust with the principle investigators overseeing the research. I also agree with Atkinson and Silverman’s (1997) assertion that we live in an “interview society” (p. 305) such that norms surrounding the participants’ and researchers’ roles have evolved to the point where they are institutionalized and “known and shared” (p. 305), so that training and practice are no longer required (Atkinson & Silverman, 1997; Fontana & Frey, 2000). Hence, participants’ openness with me can be attributed not only to the rapport I established and the respect I showed them but also, perhaps, to the older women and men’s familiarity with the interview process.

At the same time, gender also shaped my interactions and relationships with my male and female participants. Although, there are some important differences that distinguish individual women from one another, including race, class, sexuality, abilities, and physical conditions, and make no two women’s experiences identical, there are also some shared characteristics of western women. These include forming internalized negative notions of female bodies, having less earning power compared to
men for equal education in the work force, doing more than half of the domestic work, and needing the services of traditional patriarchal professions (i.e. doctors, politicians, school or university administrators) (Reinharz & Chase, 2003). As a result of these shared experiences, I found establishing a rapport with the older women relatively easy. Additionally, I had interview experience with older women as a result of having worked as a research assistant for my graduate supervisor. This experience served to contribute to my level of confidence in my ability to facilitate my own interviews with older women.

In contrast, conducting interviews with older men was a new experience. As a young, white, female graduate student, I did not know what to expect and was concerned that my data collection would be potentially hindered not only by my youth but also my gender. The possibility existed that the older men would not feel comfortable telling me certain details about their experiences and would display certain norms of masculinity or of “being a man” (Schwalbe & Wolkomir, 2003, p. 57) such as exertion of power, control, autonomy, rationality, knowledge and resistance to answering my questions (Lee, 1997; Pini, 2005; Schwalbe & Wolkomir, 2003). This possibility initially became evident to me while assisting with the quantitative data collection for stage two of the interdisciplinary study at GF Strong Hospital. While the women were more willing to share details of their personal challenges of dressing and taking care of their personal hygiene, the men kept their replies to simply, “yes” or “no”, without offering further explanation. Upon reflection, I suspected that the men who participated in this stage of the study were mindful of the tenets of the scientific method and were more rehearsed with expectations during testing, since the majority of the
male participants in the study were from high socio-economic backgrounds, had achieved high levels of education, and likely had been part of a research study either as a researcher or participant. When it came to interviewing the older men for the third stage of the research, although they provided rich details and stories of their personal health and experiences of participating in physical activity and exercise, there were occasions when I recognized my gender to be a factor in our interviewer-interviewee relationship. For example, a male participant told me how he, along with many of the men in the Prisoner of War Camps during World War II, had suffered from vitamin deficiencies that resulted in blue patches all over his body, including his testicles. Before he described this in further detail to me, he asked if I was a nurse. From this question, I sensed that he might have been more comfortable with sharing these personal details with a woman in a health service role rather than a young female graduate student.

Furthermore, I learned after conducting a couple of interviews that it was important for me to have a list of the chronic conditions that the participants had previously reported during the original telephone screening, since during the interviews the participants, particularly the men, often denied having any chronic conditions. Although, this may be attributed to recall bias, where there is intentional or unintentional differential recall (and thus reporting) of information (Grimes & Schulz, 2002) it is also possible that the male participants did not wish to appear weak or unmanly during the interview (Schwalbe & Wolkomir, 2003). Schwalbe and Wolkomir (2003) have explained that women may be “a dangerous audience” (p. 61) for men, who may, in turn, minimize emotional expressiveness so as not to appear weak (Schwalbe &
Wolkomir, 2003, pp. 57-62). Nevertheless, several of the men and women I interviewed commented that the interview had a positive effect on them since they had never taken time to consider their life-long experiences of their health and participating in physical activity and/or exercise. Some commented that they had never talked so much about themselves and that the interview had been an unexpected occasion of personal reflection that was both personally insightful and gratifying.

Despite having worked as a personal trainer with older men and women who had multiple chronic conditions, I did not foresee the impact that interviewing and transcribing would have on me personally. It was not uncommon for the participants to become sad or teary when they were discussing their multiple chronic conditions and how their lives had changed since being diagnosed with the multiple chronic conditions. At these times, I would remain composed and supportive, offering to get a tissue and acknowledging how difficult it must be for them. As Morse and Field (1995) have discussed, qualitative in-depth interviews can be an intense experience, especially if the subject under investigation has to do with illness experiences (Morse & Field, 1995). The interviews I conducted were intense experiences. The participants sometimes commented that it was the first time they had considered how the multiple chronic conditions had impacted their lives and their ability to participate in activities beyond exercise and fitness.

Transcribing the interviews proved, at times, to be more emotionally difficult than I had anticipated. The transcribing process has often been overlooked as an emotionally challenging experience (Dickson-Swift, James, Kippen, & Liamputtong, 2007). When transcribing, you are “absorbing the voices and stories of research”
(Warr, 2004, p. 586). My feelings were comparable to the researcher who reported in the Dickson-Swift, James, Kippen, and Liamputtong (2007) study that in the actual “interview you hear what they [the participants] say but when you listen again it’s like, like you really hear it and you have time to take it in more” (Dickson-Swift et al., 2007, p. 337). It was during the process of transcribing where I experienced internal ambivalence (Hurd Clarke, 2003) regarding my own opposing thoughts and feelings. Similar to how Hurd Clarke (2003) described her experience, I experienced an “inner tension between wanting to understand the definitions of the situation” (p. 720) of the older women and men in the study while at the same time struggling with a “sense of fear” (p. 720) and alarm at how the aging process might affect my own sense of self and those whom I loved. Hearing the participants’ recorded voices and sobs as they told me their experiences was difficult. At times during transcribing, I would have to break my focus as I found myself deeply emotional and affected by their experiences of living with multiple chronic conditions. Nevertheless, participant interviews revealed important findings regarding the barriers and motivators as well as the patterns of physical activity and exercise among older adults with multiple chronic conditions and will be presented in the following chapter.
Table 1 - Participant Demographic Characteristics

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Table 2 - Codebook

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<td>Fun / Enjoyment*</td>
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Experiences of Multiple Chronic Conditions

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Chapter Four: Findings

In this chapter, I will address each of my three research questions which were concerned with the barriers to and the motivators of and patterns of physical activity and exercise among older adults with multiple chronic conditions. At the time of the interview, one of the ten women and eight of the ten men were physically active. My findings reveal that (1) the barriers to physical activity were encountered similarly among the participants but were negotiated differently, (2) the motivators to physical activity and/or exercise were encountered and negotiated differently, and (3) the pattern of participation in physical activity and/or exercise was diverse among the women and men.

Barriers to Physical Activity

During the in-depth interviews, the women and men who were physically active and the women and men who were physically inactive identified and discussed the similar types of barriers to participating in physical activity or exercise. Specifically, the women and men with multiple chronic conditions reported 19 barriers to participating in physical activity and/or exercise, which are subsumed under the following categories: physical barriers, psychological barriers, and social and environmental barriers.

Physical Barriers

All of the participants reported that the physical symptoms of their multiple chronic conditions were the most important barriers to participating in physical activity and/or exercise. These physical symptoms consisted of pain/discomfort, fatigue/dizziness, weakness/lack of strength, shortness of breath, and poor balance.
Pain or Discomfort

Pain or discomfort was the most frequently cited physical barrier that influenced the women and men’s ability to participate in physical activity or exercise. Eight of the women (seven physically inactive and one active) and seven of the men (two physically inactive and five active) talked about their experiences of pain and how this made it difficult and sometimes impossible to exercise or engage in physical activity. Among the women, Maple, a 68 year old woman with 16 chronic conditions discussed how pain made it unbearable for her to walk:

I got spinal stenosis about four, five years ago and it has continued to get progressively worse. At first, I was able to go out walking around with just my walker. But then it started to become painful when I was standing still. I’d get this pain, it felt like knives cutting right through my leg. So I had to sit down right away. It kept getting worse when I was walking. Then it started hurting when I was sitting down, it keeps getting worse. So I’m practically living on Tylenol three’s. I take about eight or ten a day, for the pain. They take the edge off, the sharp edge off, but it aches all the time like knives cutting through.

Maple went on to describe how the intense physical pain she experienced on a daily basis made it difficult to engage in all types of activities, ranging from going to doctors’ appointments, reading, watching television, to preparing meals, bathing, and sleeping. Although Maple’s pain experience was unique due to her personal multiple chronic conditions, especially spinal stenosis, many of the men and women made

1 To maintain confidentiality, each participant was given a pseudonym.

Specifically, participants were given tree names, which are commonly associated with qualities such as strength and longevity.
similar comments about their experiences of pain and concomitant restrictions to their
daily and social activities. For example, Hemlock a 71 year old man with 10 chronic
conditions, discussed how a painful shoulder and lower back prevented him from
playing certain sport activities that he once enjoyed.

There’s always the shoulders and my lower back to consider. I can’t lift
anything. I can’t play badminton and table tennis. Table tennis I use to
play sometimes because it is not overhead but it’s painful now too. Any
overhead game, I can’t play.

Hemlock also mentioned that he had to decline invitations from friends to play golf and
squash because he was not able to swing the club or racquet without pain.

**Fatigue**

Fatigue was another barrier that was reported by six of the men (two physically
inactive and four physically active) and eight of the women (all physically inactive).

Dogwood, an 83 year old man with 11 chronic conditions, talked about his experiences
of being tired and how it influenced activities he wanted to accomplish:

I want to get back to playing. I’ve got a book to write yet, I’ve got records
to make yet, I’ve got music to compose. The trouble is until too very
recently if I sit at the table or something, especially at night with artificial
light, I get sleepy and if I get really sleepy I just go to bed or lay down at
least to rest because I know that my body says, “I’ve got to sleep” or that I
didn’t get enough, even though I’ve been in bed for hours and hours.
Sometimes I’m in bed for 12, 15 hours, but I’m not sleeping. I haven’t had
enough sleep. And if I don’t have to get up for anybody coming or
anything, I say, “To hell with it, I have no one to answer to!” So I lay here
and my legs are hurting anyway, so I just lay out alone. Next thing I know
it’s in the afternoon and I don’t know what time it is.
Fir an 87 year old man with 10 chronic conditions similarly told me, “At my age, I’m not going to engage in sports, I’m not going to go swimming. I suppose I should, but I’m really too tired.”

Among the women, Sycamore, a 76 year old woman with 11 chronic conditions talked about the severe fatigue she experienced while doing routine tasks.

The muscles, the body, the upper body felt really tired and then sometimes the whole body would feel like it was pushing into the ground. I was being pushed in the ground [panic in her voice] I was just weighed down ... And I was driving, yeah. And I didn’t think anything but then this pain would come on after I’d done two or three things which I always did when I went out cause I got so tired and I began to have really bad pressure pain and it would come right across here [showing across her chest]. And feel absolutely, you know just like I could hardly get around, walk around.

Another woman, Cherry an 88 year old woman with 11 chronic diseases, explained how she had stopped participating in physical activities because she was too tired.

I am very tired and I have to sit down or sometimes I even have to lay down [coughs] ... and ah well just physical tiredness ah I cannot I cannot function. ... Well physically, I am very tired.

Weakness or a Lack of Strength

Five women (all physically inactive) and five men (all physically active) talked about experiences of weakness in general and, sometimes specifically, in their arms and legs when performing both physical activity, exercise, and non-exercise types of activities. The following quote touches on all three of the most common barriers to participation in physical activity and/or exercise. Spruce, an 80 year old woman with 12
chronic conditions described how pain or soreness, fatigue, and not having enough strength limited her engagement in exercise:

Oh real physical exercise, it’s hard, I’m exhausted after five minutes. I mean if I had to really get on this floor, which I use to at my old house, and I would exercise very hard. You know, arms and legs with my dumbbells. I got up to five pounds. But I’ll tell you, I would lie there 10 minutes or 15 minutes afterwards because I would be so exhausted. I’m just too old for that; I can’t do that anymore. I just don’t have the strength to do that. I don’t have the strength in my arms even to lift those dumbbells.

