

CHAPTER I

INTRODUCTION

Decades of research clearly debunk the myth that to be old in America is to be sick and frail. Once believed to be an unproductive burden on their families and society, older persons are now frequently viewed as “physically and cognitively fit, nondisabled, and successfully aging” (Rowe & Kahn, 1998, p. 18). Recent reports from conferences and workshops on physical activity, fitness, and health stress the importance of an active way of life for adults and provide recommendations for future research, interventions, and policies to evaluate and promote exercise in the elderly population (Bokovoy & Blair, 1994). “If exercise could be packed into a pill, it would be the single most widely prescribed, and beneficial, medicine in the nation” (National Institute on Aging, 1985, p. 40).

Exercise and aging have become important social, economic, and medical issues in recent years (Larson & Bruce, 1989). With an increasingly aged population, there is great concern about aging and health. In the wake of the fitness and exercise revolution, older adults are also becoming physically active. “No longer is the senior citizen or institutionalized patient sedentary and unresponsive to lifestyle changes; rather most participate with renewed vigor in exercise programs, and many compete successfully as master athletes” (Birrer, 1989, p.75).

“Forty years ago, most elderly people moved slowly, and their bodies looked worn out. The mere idea of an eighty year old running a marathon was in the realm of fantasy. Times have changed” (Schulz-Aellen, 1997, p.172). People of all ages are showing an interest in fitness, and this is by and large a very positive development because substantial evidence exists that physical exercise and movement are essential for health in all age groups (Burdman, 1986). Regular physical exercise can delay certain changes in older adults that were once thought to be normally associated with the aging process. Several exercise scientists have adequately demonstrated that many declines associated with aging can be delayed and even reversed with increased levels of regular exercise (Fournier & Fine, 1990; Larson & Bruce, 1989; O’Brien Cousins, 1995; Palmore, 1989).

Purpose of the Research

Exercise is studied in a number of different ways in the exercise and aging literature (Alessio et al., 1993; Burdman, 1986; Butler et al., 1990; Danner & Edwards, 1992; Duncan et al.,

1995; Fardy & Yanowitz, 1995; Freysinger & Stanley, 1995; Hollman, 1964; Keller & Woolley, 1991; O'Brien Cousins, 1995, 1997; O'Brien Cousins & Keating, 1995; Rowe & Kahn, 1998; Whaley & Ebbeck, 1997); however, little empirical research exists on lifelong participation in physical exercise (O'Brien Cousins & Vertinsky, 1995; Vertinsky, 1995). This research is of great importance in order to know how accessible physical exercise was to men and women born at the beginning of the century, how participation in adult years was affected by specific life course roles and transitions, and how physical exercise is still of value to elders in their sixth, seventh and eighth decades of life (O'Brien Cousins & Vertinsky, 1995). Understanding individual's prior physical exercise experiences and habits might be useful in determining where to begin an individualized exercise program, how to motivate individuals to begin (or resume) exercising, and whether the person has any functional or health impairments that would put them at risk if involved in an inappropriate exercise program.

The purpose of this study was to examine the extent to which older adults have continuously participated in physical exercise over the life course. A retrospective exploration assisted in generating new understandings about the role of physical exercise over the life course. The findings of this study can presumably, assist educators and health promoters to better understand, predict, and promote participation in physical exercise across the life course. I designed this study to explore lifetime participation in physical exercise in a comprehensive way, and to allow understandings to emerge from the conversations with elderly men and women. A life course perspective provided a foundation for this research.

Research Questions

The extent to which physical exercise remains consistent throughout life is a variable that has recently gained increasing attention in the exercise and aging literature. Previous researchers (O'Brien Cousins, 1995; O'Brien Cousins & Keating, 1995) have pointed out that in order to understand older adults' current motivation for physical exercise we need to understand earlier life experiences. The primary question guiding this study was, "How does participation in physical exercise change or remain continuous as individuals move through the life course?" To address this research question, older adults were asked to consider societal processes and opportunities, life course roles and transitions, and individual definitions of physical exercise at four stages of their life course: adolescence, young adulthood, middle adulthood, and late life. Based on previous research conducted on exercise and older adults, these factors are associated with the person's level

of participation at specific times during the life course. To answer my primary question, a series of subquestions were addressed:

1. What is the meaning of physical exercise at specific stages in the life course?
2. Do older adults' report that their views of exercise (their motivation for exercising, their amount of exercise) differed at other stages of the life course as compared to the present?
3. Is there a relationship between perceived participation in physical exercise during adolescence, young adulthood, middle adulthood, and late life ?
4. In what type of physical activities have adults participated to remain active throughout their lives?
5. Do older adults perceive their participation in physical exercise as changing or remaining the same due to specific life course transitions?
6. Do older adults report that social roles and family responsibilities influence participation in physical exercise?
7. Are earlier socialization processes (e.g., organized sport participation) associated with individuals' participation in physical exercise?