Similarly, the men talked about not having the strength to engage in physical activity like they had in the past. For example, Alder a 79 year old man who survived a stroke and had 11 chronic conditions: “I’m much weaker, less capable. There are certain things you can do but you have to recognize all your inability first and then try to do what you can, in whatever way you can.” Alder recognized the lack of physical strength but continued to carry out activities, including participation in regular exercises daily.

Shortness of Breath

Seven of the men and two of the women talked about how they experienced shortness of breath when they tried to engage in physical activity and/or exercise. For example, Cedar, an 87 year-old man with eight chronic conditions explained:

Ah, I used to be a great walker. I could walk from here to downtown, you know, down to the Bay or whatever and walk back. I can’t walk now because of my shortness of breath. That’s what bothers me most … I walk one block and then “ha ha ha” [he takes deep breathes like a pant] you know that sort of thing.
For the men and women, shortness of breath was a key barrier to participating in physical activity and exercise. One of the women, Cherry, who was 88 years of age and had 11 chronic conditions had this to say:

Well physically I am very tired and sometimes I get out of breath because of my emphysema. ... My ah my ah organisms fight back on me because I cannot move very fast … I have discomfort in my body and I get cramps in my legs … if you cannot breathe well then you cannot work well. You see the breathing is very very important. And if the bronchi’s are constrained then that stops you from physical activities…. If you cannot breathe and get sufficient amounts of oxygen to the muscles, then it is difficult to engage in physical activity or exercise.

Poor Balance

An influential barrier to physical activity and exercise reported by six of the women and six of the men was poor balance. Both the women and men talked about having poor balance in similar ways. One woman, Lilac, who was 84 years old with 11 chronic illnesses explained:

And as a result of the no balance, in the month of May I have had five falls in this apartment. So if I didn’t use a walker indoors and ah at moment’s distraction … I was down. I had to concentrate so much on my walking and what I was doing. And I went to this door behind me [she is referring to a sliding glass door leading onto her balcony] one day, it was extremely windy and I was just putting out a bag of garage because I have a lady who comes to work for me and she takes care of it. And there was a sudden gust of wind and I mean it was a very definite gust, I went down. And I was wedged behind here [between the glass door and her large lazy boy chair] and I couldn’t move. And I was on my knees and it took the paramedics about half an hour to come because they had more urgent calls.

Similarly, Holly, a 69 year-old woman with 18 chronic illnesses described the effects of falling due to poor balance in this way:
Now I can’t walk … this leg of mine, with the injury from the fall and I’ve got other problems. I’ve got back and hip injuries, plus this recent fall injury. I also fell and hit the wall just outside my apartment. I’m thinking now how it is all related with the initial fall that made it extra sore. So it’s very painful, very painful to walk on.

Redwood, a 71 year-old man with 14 chronic conditions, described how he had to stop participating in Dragon Boat racing because of poor balance that he experienced from having low blood pressure:

Well the low blood pressure ah certainly interfered with my Dragon Boating, I had to quit the Dragon Boat because in the competition, I practically fell overboard. I lost my balance, and in fact we had to get somebody to fill in for me, I couldn’t continue the Dragon Boating.

During the interview the women and men recognized, sometimes for the first time, the ways in which multiple chronic conditions had manifested as physical symptoms. For example, this quote by Fir, an 87 year-old man with 12 chronic illnesses revealed his personal physical limitations to participating in physical activity and/or exercise. He explained:

And my balance is something, there is something I haven’t mentioned before. My balance is not really that good. Even when I walk, I sort of stagger. And I had a couple of bad incidences during the past year where I’ve fallen without any warning beforehand. And sometimes I come close to falling but sort of catch myself. So balance has become something an issue.

Psychological Barrier

Fear

In addition to physical barriers, some of the participants identified fear as a psychological barrier to engaging in physical activity and/or exercise. Specifically, six of the women and two of the men, all of whom were not physically active, made
statements regarding their fear of falling, fear of pain, fear of “overdoing it”, and fear of breaking bones.

For five of the six women and one of the men, the fear of engaging in physical activity and exercise hinged on their fear of falling while carrying out tasks of daily living. Cherry, an 88 year old woman with 16 chronic conditions described her fear of falling down the stairs to her basement while doing laundry:

I am cautious. I am very cautious. I do it [go downstairs to do her laundry] but you cannot predict with age if you’re going to fall or not fall. Many of my friends have fallen and they broken their wrists or legs and I want to prevent that.

Lilac, an 84 year old woman with 11 chronic conditions expressed her constant fear of falling after having fallen five times within the past few months. She asserted:

I live with fear of falling. Since my falls I have been very afraid to go out. I am afraid to fall again. I find that if I am so vulnerable at home, how much more am I in the outdoors.

Maple, a 68 year-old woman with 15 chronic diseases also expressed her fear of falling:

It is scary. Falling is the worst for me. Because I know I can’t get up, I know if I fall on my side, I can’t even get up to sitting by myself when I fall forward.

Similarly, Dogwood an 83 year old man with 11 chronic conditions described an experience of losing his balance outside his apartment, which left him frightened:

I didn’t have this [referring to his emergency alert] on and I was in the hallway there with my canes. Anyway for some reason I felt myself falling, I don’t know if I tripped or what? And I grabbed something and I pulled off these boxes, you know, these milk carton, that were there and they went all over the floor. I ended up lying on the floor with the milk cartons on top of me. And my legs, I couldn’t move. My two canes were, they were somewhere? Well they were under me and well I couldn’t get up. It took me quite a while to get out of that position with my legs bent and
everything. It was hours and hours. I finally came here [to his apartment], inching along on my bum. I made it down the hallway and onto the bed. Finally at two in the morning I got up out of bed and remembered what happened. Well that kind of scared me. I thought I better look into this.

Participants also had fear of experiencing pain and discomfort related to multiple chronic conditions. For example, Sycamore, a 76 year-old woman with 16 chronic illnesses described her fear not only of falling but also related to going out to do errands or attending doctors’ appointments because of the potential pain she would often have in her chest and abdomen:

I’m afraid I might get pain when I go out. I’m afraid to walk too far. I’m afraid of falling because of this foot. Actually I did fall down. I got up from here [pointing to her living room floor] one day and I caught my foot somehow or another and I went like this [showing me how she fell] and I ended up between these two things. So that really frightened me.

Another man, Mulberry, expressed his fears, although more subtly, of “overdoing-it” or making his physical condition worse if he were to participate in physical activity and/or exercise. Mulberry, who was 75 years old with 14 chronic conditions explained:

See why physical activity I just don’t do, I don’t want to ah disrupt things by if I do something real you know, maybe I’ll hurt that kidney. Or when you do heavy physical activity it gets hard to breathe and have to stop.

Although, Mulberry did not attribute his physical inactivity explicitly to “fear”, his statement revealed his concern for potentially “overdoing it” and making his physical condition worse by engaging in physical activity.

Some of the participants also indicated that they were fearful of breaking bones by engaging in physical activity. For example, a 70 year-old woman, Yew, with eight
chronic conditions including osteoporosis and a history of bone fractures described her fears about participating in physical activity and exercise. She stated:

I don’t think [you] should do exercise when you are hurting. You shouldn’t do it, you know, because you will get worse. My Doctor... said I have to be careful otherwise if I fall or whatever it is [I'm doing], you know, I will easily break bones. I mean if one day I become cripple, I don’t have anyone to help me. Not from my friend, from family, or from anyone, who would help me? So I don’t think I am not going to take the chance because I think about the future. I’d be helpless, you know, if I do something and become cripple.

This woman highlighted a very real fear of the possible consequences of breaking bones if she were to participate in physical activity and exercise.

Social and Environmental Barriers

At the same time, a variety of social and environmental factors delimited the physical activity of many of the adults in the study. Each of these are discussed below.

Age and Ageism

To begin, age was reported by seven of the men (including both the physically inactive and physically active men) and six of the physically inactive women as an influential limiting factor to participation. These individuals ranged from 70 years to 87 years of age, with four of the six women and three men of the seven men being in the eighth decade of life. Particularly for four men, their age was a central barrier or limiting factor to engaging in physical activity and/or exercise, even more so than the physical symptoms associated with their health conditions. Mulberry expressed how his age was the main barrier to participation in physical activity and/or exercise. He asserted:
I say I'm 75 I don't have to do it physical activity. I can't just do it anymore, I'm 75 and people my age just don't have physical exercises, you know. Like it's our time to sit back and watch TV, and take it easy.

Similarly, some of the men who were physically active attributed their age as a factor that limited their level of participation in physical activity and/or exercise. Oak, an 86 year old man with 11 chronic conditions explained how certain exercises were not appropriate for someone of his age. He said, “No, I do not do push-ups anymore. I used to do push-ups when I was younger, now I feel that ah at my age, push-up are a little too strenuous for my heart.” Also, Hemlock a 72 year old man with 10 chronic conditions explained how he believed that at his age, he needed to adjust his physical activity.

My body has always been quite flexible. I was never a very rigid person. So I still do, everyday, exercises. But I have with age - I'm 72 now - so I do light exercises so I don't strain myself. I do them slowly slowly.

Six of the women expressed comparable sentiments regarding participation at their “age”. For example, Cherry, an 88 year old women with 16 chronic conditions explained how participation in physical activity and exercise was influenced not only by her health conditions, which she attributed to her age, but also simply by her age:

My health problems are mostly related to my age. So I have all the age related problems. And it does change my life because the problems are taking away my independence, I am not as mobile I used to be ... and also because of my age I cannot do any physical activity like a young person can do. Yes surely, surely, by my age you are restricted and cannot do physical activity.

Thus while Cherry acknowledged that her health was a factor, she argued that physical activity became more difficult for all older adults over time.
Lack of Social Support

Reflecting the extant research which suggests that marital status is an important determinant of physical activity, lack of social support or not having a companion / expert to participate in physical activity and/or exercise with was an important barrier among the physically inactive women. Seven of the physically inactive women discussed how they did not have someone to exercise or participate in physical activity with. For example, Elm a 78 year old woman who was widowed and had 14 chronic conditions, talked about not having someone to participate with as a fundamental barrier to participating in physical activity and/or exercise. She speculated:

If I had had someone that I knew and liked … someone with like interests, I would certainly try to walk slowly. I would try to first walk on a flat [surface], then increase the length of ... If I had someone to walk with I would walk, I would walk around here [her neighbourhood], I mean there’s pleasant places around here that I could walk. But I couldn’t go very far. And you know, if someone came to walk with me, like they did after my surgery, within 15 minutes that would it, I couldn’t do anymore.

Furthermore, Elm reflected how she used to walk with her husband while he was still alive. She said:

In Sechelt, you see, D [her husband] and I for years walked. He had to walk [for his heart]. It was one of the big things we did. We used to walk to Davis Bay and back. You could walk quite far and there were benches all the way along so you could sit down if you felt like it.

Another woman, Lilac (84 years of age, 11 chronic conditions), described how she would do a weight training circuit at her neighbourhood community centre three times a week and then meet up afterwards with her husband to go for a walk. However, after her husband’s death she stopped going to do the circuit. She stated, “Ah well I just
didn’t have the energy and I didn’t have the heart to go back, I just lost interest. I lost interest in exercising." Sycamore (76 years of age, 16 chronic conditions), who had never been married, became emotional when she described how her lack of a companion prohibited her from being physically active:

> If I had a friend to go with… like last year a friend came but she could walk faster than I could. I couldn’t keep up to her. I thought I was more, you know, able to, surely I could walk [sniffles] and go with a friend. But as I say I couldn’t, I could hardly walk [crying].

Notably, all seven of the women who mentioned not having a companion to participate with were alone, either widowed, divorced, or had never been married. Similarly, the two men, who were physically inactive were also alone as one man had never been married and the other man was widowed. Interestingly, for these two men and most of the seven women, they were estranged or lived far distances from their siblings, children, and other family members. Thus, they had very little contact, in most cases only by telephone, with other people.

Interestingly, a few of the women also described how having someone, like an assistant, to schedule and plan physical activity would facilitate participation. Elm a 78 year old woman with 14 chronic conditions discussed this theme. Elm described her “ideal” circumstances of participating in physical activity in this way:

> I need someone else to organize a physical activity regime for me. As I say, “I need legs; I need a broker.” I need someone who will set up something and say, “Come let’s try this”. It would need to be during the day and needs to be flexible. And it needs to be with someone who I feel compatible with.

Elm also discussed her prior experience working with an Occupational Therapist. She
Described:

When I had the pancreatitis, the health unit over here was very good. I guess it was an Occupational Therapist that came. She was very good. But everything she gave me to do, I could do easily, it was those sorts of chair exercise. And she and I went for a walk. But because I knew who, I got to know her and I liked her, and she obviously was very skilled at what she was doing so that was fine. I was relaxed and able to walk. I went around a whole block with her. Because I felt confident that there was someone with me who I felt compatible with and if anything happened, there was someone there.

Physician Recommendations

In addition, one woman and three men reported that their physicians or other medical professionals had warned them to limit or not participate in physical activity and/or exercise due to their health conditions. For example, Yew, a 70 year old woman with eight chronic conditions, explained how her doctor warned her to be careful:

Yeah my doctor said I had to be careful otherwise if I fall or whatever it is, you know, I will easy have broken bones … I have arthritis and osteoporosis which is like a disease, a sickness, you know. So I cannot say I want to do exercise because that will make me worse you know so I don’t. I am so fragile even she told me, “You don’t take heavy chore in the house, maybe you should talk to your husband and have somebody to do clean up for you.” And so, I’m not supposed to be lifting [anything] very heavy. You could break your bones.

Transportation

For two of the men and two of the women, transportation was an “inconvenience”. Fir, an 87 year old man with 12 chronic conditions explained how although he no longer drove, he could ask, but reluctantly, his daughter to take him to an exercise facility.
[Getting to a place to exercise wouldn’t be] a problem, maybe an inconvenience, but not a problem… it is an independence sort of thing. Now this would make me somewhat reluctant to ask my daughter on a regular basis but I would.

Similarly, another man (who currently had access to exercise equipment in his home) and two women (who were physically inactive) would have to ask spouses or other family members to take them to a place to exercise and/or participate in physical activity.

In contrast, for six women and one man transportation was a critical barrier to participating in physical activity and/or exercise since they did not drive, had no spouse, family member, or friend to ask for assistance, and/or had mobility devices that were difficult to transport on buses or in taxis. For example, Cherry (88 years of age, 16 chronic conditions) had recently been in an automobile accident and no longer had a car to drive, which prevented her from going swimming. Cherry explained:

I am immobile. Since I had a little accident with my car, I am, I lost completely my independence. Until then I could go shopping, I could go to doctors, I could go for my hair, and especially important, I could do some exercises, I could go swimming. Now all that is absolutely impossible.

When asked about other possible means of transportation for getting to and from the swimming pool, she asserted:

I could take a taxi but they are very unpredictable regarding time. I have to wait for taxi or wait for the bus and it’s very inconvenient to take the bus to go swimming. It’s not comfortable to wait for the bus after swimming when you’re wet and cold.
Cherry, along with the other participants, also mentioned that the cost of taking a taxi, even with the taxi saver pass, was concern for older people with limited incomes. Furthermore, for some of the inactive women and one of the men, transportation to appointments, stores, and other places was a serious barrier in their daily lives. For example, Maple (68 years of age, 15 chronic conditions) explained her experience of accessing transportation:

Taking a taxi is just about impossible because I have to get up and down in the taxi and the seats are low. I have to have the taxi driver pull me in and out of there and all of them aren't that nice and want to do that. And I have to take my walker with me and often it won't fit in the taxi. And then I can't walk very far. When I go to my eye doctor, it's on a street where I can't go on my scooter like I can to see my doctor. My doctor's office is here close to where I live so I can go on my scooter to see him and to the [medical] lab.

Similarly, Sycamore (76 years of age, 16 chronic conditions) expressed how transportation was a barrier to going anywhere. She stated:

Transportation is a problem. This is where I find I'm staying indoors... I don't go out because getting on the bus and being on the bus is a problem. I'm unsteady, I have to hang on and the bus doesn't go slow enough for you to get a hold of the handle... so I don't go out. It's like I'm stuck, I'm stuck here.

Motivators to Physical Activity

In this section, I will enumerate the facilitators of physical activity expressed by the study participants. Those who were physically active were asked to reflect on what fostered their current exercise behavior and what might make them even more physically active. Those who were not physically active were asked to consider potential motivators to participating in physical activity or exercise at some point in the future. The women and men reported 19 motivators to participating in physical activity
and/or exercise, which were categorized according to the following themes: physical motivators, psychological motivators, and social motivators.

**Physical Motivators**

The participants reported two physical motivators: improving their health and preventing additional chronic conditions.

**Improving Health**

Nine of the men and seven of the women said that improving or maintaining their health was an important motivator to participating in physical activity and/or exercise, especially among those participants currently participating in physical activity and/or exercise. The participants who were physically active discussed improving their health not only in terms of overall physical health improvements but also with respect to alleviation of specific physical symptoms. For example, Redwood (71 years of age, 14 chronic conditions) explained:

> I have some osteoarthritis, aches and pains in my back and knee and shoulder. But if I exercise regularly, if I do regular stretching exercises as well as the strength weight training, then I’ve got it pretty well under control…I’ve been very diligent about exercising. It really really does help.

The physically active participants indicated that health care professionals, newspapers, and the internet had been important sources of information about the overall health benefits of physical exercise. One physically active man, Cedar (87 years of age, eight chronic conditions) had this to say:

> Well my doctor, the cardiologist, and the articles in the paper, if you read, many articles as you know, say “You gotta keep active.” The Parkinson’s people say, “activity is very important. Keep moving, keep active”. So that’s the motivation. Otherwise, I might show increasing ah I was going to say bad results of these chronic conditions, yeah I would deteriorate.
I’m not aiming for hundred you know, but ah I wouldn’t mind hitting ninety, it’s only two more years.

Redwood (71 years of age, 14 chronic conditions) closely reiterated Cedar’s sentiments:

Well pretty much everybody says if you don’t use it you lose it. Everybody when talking about cardiovascular problems say they recommend exercise as a panacea for almost everything - arthritis, high blood pressure. I am sure my participation in physical activity has helped my mobility, my flexibility and my strength.

Furthermore, participants argued that it was important to balance the body’s physical needs to move with the risk of causing unnecessary harm. Stating that “you have to discipline your system to be healthy,” Hemlock (71 years of age, 10 chronic conditions) asserted:

I think it is very important to be healthy. So you have to follow certain rules, eat less, be happy, don’t think unnecessary things, and do exercises. I mean don’t overdo but do certain, a few exercises about 45 minutes and hour a day you’ll be good. Not like these people who do three, four hours of playing this or that, or those who try to make more muscles, they are in a different ballgame. For me, I’m not in that; I just want to lead a healthy life.

Oak (86 years of age, 11 chronic conditions) emphasized the importance of not pushing the body beyond reasonable limits:

I was an athlete all my life so I know to keep-off any exercise that was likely to be harmful for myself. And never abuse your body that is my motto. I mean you can exercise your body but you should not drive it because if you drive your body you may do yourself harm. People who run a 10,000 miles, 10,000 meters, I think that in the long run they will pay for it with their knees and their heart. It’s ambitious, it sounds very nice to run but it’s like when you play basketball, if you play for the whole hour, you’ll come off with heart palpating, that’s too, too much.
Prevention of Additional Chronic Conditions

In addition to expressing the need to improve their health, many of the physically active individuals argued that it was important to prevent additional chronic conditions and further "deterioration" of physical health by performing physical activity and/or exercise. Alder (76 years of age, 11 chronic conditions) explained:

I choose the few [exercises] that I can manage without too much strength. Because by doing it regularly, it gives my body a chance to stay as it is and not deteriorate, but rather to improve.

Cedar said that he was motivated to continue to exercise, "Because I feel that if I didn’t do any [exercise] that I would vegetate, I would deteriorate".

It is important to acknowledge that physical activity was only one aspect of what participants identified as means of improving their health, preventing further health deterioration and chronic conditions. Participants commonly stated that a healthy lifestyle also included attention to one’s diet through the control of animal fats, sugar, salt, and alcohol. For example, Birch (75 years of age, nine chronic conditions) described how, in addition to physical activity, he and his wife were conscientious of their diet. He explained:

I’ve always been physically active and I know there are certain things you have to do to look after your body so you can do activity. And my wife’s a good cook and we stray once in a while, but she always cooks good meals. Like healthy ones, with salad and she makes her own salad dressing usually it is good and doesn’t have a lot of calories. We don’t have potatoes very often, we have meat not that often, but we have fish. And even when she is making desserts, she always tries to make it with berries or doing something that is non-fatting and use all that stuff like Becel and Mrs. Dash instead of butter and salt or pepper, so different things like that.
Some of the participants also described taking vitamin supplements that they believed improved their health. For example, Redwood (71 years of age, 14 chronic conditions) reported the following:

I believe that [exercise] really really does help. It also could be the pills that I am taking. I am taking glucosamine, chondroitin, and a new thing called MSM and it could be that as well as that is contributing to my improvement in mobility.

Similarly, Spruce an 80 year old woman with 12 chronic conditions explained that in addition to receiving treatments from a physiotherapist she took supplements. She explained, “I’ve got a shoulder that is always so bad, so I take Glucosamine. It helps, it really helps.” Indeed, the participants often described how they had personally benefitted from their attention to the levels of physical activity as well as to their diet. Moreover, they described how they tried to encourage their friends to embrace a similar healthy lifestyle, as conveyed by Cedar (87 years of age, eight chronic conditions):

My friend, he says his legs don’t carry him. His legs bother him that he can’t walk anymore. And probably, you know, there is some truth in that but I say, “You have to try. If you want to walk, you have to try; you have to overcome some disability, some of your health barriers. It’s good to keep active.” I suggest that to everybody.

At the same time, those who were not active were aware of the health benefits of physical activity and/or exercise. For some, the inability to acquire these benefits was a source of consternation. Cherry, an 88 year old woman with 11 chronic conditions, expressed regret that she was not able to be more physically active:

I feel terribly – terribly! Because I was in shape when I was going swimming. Swimming kept me in shape. Chronic diseases come naturally with age, just the same as a piece of cloth that deteriorates with age, the same with the organism, the body is deteriorating with age. So
you cannot change that, but you can extend your life, you can extend it. The life expectancy can be extended, it’s true.

Cherry further explained that the possibility of extending her life motivated her to try and find a way to participate in swimming and exercise, even though lack of transportation currently precluded her from doing the former activity.

**Psychological Motivators**

In addition to the physical benefits that motivated the adults to participate in physical activity and/or exercise, the men and the woman discussed being motivated by the psychological benefits of participating regularly in physical activity and/or exercise including improved memory and emotional well-being. Apple, the one woman who was physically active, stated “I discovered a side effect of being fit; it’s so good for you mentally as well as physically.” Apple stated that she was surprised to discover that she not only experienced physical benefits from exercising, but improved memory, which in turn motivated her further to continue to participate. For Apple, exercise was akin to completing puzzles, an activity participants like Alder described using regularly to maintain a positive cognitive function and to improve his “mind”.

As well as cognitive benefits, some participants stated that they experienced improved mood as a result of physical activity. For example, Oak stated:

Sometimes when I get up, I feel sleepy and lazy or not inclined to do exercises but by the time I finish exercises I feel picked-up and healthy and much more alert so that that in itself is a reward. But physical exercise just gives me a tone, gives me a kind of alertness in my work and also keeps my body fit.

Birch explained how he benefited emotionally from participating regularly in exercise.
I guess I like to feel good. When you exercise and do things, that makes you feel good. It makes you want to get up and go! I want to do things, I feel happier when I am doing things and I think that’s the thing in life. As long as you keep doing as much exercise and activity as you can, then you will feel better and feel better doing them.

Social Motivators

The men and women also described a number of social factors that motivated them to participate in physical activity and/or exercise, including having a companion, social connections and friendships with others, and having fun.

Having a Companion

Having a companion stood out as an important facilitator of physical activity especially among the participants who were not currently participating in physical activity and/or exercise. For example, in contrast to the majority of the women for whom lack of a partner was a barrier, the one physically active woman, Apple, discussed how having a friend facilitated her own participation in physical activity. She described:

I did two mega rides, bike rides last year. I did them with this friend that I met through Dragon Boating. She turned out to be very compatible. And she is like an iron woman. She is my age … and she has stamina that makes me look like a wimp. So she got me to go on those two mega rides. We biked up to Harrison Hot Springs on this Rotary Club fundraiser and then we signed up to do the BC, the BC Health thing and that darn near killed me. It was a 100 kilometers.