Addressing the above questions will help researchers and practitioners to understand the possible connection between early life experiences and habits and old age motivation to participation in physical exercise. This study will lead to a more comprehensive understanding of participation in physical exercise across the life course. As suggested by Rowe and Kahn (1998), "the forms of appropriate exercise change with age, as does the intensity of exercise, but the need for it and the benefits it confers continue throughout life" (p. 50).

CHAPTER II

REVIEW OF THE LITERATURE

For decades, society has viewed “ageism” as meaning elderly individuals are frail and incapacitated, need assistance from others, and are unable to participate in demanding physical work (Butler et al., 1990). Older persons are expected to decline, to move away from life, and ultimately retire. More recently, society has begun to recognize that the rapidly growing population of elderly individuals is generally physically fit and represents a possible resource for enhanced productivity, which would benefit society as well as older individuals themselves (Butler et al., 1990).

In this chapter, I will summarize the literature on exercise and aging. First, I will provide an overview of the exercise and aging literature. Secondly, I will examine more specifically the exercise and aging literature that relies on a life course framework for guidance and discuss the societal processes, opportunities, roles, life course transitions, and definitions of physical exercise relevant to my proposal. A review of theoretical frameworks guiding previous research and the theoretical framework that I will use in this study will also be discussed. I conclude this section with a discussion about the strengths and weaknesses of the exercise and aging literature.

Overview of the Literature

A review of the literature from 1964 to 1998 reveals many studies that focus on physical exercise and older adults. Studies presented in the literature document many wide-ranging potential benefits of exercise and include consideration of osteoporosis (O’Brien Cousins, 1995), arthritis (O’Brien Cousins & Vertinsky, 1991), falls (O’Brien Cousins & Vertinsky, 1991), injuries (O’Brien Cousins, 1995), and depression (Lampman, 1987). Exercise also benefits other risk factors such as high blood pressure, heart disease, stress, diabetes, and smoking (O’Brien Cousins & Vertinsky, 1991; Rowe & Kahn, 1998).

Early exercise and aging research suggested that the ‘trainability’ of elderly persons declines with age, and little improvement in cardiovascular performance can be expected especially if an exercise program is started in later life (Hollman, 1964). More recently, researchers argue that exercise makes a difference no matter how late in life a person begins (Rowe & Kahn, 1998).

The MacArthur Foundation Studies are an influential and consistent piece of the exercise and successful aging literature. Directed by Drs. John W. Rowe and Robert L. Kahn, the researchers set out to show that successful aging is not largely determined by genetics, but rather by

individual life style choices in diet, exercise, the pursuit of mental challenges, self-efficacy and involvement with other people (Rowe & Kahn, 1998). The MacArthur research has shown that exercise can benefit the older population tremendously. Older adults who participate in physical exercise function better in everyday life and live longer (Rowe & Kahn, 1998).

Benefits of Exercise

One very damaging myth about aging is that older people should not exercise because it might hurt them or “use up” what little strength and vitality they have left (Danner & Edwards, 1992). Over the years, researchers have documented both short and long-term benefits of regular and moderate physical exercise. For example, McPherson (1984) found that older individuals who maintain a high degree of physical activity in later life have a 20 to 30% greater performance rate than nonactive individuals of the same age.

Maintaining physical fitness is perhaps the single most important thing an older person can do to remain healthy. Exercise not only helps limit the physiologic changes that occur with age, but also it is a health-promotion, disease-prevention mechanism that is easily within the reach of most elders (Butler et al., 1990). Exercise and resistance training (e.g., weights) can dramatically rejuvenate muscles, enhance bone strength, and limit the risk of osteoporosis and fractures of the hip, spine, and wrist (Rowe & Kahn, 1998).

After years of researching the benefits of exercise and aging, experts now report that physical exercise can prevent or reverse about half of the physical decline normally associated with aging (Rowe & Kahn, 1998). The level of fitness needed to produce health benefits is easy to attain with low-intensity activities, such as walking, dancing, and riding a bike. Older adults can rapidly increase their ability to function by participating in regimented physical exercise. “Physical exercise is at the crux of successful aging, regardless of other factors” (Rowe & Kahn, 1998, p. 98). Exercise is the best preventive medicine that doctors can prescribe; it should begin at birth and continue throughout life (National Institute on Aging, 1985).