Apple, who was married, further described how her husband had been an important companion during physical activity:

Over the years, my husband and I biked together. Sundays we often cycle together and before I started Dragon Boating five – six years ago, I biked almost every other day by myself. I had kids in Burnaby and I would go see them and I had niece in Richmond, so you know… I would bike there. I had a radio on my handle bars and I would cycle by myself but it’s
more incentive when you have a date to go with someone with. You kind of spur one another on.

Some of the now physically inactive women mentioned isolated prior experiences of having worked with physiotherapists, social workers, or nurses, which had helped to motivate them to engage in physical activity or exercise. An example of this issue was previously mentioned. Specifically, Elm expressed to an Occupational Therapist how she was nervous performing exercises or physical activities alone since she often experienced angina, shortness of breath, and dizziness. However, as she stated in the above quote, she described how the presence of an expert eased her anxiety.

Similarly, the men’s marital status was an important facilitator of engagement in physical activity. Six of the eight physically active men were married while the other two men were in romantic relationships. Of these eight men, six talked about how their wives or partners also participated regularly in physical activity and/or exercise as well as how they occasionally participated together in a variety of physical activities. For example, Redwood stated that while he and his wife preferred different kinds of workouts, they were on the same Dragon Boat and curling team. Additionally, the couple enjoyed sailing, training for the Vancouver Sun Run, and attending a weekly meditation group together. Other men, such as Hemlock and Chestnut, indicated that they liked to go for walks with their female partners. In contrast, the two physically inactive men were living alone as one had never married and the other was divorced.

Social Connections and Friendships

The men and woman commented on the social connections and friendships they had made while participating in physical activity and/or exercise as strong motivators.
For some, this was expressed in terms of lost opportunities as they described how they missed the social networks they no longer had once they had been forced to stop group physical activities as a result of health concerns. For example, Apple (71 years of age, seven chronic conditions) described the social connections she had with the people she met while Dragon Boating, before having to quit as a result of a shoulder injury:

I was really crushed when I realized that I had to just give up Dragon Boating …. It’s really hard. Yeah, it was part of my life; it was big social part of it too. … I can hardly think of a Dragon Boater I didn’t like…you know there’s a lot of acquaintances. You know, like good acquaintances and we did a lot of other things together, parties and things like that too.

Redwood expressed similar feelings about having to leaving Dragon Boating as a result of dizziness and low blood pressure:

I’m a little sad about having to quit. I’d like to be able to continue – it was fun! The races were fun! We never had a great team, never – we only won a couple of races the whole time we were doing it when I was on the team. But it was a lot of fun. It’s this team activity where you get a bunch of people who are all working toward the same goal, you know, its fun.

Finally, Magnolia explained how she missed the friendships she formerly had through her involvement in Scottish dancing:

I miss the people. You know, there’s a couple at one of the clubs, they have a Christmas dinner/dance, and so I’ve gone to it but that’s the only time I see them. And they have a golf tournament with just the members of club. I don’t golf but they have a barbeque supper afterwards so I go to that just to stay in touch with the people in the club.

**Fun and Enjoyment**

The men and women also described having fun and enjoying participating in physical activity and/or exercise. For example, Apple (71 years of age, seven chronic conditions) frequently described how much fun and enjoyment she experienced from
riding her bike and Dragon Boating. In fact, the theme of fun and enjoyment dominated much of her interview and was the primary motivator for her to regularly participate in physical activity and exercise. Apple stated:

Going for a bike ride is like having a piece of chocolate cake. It’s fun. So I guess that’s why it works for me - my physical activity is fun. Even if it takes a little get up and go to overcome that primary inertia. It’s like, if you are in the ski lodge and you are looking out and it’s warm and toasty inside and it doesn’t look all that appealing to get yourself up and get out there. But you know from past experience that once you’re out there it’s going to be fun. And by the time you finish, you know you are going to feel great. So physical activity is fun!

Other men and women expressed comparable feelings of fun and enjoyment that came from being physically active. Hemlock had this to say:

I feel [doing exercise] is fun. At the same time you are enjoying your body, you are relaxed. If you don’t stretch your body, you know you feel ... lazy and fatigued but once you do [exercise and stretch] you feel fresh, you enjoy it ... and also know I am doing something good for my body.

Patterns of Participation

The interviews with the women and men revealed a pattern of participation in physical activity, exercise, and sport that was diverse as well as dynamic across their lifetimes. While five of the ten men had participated in physical activity and exercise throughout their lives prior to the onset of multiple chronic conditions, none of the women had participated similarly in physical activity, exercise, or sport across each of these distinct life stages.
Childhood and Adolescence

Three of the women (Maple, Yew, and Cherry) and five of the men (Redwood, Mulberry, Birch, Alder, and Oak) talked about participating frequently in physical activity, exercise, or sports during their childhood. During adolescence, these same three women plus Sycamore and these same five men plus Fir reported participating in sports, exercise, or other physical activities. Alder (76 years of age, 11 chronic conditions) described having had a very active level of sport and physical involvement during childhood and adolescence:

I played for my school, in five sports and was on five different teams. On the soccer team, I was the goal keeper. On the grass hockey [team], I was center forward. On the basketball team, I was school captain. And I was captain of my school’s ping pong team and volleyball team. I represented my school for twelve years.

Similarly, Maple (68 years of age, 15 chronic conditions) described her participation in sports and physical activity as a child in this way:

Well for instance [as a child] I would be playing out all day from morning till night practically. I’d be playing, running around with a bunch of kids in the neighbourhood. We’d play “Run Sheep Run” and stuff like that. Running around all over the place. And we played baseball, built tree forts, everything. And then when I got , I walked lots and at school I was in the volleyball club and basketball club and um so I was active.

In contrast, six of the women did not participate in physical activity or exercise in either their childhood or adolescence. Lilac (84 years of age, 11 chronic conditions) explained how she was not physically active in her younger years:

No I was more cerebral than physical. You know I played the piano. I learned and studied piano. And I read a lot. I was never very physically active as a child no, never. Just wasn’t…. I preferred to read and watch others do physical activity.
Adulthood

For most of the participants, adulthood marked a time of decreased participation in physical activity, exercise, or sport. Only three of the women and three of the men reported participating in some level of physical activity during their adult years and often their participation was seasonal or during family vacations. For instance, Maple (68 years of age, 15 chronic conditions) stated:

No, I didn’t play sports while I was working. Well we went out all the time and walked, as I said, we went out to the Lake in the summer and we often walked all around the lake. Just now I am inactive, that’s the only time in my life.

Both the men and women indicated that work and raising children took precedence over engaging in physical activity or exercise during their adult years. Hemlock (71 years of age, 10 chronic conditions) put it this way:

Maybe a couple of times a week, we’d go for a walk. Life was very tough. To raise three daughters and give them a good education and the cost of living here in Canada is quite expensive, it was not easy. We both had to work [referring to his wife and himself].

Hemlock’s statement showed a common pattern of how work and family concerns became a priority in adult life. Participants who did not have children also stated that participating in physical activity and sport was difficult given their work responsibilities. Mulberry (75 years of age, 14 chronic conditions) described how work came to take precedence over regular participation in sports early in his adult life:

No, well I played in my adult life but it was just a weekend thing. Back home they had a baseball team and if I was in town on a weekend they played, they would always ask me to play. But if I wasn’t home, I worked in the mining industry, diamond drilling, and a lot of the time I’d be up in
the yard for two, three months. Go to Labrador, Northwest Territories, Yukon, and it was always two or three months. So I went to work and once I started to work and started to get a good pay cheque, I stopped playing. Sometimes would go skiing on the weekend and sometimes play lacrosse but nothing regular.

That said, Mulberry had worked in the mining industry, which likely would have been a very physically demanding job.

**Later Adulthood and Time of Interview**

At the same time, many of the participants reported that their level of participation in physical activity or sport increased once they entered late adulthood. Six of the women and four of the men talked about participating in regular physical activity and exercise after their children had left home, after they had retired, or following a personal diagnosis or a spouse's diagnosis of a chronic condition(s). For example, Maple (68 years of age, 15 chronic conditions) described her very physically active schedule after being diagnosed with diabetes.

When I was diagnosed with diabetes, I was walking lots. And I went to the gym too. Three times a week, just about every second day, I'd workout in the gym, lift weights. And so I had some muscle tone on my body and I did other exercises there. I thought, “I'm getting older and weaker and I've got diabetes now, I probably need to strengthen myself. “ So I went and they arranged a program for me, that would be right for me. So I did that every, like I said, every second day. And I did my walking every day. So I was in good shape then. And then I had to start having strokes and then the heart attack took me down.

Although Maple participated frequently in physical activity after being diagnosed with type II diabetes, she reported that the subsequent effects of a stroke and a heart attack made it impossible for her to continue exercising. Lilac (84 years of age, 11 chronic
conditions) stated that she had also participated in regular physical activity later in adulthood and prior to the onset of chronic conditions:

When my husband was still alive, I used to go to the West End Community Center, the fitness center there. I went there for a long time. I would go there for nine o’clock in the morning and do the whole circuit, it would take me about 45 minutes to an hour and it wasn’t busy in the morning you see. I would do the whole circuit and then come home and he had gotten ready to go downtown. So we’d go walking downtown, we’d walk there and we’d go for lunch and then we’d walk back home and that was in essence for one half of an entire day I was exercising. And so was he. So it was good but after he passed away I stopped going. I seemed to go downhill a little after that, you know.

Similarly, Redwood (71 years of age, 14 chronic conditions) described how he increased the level of physical activity he was performing after retiring. He explained:

After I retiring ... I took a teaching job at a little college .. and I used to cycle from here [his home] to the college. Initially the college was in Burnaby and I would cycle from here to Burnaby every day.

Although six of the women had participated in physical activity and exercise in their later adult years, the onset of multiple chronic conditions in later life resulted in a dramatic change such that only Apple continued to be active at the time of the interview. In contrast, five of the seven physically active men had continued participating since later adulthood even after they developed a variety of chronic conditions. Additionally, two men began to participate in physical activity as a result of learning about their diagnosis of one or more chronic conditions. For example, upon learning that he had type II diabetes, Chestnut a 79 year old man with seven chronic conditions started to walk daily. He explained:

I started to exercise as much as possible. And so what they [at the Diabetes Day Clinic] did was to term out to us a pedometer and ah I had
never seen one before and I put that to use immediately. And the goal was to walk probably about ten thousand steps every day.

The other man who was new to physical activity, Cedar (87 years of age, eight chronic conditions), continued to be physically active after he had completed three months of cardiac rehabilitation at a specialized care program that works with people who are living with a heart condition.

**Adjusting Behaviour**

The eight men and one woman who were participating in physical activity and/or exercise described how they used a variety of strategies in order to accommodate to their physical limitations. To begin, those who were still physically active adjusted the type of physical activities and/or exercise in which they participated. For example, Apple described replacing some activities she was no longer able to do with those that accommodated her physical limitations, specifically a shoulder injury and spinal arthritis:

> I can’t walk or run great distances anymore. So that is out for me. I have spinal arthritis and that is one thing that has proven repeatedly that I suffer from, especially after excessive walking. And so that is why I am such a fanatical biker and paddler and peddler because I replaced walking and swimming – I use to walk everywhere and I swam for years too when I first took up fitness. So you have to adapt as your body ages and your options are more limited.

While she admitted to “suffering” from spinal arthritis and the effects of “excessive walking”, Apple did not allow the experience of pain to hinder her from participating in other types of physical activity and exercise. Furthermore, Apple eloquently acknowledged that as she grew older, she would likely have to continue to adapt her physical activities.
Additionally, the physically active men and woman described decreasing the frequency with which they engaged in particular activities of exercises. Specifically, the participants indicated that these adjustments encompassed not spending as long at the activity, stopping to “catch” their breath, not pushing themselves or their bodies, and accommodating how they felt on that particular day (i.e. “taking it easy” because of tiredness from a restless night’s sleep). For example, instead of swimming laps every day or jogging on land for long periods of time, Cedar (87 years of age, eight chronic conditions) performed water exercises and jogged in the pool for only several minutes at a time. He explained:

I do water exercises three times a week. About 35 minutes in the pool. I do, it’s an equivalent of weight lifting, I have these Styrofoam dumbbells that you force off resistance in the water, so I do that. I do stretching. And I jog in the water. I jog for five, six, seven minutes which I could never do on land, but that is because of the support of water. So between the three times a week at the pool and two to three times a week just walking outside, that’s my exercise.

For Cedar swimming laps of the pool would be impossible, but jogging for several minutes and using the water as resistance allowed him to participate within the limitations of his physical ability.

Finally, the participants reported that they had decreased the intensity of their physical activities and exercise or altered the ways that these activities and exercises were performed. Many of the physically active participants stated that they had “slowed” down or gone “easy” on their bodies in light of their multiple chronic conditions and their increased age. For example, Hemlock a 72 year old man with 10 chronic
conditions explained how he continued to perform exercises but in a “slower” way than he did in the past. He said:

I do exercises and yoga and breathing exercises. We go for a walk regularly. We walk 2 miles, one hour every day. So my body has been quite flexible, I was never a very rigid person. So I still walk, exercise, and yoga every day. But with the age, I’m 72, so now I do light exercises so I don’t strain myself.

Similarly, Alder stated that for him, multiple chronic conditions meant that he had had to:

Learn to move slowly, learn to eat slowly, learn to accept yourself. Ah previously you just take things for granted but now you have to adjust and you have to accept because you had stroke I suppose I’m more attentive, more careful, in my motion, more careful than previously. You don’t bother to think, you run, jump, but now you think first before you move. Because your movement is very limited.

For some participants, the decrease in intensity was also accompanied by the use of medications. For example, Cedar (87 years of age, eight chronic conditions) described the following:

I get a little bit of angina occasionally, very occasionally, if I am walking, or I become short of breath. I just can’t walk any further so I take a shot of nitroglycerin, which is the standard practice, and I wait a few minutes and then carry on. So now I walk, instead of kilometers and kilometers, I walk three blocks, two blocks and that’s it.

In contrast, those men who had higher levels of engagement tended to be more physically active than those men with lower levels of education. The two men who were physically inactive at the time of the interview, namely Mulberry and Dogwood had less than high school educations.
Chapter Five: Discussion

In this chapter, I will discuss the findings of my study in relation to the extant literature, as well as in relation to theorizing concerning aging, ageism, and healthism.

Barriers to Participating in Physical Activity and/or Exercise

The barriers that were encountered by the women and men in the present study were similar to the barriers previously reported in the literature. Specifically, like the findings from previous studies, I found that the physical symptoms accompanying the participants' multiple chronic conditions were strong deterrents to their engagement in physical activity, especially for the women. Of particular note, was the impact of pain/discomfort, fatigue/dizziness, weakness/lack of strength, shortness of breath, and poor balance. Although, these barriers have been previously identified in the literature, the depth of these experiences has not been explored. In contrast, the present study's participants often identified all five of these physical barriers during the interview as important barriers to participation. Indeed, many of the participants were extremely frail and suffered many ill effects from their various and numerous chronic conditions. As a result, the present study highlights the complexity of having multiple chronic conditions and engaging in physical activity and/or exercise.

Consistent with the extant research, the physically inactive women and men in the present research also reported the psychological barrier of fear. Specifically, they expressed a fear of falling, a fear of pain, a fear of “overdoing it”, and the related fear of breaking bones. Notably, those who were physically inactive were among the most frail in the sample. In contrast, those who were physically active did not report fear as an
issue that they had to overcome in order to remain involved in exercise. The research suggests that typically those who engage in physical activity and/or exercise regularly have higher exercise self-efficacy beliefs and more confidence in their ability to engage in exercise safely without the concern of falling. Clark (1999) has suggested that by acknowledging the fears of physically inactive older adults related to participating in physical activity and/or exercise, such as those found in the present study (fear of falling, fear of pain, “overdoing it”, and fear of breaking bones), and adjusting exercise to a level that will “nearly ensure successful completion” (p. 60) psychological barriers may be overcome. The role of self-efficacy and confidence will be developed further below.

At the same time, age was cited as an important social barrier to participating in physical activity and/or exercise by seven of the men and six of the women. These men and women expressed a shared belief that they had reached an age where participating in some or all forms of physical activity was neither appropriate nor safe. This finding is similar to what Booth et al. (2002) found in their study where participants perceived they were “too old” to engage in physical activity and/or exercise (Booth, Bauman, & Owen, 2002). Other studies have shown that men and women often believe that they are already physically active enough for “someone their age”(Crombie et al., 2004, p. 289; Resnick & Spellbring, 2000), that they are “doing enough physical activity to keep healthy ” (O'Neill & Reid, 1991, p. 395) or that there is “no need to participate” (Hirvensalo et al., 2003, p. 164) at their age. In this way, the results from the present study reflect strongly held social and cultural beliefs regarding physical abilities in later life, which are underscored by ageist assumptions (Vertinsky, 1995).
Although, some of the men and women resisted and challenged stereotypes of later life by participating in physical activity, the men and women also reflected ageist conceptions of being old by virtue of their health statuses and their levels of participation on physical activity. The multiple ill effects of their health issues were often physically apparent, for example by their use of canes, walkers, and wheelchairs. Similarly, many of the participants were limited in their abilities to be physically active. My findings reveal deep tensions for the participants between believing they should be actively engaged in physical activity (i.e. successfully aging) and being overwhelmed by multiple physical, psychological, social and environmental effects of having multiple chronic conditions.

However, age also provided some of the men and women, particularly those who were not physically active, with a kind of deliverance from the ideals of successful aging and societal expectations of later life as a time of high productivity (often in voluntary ways), empowerment, and opportunity. In this way, some of the men and women embraced "normal" ways of aging that were associated with traditional beliefs of later life as a time of "natural" declines in health and disengagement from physical activity and particular spaces (e.g. the weight-room and exercise classes).

The impact of lack of social support or not having a companion or partner to participate in physical activity and/or exercise with among the women and men with multiple chronic conditions warrants additional comment. Psychological aspects including fear and social support were salient barriers and facilitators among the men and women with multiple chronic conditions. These findings are supported by extant
research examining the link between exercise and psychological well-being, particularly self-efficacy and social support (Clark et al., 1995; McAuley et al., 2006; McAuley et al., 2005; O’Brien Cousins, 2003; Tiggemann & Williamson, 2000; Wilkins, 2001). While most of the men were married and engaged in physical activity with their spouses, the majority of women in the present study were widowed and/or single and indicated that lack of a companion was a strong barrier to being physically active. Similarly, these women also described fear and anxiety as deterrents to participating in physical activity and/or exercise. Bandura’s (1986) theorizing concerning self-efficacy helps explain the links between physical activity (i.e. mastery experience), social support, and self-efficacy as they pertain to the experiences of older women and men with multiple chronic conditions. For example, if family, friends, exercise leaders, and health care professionals were to provide social support through verbal persuasion or verbal encouragement, act as role models by engaging in physical activity themselves, and share information regarding exercise programs and the health benefits of physical activity participation, older men and women, like the participants in the present research, would likely have the encouragement and support they required to engage in regular physical activity and/or exercise. In fact, this has been found in previous studies with older adults who received encouragement and support from others were more likely to engage in physical activity and to experience exercise success (Clark, 1999; Dionigi, 2007; McAuley et al., 2006; McAuley et al., 2005; Netz, et al., 2005; O’Brien Cousins, 2003; Tiggemann & Williamson, 2000). Findings from the present study suggest that since lack of social support was an important barrier as well as a facilitator to participating in physical activity, especially among the women, future research and
policy implications should include social support and other psychological aspects of participating in physical activity for older adults with multiple chronic conditions in their examinations. Providing social support and positive encouragement may lead older adults, particularly older women, with multiple chronic conditions to participate in physical activity and/or exercise. In turn, repeated exercise experience success may lead the women to experience increased self-efficacy, which would carry over and positively affect other activities in their lives.

The level of self-efficacy and social support may have contributed to the women’s inactivity, though strong cultural messages and negative stereotypes regarding women’s abilities to perform activity are also influential. Powerful cultural and social ideologies regarding women’s bodies and their physical capacity to perform certain exercises have been internalized and normalized in everyday discourse, in western society. Women’s bodies have traditionally been viewed as weak and fragile in comparison to men’s, so that performing physical activity, sport, or exercise would put them at serious risk of impairment and/or further decline (Vertinsky, 1991; Vertinsky, 2000; Vertinsky, 1995). These ideologies have been challenged in some spaces today. However, the women who participated in the present research grew up at a time when particularly limiting beliefs regarding women’s bodies and women’s capacity to perform certain activities prevailed. Importantly, the women revealed that they were uncertain of their physical abilities to perform physical activity and /or exercise, especially in light of the having multiple chronic conditions. Furthermore, the women likely internalized these powerful socially constructed myths over their lives and continued to accept them as norms. These negative stereotypes likely encouraged a complex cycle of inactivity.
and illness that lead to further inactivity and illness. For these women with multiple chronic conditions, having social support is only one aspect of motivation in a larger cultural landscape where negative myths and stereotypes regarding aging women prevail.

**Motivators to Physical Activity and Exercise**

Perhaps reflecting their own level of involvement in physical activity, the men identified more motivators to participating in physical activity and/or exercise than the women. The motivators to physical activity and exercise were frequently the same as the barriers to participation in physical activity and/or exercise. For example, while the women tended to cite physical symptoms as a reason for not engaging in physical activity, the majority of the men reported that improving their physical health (muscular strength, pain, fatigue) and preventing further physical health deterioration were key sources of motivation. Importantly, the men were commonly reluctant to discuss or acknowledge experiences of pain, discomfort, and other physical symptoms related to having multiple chronic conditions. This can be explained by the male participants’ efforts to preserve particular hegemonic masculinities, in spite of their multiple chronic conditions, by denying weakness and vulnerability, maintaining emotional and physical control, appearing strong and robust, and “invulnerable to disease” (Courtenay, 2000, p. 1389). In addition to denying physical symptoms, the men tended to manage the ideals of hegemonic masculinity in various ways. For example, participating in physical activity not only improved the men's physical condition but also allowed them to embrace ideal forms of masculinity by maintaining hegemonic power positions among family, friends,
and larger society since they were active, busy, and productive. The physical benefits, like muscular strength, gained from participating in physical activity and exercise secured the men’s "natural" privileged position in their relationships with their wives, children, and friends. In addition, findings showed that the majority of men tended to participate in physical activity and exercise alone (i.e. walking, water exercises) which may suggest that they were careful to avoid environments where their physical abilities associated with being a man (i.e. muscular strength) remained unchallenged or compared to with other men or to women. These findings reflected how experiences of aging and having multiple chronic conditions could "reduce a man's status in masculine hierarchies" (Charmaz, 1995, p. 268), by potentially shifting their "power relations with women" (p. 268) and other men, and raising their "self-doubts about [their] masculinity" (p. 268). Nevertheless, central discourses regarding masculinity benefited the majority of the men by promoting physical activity and exercise.

Similar to the extant research (Cohen-Mansfield et al., 2003; Grossman & Stewart, 2003; Wilcox et al., 2006), the physically active participants described how they had benefited physically, psychologically, and socially from being involved in exercise, which served to reinforce their commitment to remaining physically active while at the same time preserving cultural notions of masculinity (among the men), healthism, and successful aging. Those who were no longer able to be involved in physical activity lamented the loss of the physical, social and psychological benefits.

The ideologies of healthism and successful aging were underlying motivators for participation in physical activity and/or exercise. Clearly recognizing the physical
benefits of physical activity and/or exercise, the participants often discussed the importance of disciplining the body and assuming responsibility for their health. However, the ideals of healthism and successful aging were problematic for these older men and women in a variety of ways. To begin, many of the participants lived in constant pain and discomfort. Thus, their physical limitations precluded their abilities to be physically active and may have even contravened the wisdom of engaging in physical activity and/or exercise. The societal implications of healthism and successful aging are that older adults with multiple chronic conditions are potentially held socially responsible for their health issues by virtue of their perceived failure to have avoided health risk behaviours (i.e. physical inactivity, overeating, alcoholism, sexual promiscuity), both in the past and present, and to “live up to their social responsibility for their own bodies” (White et al., 1995, p. 173). Ultimately, healthism and successful aging, as prevailing ideologies, obscure larger structural, social, political, and economic influences of society as well as fail to appreciate older adult's individual life histories and current physical health conditions.