Participation in Exercise

Cross-sectional studies suggest there is a reduction in physical activity level and intensity with age (Fardy & Yanowitz, 1995; Fitzgerald et al., 1994; Freysinger & Stanley, 1995). Older adults are likely to disengage in physical exercise in later life. Physical activity decreases with age, with the greatest decline observed among women (Segal, Crespo, & Smit, 1998). In 1992, among people 65 years of age and older, fewer than 30% of men and fewer than 20% of women engaged in

any types of regular physical activity five times a week for 30 minutes at a time. Among people 75 and older, about 38% of men and more than 50% of women reported participating in no leisure time physical activity (Segal, Crespo, & Smit, 1998). Comparably, data from the 1995-1996 Healthy People 2000 Review show that 29% of adults 65 and older engaged in no physical activity (Segal, Crespo, & Smit, 1998).

In lieu of these previous research findings and statistics (Freysinger & Stanley, 1995; Hollman, 1964), more recent research indicates that older adults are expressing significantly greater interest and concern about health issues than are younger adults. For example, Danner and Edward's (1992) research shows that a healthy older individual can improve functional capacity through proper training and achieve the physical fitness of a much younger sedentary person. Maintaining and improving endurance, strength, flexibility and balance along with learning to deal with emotional stress can improve the quality of life well into a person's seventh, eighth and ninth decades of life (Danner & Edwards, 1992). They also suggested that today's older adults are interested in learning about maintaining and promoting their health, and they are more willing to make lifestyle changes to be healthier and more active. As the population ages, issues of health maintenance and disease prevention will continue to be of growing importance, as will participation in physical exercise.

Motivation to Exercise

Motivation is a major influence on older adults' participation in exercise programs. Langlie (1977) found that social membership (belonging to a group or socializing with a group of peers with whom common interests can be found) is an important motivational predictor of an individuals' likelihood to engage in exercise. The social benefits of exercise are apparent: men and women find themselves with others of similar ages and life stages. There are additional social benefits to participating in exercise programs that include such opportunities as intergenerational and age-integrated interaction. "Opportunities to socialize and enjoy a sense of camaraderie, for instance, can be a primary motivating factor to attend exercise classes" (Caserata & Gillett, 1998, p. 602). Exercise programs that are pleasurable and rewarding usually motivate older adults to participate in exercise. Last but certainly not least, the group leader can be an outstanding motivating factor to older adults' participation in exercise (Danner & Edwards, 1992).

O'Brien Cousins (1995) reported that "insufficient social support for exercise in late life is a key barrier to participation among older adults" (p. 273). Older adults may lack social approval to

participate in exercise by spouses, children, friends, and physicians. This lack of social support may prevent them from participating in exercise programs. Other motivating beliefs behind older adults' participation in physical exercise programs include engaging in recreational activity, acquiring better health status, and increasing their overall life satisfaction (Danner & Edwards, 1992). Yet there are still many other individuals who participate in exercise for fun, new experiences, and to increase socialization. Older people are motivated by the need to remain in full control of as many aspects of their lives as possible.

Self-Efficacy

Self-efficacy is a repeatedly used psychological construct in the exercise and aging literature. Self-efficacy is the belief that one is capable of executing a particular task and denotes personal feelings of competency and ability (Bandura, 1977). Self-efficacy makes a difference in how people feel, think, and act. A low sense of self-efficacy is associated with pessimistic thoughts about accomplishments and personal development, while a high sense of self-efficacy is associated with optimism, challenging tasks, and high goals. Self-efficacy can enhance or impede individuals' motivation to participate in physical exercise. Therefore, self-efficacy is an important construct in understanding older adults' motivation in routine physical exercise and is a component of psychological health.

The findings from several studies suggest that successful exercise participation leads to enhanced self-efficacy (McAuley et al., 1991; O'Brien Cousins, 1997), which in turn can influence perceptions of well-being (McAuley & Rudolph, 1995). These studies suggest that older adults "judge their efficacy for exercise based on their understandings of their ability as defined by perceived health, chronological age, and previous skills" (O'Brien Cousins, 1997, p. 241). O'Brien Cousins' (1997) research on 'Elderly Tomboys' provided empirical support for the belief that a person's level of self-efficacy can influence her participation in physical exercise. Her research provided support that either (a) beliefs about self-efficacy for sport and exercise are generalized in one's physical identity over time, or (b) early mastery experiences in physical skill are simply an important source of information for judging one's physical capability when there are few other experiences on which to draw in late life. Researchers (McAuley et al., 1991; McAuley & Rudolph, 1995; O'Brien Cousins, 1997) agree that older adults who feel more competent generally attempt to perform a larger variety of physical activities than those who feel less

competent. Dzewaltowski (1989) found that those who exercise are confident that they can exercise despite uncontrollable factors (e.g., aging, illness, disease).