Patterns of Participation

Situating the present study’s findings in the context of the literature, it was not surprising that the men were more likely to talk about having participated in sports and physical activity than the women during their childhood and adolescence. The women and men interviewed would have experienced childhood and adolescence at a time when gender roles or appropriate ways of "doing gender" (West & Zimmerman, 1987) had yet to be critically examined. Particular gender norms and "essential female and
male natures” (West & Zimmerman, 1987, p. 137) dominated social and cultural beliefs in western society. Commonly, girls and women were not encouraged to be physically active since participating in exercise or types of physical activity and sport was believed to place girls and women at serious risk of injury and wearing-out their bodies (Vertinsky, 1995). Consequently, they risked the loss of their only useful function to society: bearing and rearing children (Vertinsky, 1991; Vertinsky, 1995). In contrast, boys and men were encouraged to embrace "natural" leisure sports and other physical activities, cultivating and maintaining masculinity and male hegemony (Hall, 2007).

Similarly, social and cultural expectations of "doing gender" likely influenced engagement in physical activity and/or exercise during all participants’ adult lives. As adults, both the men and women decreased their participation in physical activity and/or exercise, citing family (more of the women than men) and career (more of the men than the women) responsibilities as taking priority in their lives at this time. This finding is well supported by the extant literature, which documents declining rates of participation in sport, physical activity, and exercise participation over the life course. Studies have shown that participation in physical activity, exercise, and sport falls dramatically at two times during the life course: first, marked by entry into full-time employment and the second, marked by the end of full-time employment or retirement (see Berger, Der, Mutrie, & Hannah, 2005; DiPietro, 2001; Hessler, 1989; McPherson, 1978; McPherson & Kozlik, 1980; McPherson, 1982; Rudman, 1989; Seeman & Chen, 2002; Tammelin, Näyhä, Laitinen, Rintamäki, & Järvelin, 2003). Furthermore, the idea of making exercise, sport, and physical activity a priority across ones' lifetime and including
participation with children and spouses would not have been encouraged in the
participants' adult lives, as it is today.

Surprisingly, during late adulthood and prior to the onset of multiple chronic
conditions, more of the women than the men were participating regularly in physical
activity and/or exercise. Possible explanations for the increase in physical activity
among the women at this particular time in their lives can be attributed to early health
scare s or diagnoses of multiple chronic conditions, having more time and financial
resources to participate, and timely health promotion campaigns stressing the
importance of physical activity among all people, including older adults and women.
However, at the time of the interview only one woman had continued to participate in
physical activity and/or exercise, whereas the four men who had remained physically
active during their adult lives were joined by four additional men. All the men
participating in physical activity and/or exercise had high levels of educational
attainment and had high household incomes, in contrast to the physically inactive men,
who had less than high school education and had the lowest household income among
the men.

The number of multiple chronic conditions did not appear to influence the
likelihood of participation among the men, since the men had at least seven and an
average of 11 multiple chronic conditions. Based on these findings and former research
in the area of health and physical activity in later life, where it has been argued that
socioeconomic position is a “fundamental cause” (Herd et al., 2007, p. 224) of health
differences among older adults, it would have been anticipated that the number of
multiple chronic conditions would be exceptionally high for the two men with less than high school education and lowest household income among the male participants. However, this was not the case. In fact, one of the two men, Redwood, with the highest number of multiple chronic conditions, 14, had achieved the highest level of education (Doctor of Philosophy degree from university) and had the highest household income (above $120,000) among all the participants. In addition, Redwood spoke at length of how he had participated during adolescence, more regularly in his adult life following an early health scare, and had continued to participate in physical activity and/or sports after he had retired. Among his activities were: Dragon Boating, curling, biking, and weight training. Nevertheless, the two men with lowest educational attainment and lowest household incomes, Mulberry and Dogwood, had a relatively high number of multiple chronic conditions, 11 and 14 respectively. Consequently, this illustrated that health, multiple chronic conditions, and participation in physical activity is diverse and is not as simplistic as former studies have depicted.

Gender differences with respect to the men’s and women’s responses to their physical ailments also warrants further comment. While the men and women had similar types and numbers of chronic conditions, the men maintained higher levels of physical activity than the women. My findings also showed that the men tended to take up regular exercise and/or physical activity once they had been initially diagnosed with a chronic condition unlike their female counterparts. The results of my study further suggested that the men, in contrast to the women, had greater knowledge and access to resources in order to engage in physical activity and/or exercise. More of the men than the women had previous experience participating in physical activity and sports
throughout their lives which may have contributed to the fact that more of the men than the women were physically active for the majority of their lives. Therefore, women, starting at an early age, would benefit from exercise education, access to health promoting resources, and encouragement from family, friends, and teachers to engage in physical activity, exercise, and sport that would likely contribute to life-long participation in physical activity and/or exercise and positive health in later life.

In addition, considering the relationship among the variables of educational attainment, household income, multiple chronic conditions, and the pattern of participation in physical activity and/or exercise is problematic for numerous reasons, especially among the women. The educational attainment of the women must be examined within the social, cultural, and political context within which they grew up. Previous research has shown that across a lifetime, educational attainment, occupation and subsequent income and wealth influence access to clean and safe neighbourhoods, health care resources, recreational and sports facilities, as well as social networks sharing similar cultural values of health (Herd, 2006; Herd, Goesling, & House, 2007; Shaw, & Spokane, 2008). During the women's lifetimes they would not have had the same opportunities to access high levels of education and high paying employment that would subsequently lead to higher income, wealth and access to important health care resources, as their male counterparts. Women were not only dependent upon their potential husbands’ income and wealth, but also upon the equal distribution of resources between themselves and their husbands. Studies have shown that in marriage, distribution of income and other information and health resources is often not equal between husbands and wives (Pahl, 1988; Pahl, 1995). This is evident
among the women. For example, Spruce reported the highest household income ($120,000), the only woman to do so, but also reported having achieved an average educational level (college diploma), having 12 chronic conditions, and not being physically active. In the context of previous research, this was surprising since Spruce had a high household income and wealth and would likely have had access to health care resources, leisure facilities, and information networks regarding positive health. When asked about why she was not more physically active, Spruce admitted that she knew that she should be active but stated that taking care of her home and children left her little time to do anything else. It appeared that Spruce embraced prevailing traditional gender stereotypes of women that defined types of appropriate behaviour focused on domestic pursuits and taking care of their families.

Importantly, two findings stand out as unique in this study. First, for this group of men and women the number of their multiple chronic conditions, although important, was not as limiting as the types of multiple chronic conditions that they experienced. To review, the men and women had various degrees and types of chronic conditions simultaneously which included such conditions as arthritis, back pain, cancer, high blood pressure, heart disease, osteoporosis, stroke, and type II diabetes. Although, some of the men and women had similar types of multiple chronic conditions, the findings suggested that it was the amalgamation of the particular types in combination and the degree of severity that was profoundly limiting to their participation in physical activity as well as activities of daily living. Particularly, findings suggested that the participants identified one or two specific multiple chronic conditions as a kind of breaking point in their lives where their health quickly deteriorated. For example, Alder
had 11 multiple chronic conditions among these arthritis, heart disease, high blood pressure, and osteoporosis, yet surviving a stroke in 2000 altered his life dramatically. Doctor's told him that he would never walk or eat solid foods again. At the time of the interview, he was walking with a cane, eating various solid foods (although slowly), and participating in light weight training and rowing on his home rowing machine daily. Similarly, Maple who had 16 multiple chronic conditions among these anemia, arthritis, congestive heart failure, high blood pressure, migraine headaches, type II diabetes, stomach problems, and survived five strokes, expressed how the symptoms of spinal stenosis was the most debilitating among her chronic conditions that made participating in physical activity impossible. The types of multiple chronic conditions in combination and the degree of severity of one or two particular chronic conditions fundamentally impacted the participants’ engagement in physical activity and/or exercise as well as their lives overall. In addition, there was a second important finding revealed that contributed to this first unique finding and further highlighted the differences among each of the participants’ experiences in this study.

Second, findings showed that the way that each of the participants’ managed their multiple chronic conditions was highly personal. Each of the men and women coped with their multiple chronic conditions in individualized ways that was dependent upon their gender, social support networks (i.e. spouses, children, grandchildren, as well as physicians and other health care professionals), financial resources, transportation, access to important health care resources, as well as associated personal beliefs regarding aging and appropriate types of activities to be involved in at this stage of their lives. As discussed above, for this group of men and women the
number of their multiple chronic conditions, although important, was not as limiting as the type of multiple chronic conditions in combination. Yet, the way that the men and women managed their chronic conditions was the critical factor that separated the men and woman who were participating and the men and women who were not participating in physical activity and/or exercise. Alder and Maple mentioned above represented two unique cases among the participants. Each of the participants reflected a unique case, indeed. Although, Alder and Maple had both survived a stroke their experiences were different in terms of severity and affects of the stroke as well as the resources they had access to in order to manage their health conditions. Alder had a wife that was able to assist and take care of his needs whereas Maple’s husband had died years earlier and was alone. Also, Alder suggested that he had the financial resources and past experiences with participating in physical activity which afforded him the knowledge and access to health care resources he required. In contrast, Maple had a limited household income and had never participated in physical activity during her life. All of the participants were like Alder and Maple in terms of their unique combinations of the type of multiple chronic conditions, their severity of their multiple chronic conditions, and the ways they managed their multiple chronic conditions based on individual access to necessary health resources. In addition, the way that the men and women coped with their unique experiences of having multiple chronic conditions and participating in physical activity and/or exercise were influenced by dominant ideals of hegemonic masculinity and femininity, the ideologies of healthism and successful aging, and individual social, political, and economic positions.
Chapter Six: Conclusion

The present study has made some important contributions to the research literature regarding older adults, multiple chronic conditions, and physical activity. First, by investigating the impact of multiple chronic conditions on older adults’ participation in physical activity and/or exercise, this research addresses a gap in the literature, which has previously only looked at single chronic conditions. Second, a complement is provided to the large body of extant quantitative research concerning multiple chronic conditions in later life. Indeed, the present research is one of the first qualitative studies investigating older adults with multiple chronic conditions and their encounters with participating in physical activity and/or exercise. Qualitative research within the theoretical framework of symbolic interactionism allowed me to better understand and document the multiple meanings that older adults with multiple chronic conditions attached to their physical activity and health experiences that are often underreported in quantitative studies. Prus (1996) argued that, "the study of human behaviour is the study of human lived experiences and that human experience is rooted in people’s meanings, interpretations, activities, and interactions" (p. 9). The research benefited from the theoretical framework of symbolic interactionism by understanding older adults’ social actions and interactions from their own point of view. Qualitative interviews allowed me to actively engage and interact with the participants revealing how this group of older adults encountered their health and participation in physical activity and/or exercise from their own perspective. Symbolic interactionism allowed me to identify not simply the barriers and facilitators to participating in physical activity and/or exercise, but importantly the deeper meanings the participants attached to their health
and physical activity experiences. In addition, theories pertaining to healthism and successful aging brought a fuller understanding to the complex relationships among age, multiple chronic conditions, and participation in physical activity.

However, this research was not without limitations. First, the participant sample was small as only ten older women and ten older men were interviewed and thus provides only a beginning picture of how older adults with multiple chronic conditions may experience participating in physical activity. Second, only one interview was conducted with the majority of participants and the rigor of the study would have been enhanced by the completion of follow-up interviews, if not multiple additional interviews to tease-out nuances and to gain clarity by “member-checking”. Lastly, although effort was made to include a diverse sample of research participants in terms of gender, ethnicity, household income, and educational attainment, future studies would gain from a more diverse representative sample of older Canadians, notably participants from diverse races and ethnicities since Canada is a multicultural nation.