Older adults who have a low level of self-efficacy often hold misconceptions about their physical abilities (Hogan & Santomier, 1984) when unsuccessful attempts are made to maintain or regain a level of activity that clearly is beyond their capabilities. Also, when older adults are seeing physical performance declines in peers, spouses, or friends, they often feel that they too have reached a point in their life marked by a loss of many competencies including physical ones (Bosscher et al., 1995). When older adults' feelings of physical self-efficacy are enhanced, they are more likely to increase their physical activity levels. Some older adults who lack self-efficacy about exercise tend to drop out of exercise programs. Dzewaltowski (1989) suggested that in order to increase older adults' self-efficacy and well-being, it is necessary to provide them with positive support and exercise experiences. To comprehend older adults' participation in exercise more fully, researchers have conducted several studies using a life course perspective.

Life Course Approaches to Studying Exercise

Researcher Barry McPherson (1984) helped to set the stage for life course research in exercise and aging. He believed that it was important for future research to extend its scope to include more factors designating how role transitions across the life course affect changes in physical and mental leisure activity in later life. Factors such as marital status and timing, labor force status, the timing and number of children, and empty nest and retirement periods could all have an effect on a person's participation in physical exercise (McPherson, 1984). These events tend to parallel the transition into adulthood and are believed to be important factors shaping the continuity of participation in physical exercise from adolescence to adulthood (Howell & McKenzie, 1987).

Howell and McKenzie's (1987) research on high school athletics and adult sport-leisure activity examined gender variations across the life cycle. Their research was one of the first empirical studies to apply a life course framework to investigate exercise and aging. They emphasized that in order to understand sport and physical participation in the later years of life, "one should become aware of the social organizations of the life cycle and the personal, social, and historical changes and transitions that are pertinent to participation at a given point in adulthood" (Howell & McKenzie, 1987, p. 330).

By the end of the 1980s and into the 1990s the work of several other researchers supported the premise that in order to understand older adults' participation in physical exercise in late life, one must examine life course patterns of participation (Harada, 1994; Keating, 1995; McPherson, 1984; O'Brien Cousins & Keating, 1995; O'Brien Cousins & Vertinsky, 1995; Spirduso, 1994). Their studies took into account older adults' earlier life course experiences with physical exercise. They examined life cycle patterns of participation in sport (Harada, 1994; O'Brien Cousins & Keating, 1995; O'Brien Cousins & Vertinsky, 1995), sociocultural perspectives on physical activity (McPherson, 1978, 1984; Whaley & Ebbeck, 1997), and stereotypes of sport participation (Fournier & Fine, 1990; Greendorfer, 1983; Vertinsky, 1995).

Although these studies brought new empirical light to the aging literature, they have their limitations. The studies that have employed a life course framework took into consideration only two points in the life cycle: early adolescence and later life or middle adulthood and later life. Yet, it is important to consider the entire life course when examining older adults' participation in physical exercise in order to gain a more adequate understanding of participation in late life. Although life stages and life events of men and women may be similar, the pathways of coping with life challenges may differ, therefore individually changing one's level or involvement in exercise (O'Brien Cousins & Keating, 1995).

Factors such as: (a) societal processes and opportunities, (b) life course roles and transitions, and (c) individuals' perceptions and definitions of physical exercise have major implications for individuals' participation in physical exercise. Once adult exercise patterns are established, they tend to persist. Yet any of these factors (i.e., societal processes and opportunities, life course roles and transitions) can cause exercise patterns to change (Atchley, 1997). They may not change the type of exercise as much as the amount of participation. Thus, many factors throughout the life course will influence participation in physical exercise in middle adulthood and in later life.