This study has illustrated how particular social and cultural ideologies of aging and gender (hegemonic masculinity and femininity) linked to participating in physical activity influenced older individuals' behaviours in powerful ways. Ideologies of healthism and successful aging underpinned the barriers, motivators, and patterns of participation in physical activity and/or exercise among older adults. Furthermore, the notions of healthism and successful aging worked in diverse ways among the participants, empowering some to engage in physical activity and to choose healthy lifestyle practices (i.e. modifying diet, alcohol, smoking, etc) while "condemning" others for failing to take control of their health by avoiding "at-risk behaviours" and illness. In
addition, this study showed that much confusion and misunderstanding remains regarding physical abilities and limitations among older adults with multiple chronic conditions, particularly among the older women, as each woman and man encounters physical activity and/or exercise in diverse ways.

Future recommendations for investigating the experiences of older adults with multiple chronic conditions would benefit from recognizing the diversity among individuals 65 years of age and older, in terms of current physical ability, independence, social support, as well as socioeconomic position, while at the same time considering their past personal histories. Although, it was outside the scope of the present sociocultural research, psychological factors that hinder and motivate older adults with multiple chronic conditions in terms of exercise self-efficacy and confidence in perceived abilities to participate in exercise and physical activity, requires further investigation as findings showed that these psychological factors, along with social and cultural structures, strongly influenced participation.

Practical applications from the study's findings suggested that older adults with multiple chronic conditions require assistance in various ways depending upon their social position as well as the types of multiple chronic conditions they suffer from and the severity of those conditions. For some of the men and women in the present study tasks of daily living including preparing meals, taking out their garbage, and attending physician's appointments were challenging. Although they could attend to most of their personal needs, having regular assistance would provide them with the support they required. In terms of improving physical health conditions, the majority of the
participants expressed a strong desire to improve their physical health, but were overwhelmed by the idea of planning exercise or physical activity for themselves. Also, the idea of scheduling physical activity at this time in their lives was a relatively new concept. Findings suggest that the majority of the men and women had neither the knowledge nor the understanding of how to participate in physical activity and/or exercise at a level that would be beneficial and safe. Implementing programs that directly deal with these issues and enable direct one on one interaction with an experienced professional in adapted activities for older adults with multiple chronic conditions could greatly benefit many older adults. Furthermore, older adults need to have easy access to inexpensive programs, close-by facilities, and transportation to attend these programs. Therefore, it is imperative that policies address these structural and economical components of health promotion for older adults with multiple chronic conditions.

To conclude, the theoretical implications of my findings contribute to bringing valuable insight to the complex experiences of participating in physical activity and exercise for older adults with multiple chronic conditions. I hope that this research will inspire further qualitative investigation into the experiences of older adults with multiple chronic conditions that will challenge current limiting ideologies of aging and encourage physical activity and exercise in later life.
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Appendix A: Letter of Introduction

THE UNIVERSITY OF BRITISH COLUMBIA

LETTER OF INTRODUCTION

PARTICIPANT INFORMATION

Physical Activity and Chronic Diseases: The Experiences of Older Individuals

WHO IS CONDUCTING THE RESEARCH?

Karin McFarlin, a Graduate student in the School of Human Kinetics at the University of British Columbia under the supervision of Dr. Laura Hurd Clarke.

Karin’s telephone number is [redacted].

WHAT IS THE PURPOSE OF THE RESEARCH?

To investigate how individuals who are 60 years of age and older who have multiple chronic illnesses experience and perceive physical activity and exercise. Specifically, we want to investigate the factors that may limit or promote regular participation in physical activity and exercise.

WHAT DOES PARTICIPATING IN THE STUDY INVOLVE?

If you agree to participate in this study, you will be interviewed by myself, Karin McFarlin. The interview will be approximately one to two hours in duration, depending upon what kinds of things you would like to discuss. The interview will take place at your home, the university, or at another location of your choosing. If there are things that you would prefer not to discuss, that is fine. With your permission, I would like to tape record our discussion so that I can focus on what you are telling me rather than on taking notes. I do not anticipate any risks associated with participating in this research.

WILL THE INFORMATION I SHARE BE CONFIDENTIAL?

Absolutely. The information that you tell me will be handled confidentially. To keep your anonymity, you will never be identified by name in any documents of the completed research. The information from our interview will be kept strictly confidential and the tapes from the interview will be stored in a locked filing cabinet at the university. Only I will have access to the tapes. Once the research is complete, I will destroy all the tapes and related documents.
HOW WILL THE RESEARCH BE USEFUL?

The health benefits from physical activity and exercise in later life have been well established. Few studies have investigated the experiences and attitudes of participating in physical activity or exercise for older individuals with one or more chronic conditions. Furthermore, little is known about the kinds of constraints or factors that may encourage participation in physical activity and exercise for older individuals with chronic conditions. The findings from this research will contribute to our understanding of older individuals’ unique experiences of participating in physical activity and exercise.

WHAT IF I WANT TO WITHDRAW FROM THE STUDY?

Participation in this research study is entirely voluntary. You may withdraw from the study at any time without giving reason. There are no consequences for terminating an interview or for withdrawing from the study.

WHAT ARE THE REMUNERATIONS FOR PARTICIPATING?

There is no remuneration for participating in the study. However, if you prefer to be interviewed at the university, your transportation and/or parking costs will be paid for.

Thank you for your time and interest in the Physical Activity and Chronic Diseases Research Study. If you would like to become involved in the study, please call Karin at (604) 790-7669.
Appendix B: Letter of Consent

PARTICIPANT CONSENT FORM

Physical Activity and Chronic Diseases: The Experiences of Older Individuals

Principal Investigator:
Dr. Janice Eng, PhD PT/OT
School of Rehabilitation Sciences, UBC
GF Strong Rehab Centre
4255 Laurel Street, Vancouver, B.C.

Co-investigators:
Karin McFarlin, Graduate Student
School of Human Kinetics, UBC
Email: karinee_mc@hotmail.com
Telephone:

Contact number for study information and questions:

Sponsor: Canadian Institutes for Health Research

Purpose of the Project:
You are invited to join a research study to help us understand the experiences and factors that may limit and encourage participation in physical activity and/or exercise for older individuals with multiple chronic diseases. The health benefits of physical activity and exercise in later life have been well established. Few studies have looked at the experiences and attitudes of participating in physical activity or exercise for older individuals with one or more chronic conditions. Furthermore, little is known about the kinds of constraints or factors that may encourage participation in physical activity and exercise for older individuals with chronic conditions. The purpose of this study is twofold: 1) to examine the meanings of participating in physical activity and exercise for individuals aged 60+ who have one or more chronic diseases; and 2) to investigate the factors that limit or encourage individuals aged 60+ with multiple chronic diseases to participate in physical activity or exercise. The findings from this research will contribute to our understanding of the experience of participating in physical activity and exercise in later life.

Participation:
Participation in this research study will consist of an interview that will be approximately one to two hours in duration. You will be interviewed by myself, Karin McFarlin. With your permission, I would like to tape record our discussion so that I can focus on what you are telling me rather than on taking notes. The interview will take place in your home, at the university, or at another location of your choosing. If I ask you about
things that you would prefer not to discuss, you are not obligated to do so. Following
the interview, I would be glad to discuss any aspects of the study or any questions that
may have arisen during the interview. I do not anticipate any risks associated with
participating in this research.

Confidentiality:
Your confidentiality will be respected. No information that discloses your identity will be
released or published without your specific consent to the disclosure. However, research
records and medical records identifying you may be inspected in the presence
of the Investigator, Health Canada, and the UBC Research Ethics Board for the purpose
of monitoring the research. However, no records which identify you by name or initials
will be allowed to leave the Investigators’ offices.

Remuneration:
There is no remuneration for participating in the study. However, if you decide that you
prefer to be interviewed at the university, please let me know and your travel costs
and/or parking costs will be reimbursed. No receipt for your travel and/or parking costs
will be required.

Your Rights:
Participation in this research study is entirely voluntary. You may withdraw from the
study at any time without giving reason. There are no consequences for terminating an
interview or for withdrawing from the study.

If you have any questions or would like more information about the research study,
please contact Dr. Janice Eng, the study’s principal investigator, or myself, Karin
McFarlin, at [contact information]. If you have any concerns regarding how you were treated
during the interview or your rights as a research participant, please contact the
Research Subject Information Line, UBC, at [contact information]. If you have any
concerns or questions, you may also contact my supervisor, Dr. Laura Hurd Clarke, who
is an Assistant Professor in the School of Human Kinetics at UBC. Her office number is
[contact information].

Consent to Participate:
This is not a contract and I understand that I do not give up any legal rights by signing it.
By signing the form I am indicating that:

- I have read and understood the subject information and consent form.
- I have had the opportunity to ask questions and have had satisfactory responses
to my questions.
- I understand that all the information collected will be kept confidential and that the results will only be used for scientific objectives.
- I understand that my participation in this study is voluntary and I am completely free to refuse to participate or to withdraw from this study at any time without changing in any way the quality of care that I receive.
- I have read this form and I freely consent to participate in this study.
- I have been told that I will receive a dated and signed copy of this form.

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Appendix C: Interview Schedule

I. Opening Questions:
   1. Tell me about your health.
   2. Tell me the story of how you came to have chronic illnesses? How did you feel about that?
   3. How did it change your life, if at all?
   4. How do you feel about your health issues “****” (insert chronic illnesses)?
   5. How has having “****” affected or influenced your sense of identity or how you see yourself as a person?
   6. How has having “****” influenced or changed your social connections or relationships with other people in your life?
      • Refer to their specific chronic illnesses
   7. Tell me about the kinds of activities you do on a daily / weekly basis?
      a) Please walk me through a typical day and/or a typical week in your life.
      b) What kinds of things do you do?
      c) Have these activities changed? What things do you do differently than you did 5 years ago? 10 years ago?
      d) Have your health issues influenced the way you carry out these daily and/or weekly activities?
      e) How did learning about your health issues affect the way you saw your own abilities to carry out activities?
   8. How would you define physical activity and exercise?
      a) What kinds of things do you consider physical activity?
      b) What kinds of things do you consider exercise?
   9. How does having one or more chronic illnesses affect your ability to participate in physical activity and/or exercise?
      • How might your health affect your participation in physical activity and/or exercise?

II. Participants who participate in physical activity and/or exercise:
   1. What kinds of things encourage you to continue participating in physical activity
and/or exercise?

2. What types of physical activity and/or exercise do you like to participate in and why?

3. Give me an example of an exercise experience that was not positive? What made you continue even after this experience?

4. Tell me about a positive experience you have had with physical activity and/or exercise?

III. Participants who do not participate in physical activity and/or exercise?

1. How do you think you could be more involved in physical activity and/or exercise?

2. What kinds of things do you see as stopping you from being more involved in physical activity and/or exercise? Please explain.
   Probes: Is the cost of programs a concern?
   Is transportation an issue?

3. What kinds of things would help you be more involved in physical activity and/or exercise?

4. What kinds of things would help you stay involved in physical activity and/or exercise?

5. What kinds of physical activity or exercise programs could you see yourself participating in if you had the opportunity?

6. Give me an example of an exercise experience that was not positive?

7. Tell me about a positive experience you had with physical activity and/or exercise?

IV. Closing Questions:

1. How has having chronic illnesses change how you felt about yourself?

2. Is there anything negative about having chronic illnesses? Is there anything positive with having chronic illnesses?

3. Tell me, if you were doing this research what questions would you ask? Have I missed anything that you feel is important?
Appendix D: Vignettes of Participants

Redwood

Redwood was a 71 year old man born in the United States of America. He had 14 multiple chronic conditions including allergies, osteoarthritis, back problems, chronic bronchitis, low blood pressure, high blood pressure, heart disease, bradycardia (pacemaker), angina, cancer (skin), three (mild) strokes, urinary problems (enlarged prostate), migraine scotoma, bone fracture (ankle), and erectile dysfunction. He was married and living with his third wife and stepson. He had children from earlier marriages. He had a Ph.D., taught and conducted research at university for his entire adult career. He reported a household income of greater than $120,000. At the time of the interview, Redwood worked out with weights three times a week, curled once a week, and walked to most destinations.

Hemlock

Hemlock was a 71 year old man born in India but lived most of if adult life with his family in Canada. He had 10 multiple chronic conditions including allergies, asthma, osteoarthritis, chronic bronchitis, stomach/intestinal problems, urinary problems (enlarged prostate), multiple chemical sensitivities, Poliovirus, a bone fracture, and gallstones. He was married with three grown daughters. He lived with his wife and one of his daughters and her family. He had a Bachelor of Engineering degree and reported a household income between $40,000 and $60,000. At the time of the interview, Hemlock performed yoga and breathing exercises every morning and walked most days of the week with his wife.

Mulberry

Mulberry was a single 73 year old Native Canadian man with 14 multiple chronic conditions that included asthma, osteoarthritis, osteoporosis, back problems, high blood pressure, type II diabetes, angina, cancer (kidney & lung), urinary problems, cataracts (both eyes), fractured both legs (car accident 1999), and hip joint replacement. He had never married and did not have any children. He left high school before graduating to work in the mining industry. He reported a household income of less than $20,000. After a near fatal car accident in 1999, his physical activity participation was limited to occasional upper body exercises performed from his wheelchair.
Birch

Birch was a 75 year old man born in Canada. He had nine multiple chronic conditions that included asthma, arthritis, back problems, high blood pressure, heart disease, angina, thyroid condition, and had survived a stroke. He was married and had children and grandchildren. He left high school early to volunteer in the Navy during World War II. He earned a plumbing training certification and worked as a Manager in the plumbing industry throughout his adult career. He reported a household income between $60,000 and $80,000. Birch was physically active most days of the week participating in thrice weekly exercise class, walking, as well as curling, golfing, and lawn bowling.

Alder

Alder was a 76 year old man born in Malaysia, but lived most of his adult life in Canada. He had 11 multiple chronic conditions that included allergies, arthritis, osteopenia, back problems, cataracts in both eyes (had surgery), fractured arm, and survived a serious stroke in 2000. He was married to his second wife and had children and grandchildren. He had a University Bachelor’s degree. He reported household income between $20,000 and $40,000. His physical activity included a rowing machine, weight training, and stretching exercisers daily.

Chestnut

Chestnut was a 79 year old man born in Canada. He had seven multiple chronic conditions that included arthritis, back problems, high blood pressure, type II diabetes, testicular cancer, cataracts, and a thyroid condition. He was widower three times and at the time of the interview had a girlfriend. He had grown children from his first marriage. He earned a Bachelor of Commerce degree many years after leaving high school early. He was a high school economics teacher for most of his adult career. His household income was $60,000-80,000. His physical activity included light stretching and walking a minimum of 10,000 steps per day. He was considering cycling and swimming in the near future.

Dogwood

Dogwood was an 83 year old man born in Canada. He had 11 multiple chronic conditions that included osteoarthritis, osteoporosis, type II diabetes, back problems, arrhythmia (pacemaker), cancer (prostrate), urinary problems, thyroid condition, inguinal hernia, bone fracture, and a joint replacement. He was a widower without any children. He had never graduated from high school, but rather left school early to pursue a career in the music industry. His household income was less than $20,000. He did not participate in physical activity.
Cedar
Cedar was an 87 year old man born in Canada but identified with his Jewish ethnicity. He had eight multiple chronic conditions that included arthritis/rheumatism, type II diabetes, angina, congestive heart failure, prostate cancer, cataracts in both eyes, Parkinson's disease, and had a heart attack in 2004. He was married and living with his wife. He did not have any children but was close to a nephew who lived close to his home. He had a Master of Science degree. His household income was $40,000-60,000. His physical activity consisted of extensive walking, aqua-aerobics, water running, and other aquatic exercises.

Fir
Fir was an 87 year old man born in Canada but identified with Jewish ethnicity and observed Jewish traditions and customs throughout his life with his family. He had 12 multiple chronic conditions that included allergies, back problems, high blood pressure, heart disease, arrhythmia (pacemaker), cancer (lymphoma), cataracts in both eyes, bone fractures, diverticulitis, and had three heart attacks. He was married and had children and grandchildren. He had a PhD, taught, and conducted research at a university his entire adult career. He reported a household income that was greater than $120,000. His physical activity consisted of walking and fishing with a friend.

Oak
Oak was an 86 year old man born in Mongolia, grew up in North China, and immigrated to Canada after being a prison of war in World War II. He had 11 multiple chronic conditions that included allergies, back problems, high blood pressure, hernia, arrhythmia, colon cancer, benign prostate hyperplasia, stroke, joint replacement (left hip), ruptured esophagus, and several heart attacks. He was widowed and divorced and currently had a girlfriend. He had children and grandchildren. He lived with one of his daughters and her family. He had a Master of Arts degree, taught, and conducted research at a university his entire adult career. He reported a household income that was greater than $120,000. His physical activity consisted of daily calisthenics, stretching and walking.

Maple
Maple was a 68 year old woman born in Canada. She had 16 multiple chronic conditions that included allergies, asthma, fibromyalgia, arthritis/rheumatism, high blood pressure, migraine headaches, type II diabetes, heart disease, congestive heart failure, stomach problems (clotting), cataracts, spinal stenosis, anemia, two heart attacks, and survived five strokes. She was widowed and had children and grandchildren. She had a high school education and had a household income of less than $20,000. Maple did not participate in physical activity.
Holly

Holly was a 69 year old woman born in Canada. She had 17 multiple chronic conditions that included food allergies, asthma, asthma attacks (daily), fibromyalgia, arthritis/rheumatism, osteoporosis, back problems, high blood pressure, chronic obstructive pulmonary disease, urinary incontinence, bowel disorder (IBS), Parkinson’s Disease, multiple chemical sensitivities, Dystonia, Cerebral Palsy and acid reflux. She had a high school education and had taken some courses at a local community college. She was divorced and had children and grandchildren, but was estranged from her family. She had a household income between $20,000 and $40,000. She did not participate in physical activity.

Yew

Yew was a 70 year old woman born in Malaysia, but had lived most of her adult life in Canada. She had eight multiple chronic conditions included allergies, arthritis, back problems, high blood pressure, urinary incontinence, glaucoma, a fractured tailbone and ribs, and osteoporosis. She was married and had one daughter. She had a teaching degree from a Malaysian university and worked at a university library her entire adult career. She had a household income between $20,000 and $40,000. She did not participate in regular physical activity but infrequently stretched and gardened.

Apple

Apple was a 71 year old woman born in Canada. She had seven multiple chronic conditions included osteoarthritis, back problems, high blood pressure, urinary incontinence, thyroid condition, fractured nose, and sleep problems. She was married and had children. She had a degree as a Registered Nurse but worked in the retail wholesale industry for her entire adult career. She had a household income between $60,000 and $80,000. She was very physically active. Her weekly physical activity consisted of cycling daily, Dragon Boat Racing and training, weight training, elliptical machine, and stretching.

Sycamore

Sycamore was a 76 year old woman born in Great Britain and immigrated to Canada during her early adult life. She had 14 multiple chronic conditions that included allergies, arthritis, back problems, migraine headaches, Type II Diabetes, cataracts in both eyes, Parkinson's disease, macular degeneration, TMJ, acid reflux, joint replacement (hip), heart attack, low blood pressure and angina. She had a high school education and worked at a secretary for her entire adult career. She never married. She had a household income between $20,000 and $40,000. She did not participate in physical activity.
Elm

Elm was a 78 year old woman born in Canada. She had 13 multiple chronic conditions that included food allergies, high blood pressure, migraine headaches, Type II Diabetes, heart disease, angina, bowel disorder, cataracts in both eyes, thyroid condition, multiple chemical sensitivities, diabetic retinopathy, a fractured shoulder and had two heart attacks. She was widowed and had children and grandchildren. She had a household income between $20,000 and $40,000. She had a university Bachelor of Art degree and taught high school for most of her adult career. She was not physically active.

Spruce

Spruce was an 80 year old woman born in the United States of America. She moved to Canada after she was married. She had 11 multiple chronic conditions that included food allergies, arthritis, osteoporosis, back problems, urinary incontinence, cataracts in both eyes, thyroid condition, chronic fatigue syndrome, multiple chemical sensitivities, macular degeneration and hearing loss (hearing aid in both ears). She was married and lived with her husband. She had three grown daughters. She had a household income of greater than $120,000. She had a college diploma, focused her adult life raising her family, and volunteering. She was not physically active.

Magnolia

Magnolia was an 82 year old woman born in Canada. She had 14 multiple chronic conditions included allergies, rheumatoid arthritis, asthma, fibromyalgia, high blood pressure, migraine headaches, heart disease, heart attacks, urinary incontinence, bowel disorder, cataracts in both eyes, glaucoma, esophageal stricture and a bone fracture of both second toes. She was widowed and had children and grandchildren. She had a college degree as a Registered Nurse and worked as a nurse her entire adult career. She had a household income between $20,000 and $40,000. She did not participate in physical activity.

Lilac

Lilac was an 84 year old woman born in Canada. She had 11 multiple chronic conditions included arthritis, asthma, fibromyalgia, osteoporosis, gout, Type II Diabetes, urinary incontinence, cataracts in both eyes, glaucoma, peripheral neuropathy and carpal tunnel syndrome. She was widowed and never had children. She had a college diploma and worked for a large corporation her entire adult career. She had a household income between $20,000 and $40,000. She did not participate in physical activity.
Cherry

Cherry was an 88 year old woman born in Hungary and immigrated to Canada after World War II with her new husband. She had 16 multiple chronic conditions that included allergies, arthritis, osteoporosis, back problems, high blood pressure, chronic bronchitis, chronic obstructive pulmonary disease, Type II Diabetes, urinary incontinence, bowel disorder (diverticulitis polyps), cataracts in both eyes, thyroid condition, emphysema, thrombosis, sleep apnea and atherosclerosis. She was a few credits shy of earning a Bachelor of Art degree from university when the war broke out. She worked at various jobs during her adult life from hair stylist to massage therapist. She was divorced and had children and grandchildren. She had a house hold income of less than $20,000. She was not physically active at the time of the interview but had been a regular swimmer thrice weekly for several years before being in a car accident a few months prior to the interview.
APPENDIX E: UBC CLINICAL RESEARCH ETHICS APPROVAL CERTIFICATE

The University of British Columbia  
Office of Research Services,  
Clinical Research Ethics Board – Room 210, 828 West 10th Avenue, Vancouver, BC V5Z 1L8

Certificate of Expedited Approval: Amendment  
Clinical Research Ethics Board Official Notification

<table>
<thead>
<tr>
<th>INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT</th>
<th>Vancouver Coastal Health Authority</th>
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<tr>
<td>CO-INVESTIGATORS:</td>
<td>Hurd Clarke, Laura, Human Kinetics; Marra, Carlo, Pharmaceutical Sciences; McFarlin, Karin; Miller, William, Rehabilitation Sciences; Miran-Khan, Karim, Human Kinetics; Noreau, Luc,</td>
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<td>SPONSORING AGENCIES:</td>
<td>Canadian Institutes of Health Research</td>
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<tr>
<td>TITLE:</td>
<td>Physical Activity and Quality of Life of Community-Living Individuals with Chronic Disease</td>
</tr>
<tr>
<td>APPROVAL DATE (yyyy-mm-dd)</td>
<td>05-01-26</td>
</tr>
<tr>
<td>TERM (YEARS)</td>
<td>1</td>
</tr>
<tr>
<td>AMENDMENT APPROVED:</td>
<td>9 January 2006</td>
</tr>
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</table>

CERTIFICATION
In respect of clinical trials:
1. The membership of this Research Ethics Board complies with the membership requirements for Research Ethics Boards defined in Division 5 of the Food and Drug Regulations.
2. The Research Ethics Board carries out its functions in a manner consistent with Good Clinical Practices.
3. This Research Ethics Board has reviewed and approved the clinical trial protocol and informed consent form for the trial which is to be conducted by the qualified investigator named above at the specified clinical trial site. This approval and the views of this Research Ethics Board have been documented in writing.

The amendment(s) for the above-named project has been reviewed by the Chair of the University of British Columbia Clinical Research Ethics Board and the accompanying documentation was found to be acceptable on ethical grounds for research involving human subjects.

The CREB approval period for this amendment expires on the one year anniversary date of the CREB approval for the entire study.

Approval of the Clinical Research Ethics Board by one of:  
Dr. Gail Bellward, Chair  
Dr. James McCormack, Associate Chair