Societal Processes and Opportunities

Researchers have shown a positive association between sport participation and physical activity during early childhood with exercise participation in later life (Howell & McKenzie, 1987; McPherson, 1984; O'Brien Cousins & Keating, 1995; O'Brien Cousins & Vertinsky, 1995; Snyder & Spreitzer, 1979; Sofranko & Nolan, 1971). Some children will be exposed to sport by parents, siblings, and peers. The family is believed to be the most influential social institution in a child's life. It is very likely that involvement in sport has a great deal to do with how much reinforcement

children receive from their family members and peers. Sport socialization research suggests “that adult participation is influenced by early life experiences, childhood encouragement, family activity patterns, lifestyle continuity, and youth, varsity, and organized sport participation” (O’Brien Cousins, 1997, p. 230). Early socialization experiences are important in understanding what predisposes older adults to participate in certain activities in middle and later life, because it is believed that “one is socialized into sports” (Snyder & Spreitzer, 1979, p. 250).

Many sport opportunities afforded to today’s children were nonexistent when the current generation of elderly men and women were young (O’Brien Cousins & Keating, 1995). In addition, these older adults were socialized into very different types of physical exercise roles depending on whether they were boys or girls (Whaley & Ebbeck, 1997). Men report much more involvement in organized sports, such as baseball, hockey, tennis, track, and boxing, whereas women were involved in more “domestic” activities, such as house cleaning, taking care of siblings, or occasionally in neighborhood games, such as kick-the can, skating, or pick-up ball games (Whaley & Ebbeck, 1997). Older adults also report that during childhood they were involved in a great deal of farm work and chores, such as milking cows, planting fields, picking berries, and driving farm machinery (Whaley & Ebbeck, 1997).

Society influences the type and level of activities appropriate for men and women (Whaley & Ebbeck, 1997). In turn, these societal influences affect the physical activity choices that men and women make throughout their life course (Whaley & Ebbeck, 1997). Examining societal expectations, opportunities, and beliefs is essential to understanding restrictions that older adults may have had during their youth to participation in physical exercise. As McPherson (1978) stated, “unless children are exposed to social systems in which they have the opportunity to engage in sport and receive positive sanctions, it is unlikely that sport will become a salient aspect of their lifestyle” (p. 219).

Life Course Roles and Transitions

A person’s level of participation in physical exercise is a process rather than a permanent state of being (Whaley & Ebbeck, 1997). Many events and situations affect participation in exercise (e.g., role transitions). Individuals may be more or less involved in physical exercise depending on their life course status (e.g., working full time, parenting, empty nest, retirement) (Snyder & Spreitzer, 1979; Whaley & Ebbeck, 1997). Role transitions and event trajectories can

help to explain life course barriers and opportunities that exist in people's lives that influence their leisure time activities.

By early adulthood individuals usually accumulate a number of roles or activity clusters (e.g., work, marriage, parenthood). Their level of commitment to each of these roles can affect commitment to participation in physical exercise (Howell & McKenzie, 1987; McPherson, 1984; O'Brien Cousins & Vertinsky, 1995; Snyder & Spreitzer, 1979; Whaley & Ebbeck, 1997). For example, when individuals reach their retirement years they allot more time to continue to participate in activities that they used to enjoy before they had children or a career. Retirement allows for more free time for an individual to engage in previous life enhancing activities.

Snyder and Spreitzers' (1979) research on lifelong involvement in sports suggested that commitment to participation can vary from time to time, depending on the various roles persons are involved in at a particular time in life. For most men and women, departure from physical exercise occurs when they enter a career with time demands, when they get married, or when they have children. Occupational and domestic roles in middle adulthood bring responsibilities that can inhibit participation in physical exercise (O'Brien Cousins & Keating, 1995). Conversely, role changes (e.g., empty nest, retirement) in later life are accompanied by reduced responsibility and increased free time. Hence, one's level of participation in physical exercise during childhood and adolescence may be a good indicator of one's commitment in later adulthood.

Definitions and Meanings of Physical Exercise

It is important to understand older adults' perceptions of the meanings of exercise because both the form and the meaning of physical exercise "can change as new values, or new knowledge appears, as advertising changes beliefs and behaviors, or as exercise or sporting fads ebb and flow through specific segments of a culture" (McPherson, 1984, p. 33). Thus, direct questions must be posed to older adults about their perceptions, definitions, and meanings associated with lifelong participation in physical exercise.

The occupations of many older persons earlier in adulthood (including homemaking) required moderate to high levels of physical endurance, thereby reducing the need for physical exercise in the limited leisure time available (McPherson, 1984). Older adults, especially women, may not have believed that physical exercise (i.e., anything outside of their daily routines) was important to participate in during their younger years. Because they endured enough physical exertion in their daily routines and occupations, there was no need to exert themselves any more in

a given day. Holding this belief may have prevented persons from participating in any sort of “out of role” participation in physical exercise. In other words, individuals may have believed that they were meeting their daily expenditure of physical activity through specific roles in their lives. Therefore, specific roles, transitions, and events may influence one’s definition of physical exercise, depending on their stage in the life course.

In this paper, the definition of “physical exercise” will include several types of physical activities. This definition will be more fully defined in the next chapter. One reason for taking into account this broad definition is that physical exercise in the beginning of the century, did not exist in the formalized manor, as we know it today. How older adults defined physical exercise in childhood may be different than other stages of the life course (i.e., middle adulthood, late life). When older adults were in early adolescence and well into middle age, health clubs and facilities were rare. Due to, but not limited to, medical and technological advances, exercise has gone from an informal to a more formal process in the past century therefore, changing the definition of physical exercise.

Theoretical Framework

A major weakness in the exercise and aging literature is the lack of continuous theoretical foundations to guide and support research. In the past, theoretical frameworks have assisted researchers in the explanation of why some older adults are motivated to participate in regular exercise while others are not. However, no particular theory has emerged to explain the rationale behind older adults’ participation in exercise (Roberts, 1992). There is considerable evidence suggesting that familiarity and lifelong preferences are important components contributing to participation in exercise over time (Burch, 1969; Kelly, 1974, 1975). Therefore, I will examine continuation of individual participation in exercise using a life course perspective.

Life Course Perspective

A life course perspective provided the theoretical framework for my investigation of older adults’ life course patterns of participation in physical exercise. At the core of the life course perspective is an assumption about how the life course is constructed. That is, as individuals pass through life, they enter and exit discrete stages (Fry, 1992). The focus of the life course perspective is on examining changes over time. It involves the interdependence of trajectories over the life course (Elder, 1978) and gives a theoretical framework for studying human development and aging within a constantly changing society. This life course perspective provides empirical confirmation

into the dimensions of time, process, and social context (Bengtson & Allen, 1993; Elder, 1991), while offering a micro- and macro-level approach that links individuals, families, and historical time (Hareven, 1987). These three basic dimensions of the life course perspective support the assumptions for this study.

One of the central premises of the life course perspective is the notion of timing. Time is important in understanding the current and past situations of individuals. Generational time places a person within a family context, and with roles within the families such as child, parent, and grandparent (Bengtson & Allen, 1993). An assumption in previous exercise and aging literature is that family, domestic, and labor responsibilities from specific role expectations reduce the amount of time a person has to be involved in active leisure pursuits, such as physical exercise (O'Brien Cousins & Keating, 1995; O'Brien Cousins & Vertinsky, 1995).

The second premise of the life course perspective is social context. This concept is important in understanding why people do what they do over the course of their lives. Context refers to the impact that social structure and social creation of meanings has for explaining change and continuity over time (Bengtson & Allen, 1993). Habitual exercise is largely related to socialization processes and opportunities which, at an early age, have the potential to influence the activities of people for the rest of their lives (Morris, 1991). For example, O'Brien Cousins (1995) conducted a study that involved recapturing the physical activity experiences of three older women born in or before 1900. This study was guided by in-depth, guided life course interviews. The late-life exercise patterns of these very old women appeared to be rooted in very different ways to their past. Young girls at the turn of the century who were afforded opportunities and social support to develop physical skills in sport-type activities, or who were physically challenged in domestic or farm labor, still appreciate and take advantage of the health-promoting aspects of exercise over 80 years later.

People who are encouraged to be active at an early age, acquire skill, and obtain enjoyment from participation are more likely to want to continue being active as they get older (Howell & McKenzie, 1987; McPherson, 1984; O'Brien Cousins & Vertinsky, 1995; Snyder & Spreitzer, 1979). Therefore, early socialization processes into sport and physically active play will have a major impact in promoting lifelong exercise among older adults.

The third concept of the life course perspective is that of process. The emphasis here is on the dialectic of change and continuity in individual age, cohort and period effects; that change is

dynamic in and of itself (Bengtson & Allen, 1993). Process assumes that individuals cannot be understood from just one point in time (Bertaux & Bertaux-Wiame, 1981). Human beings' lives from childhood to later life move through many stages. Therefore, a life course perspective will provide insight into how exercise patterns vary as people make life decisions and build on earlier experiences. Specific events, roles, and transitions in men and women's lives are likely to have an impact on participation in physical exercise in later life.

For purposes of this study a life course perspective will take into account the experiences and exercise patterns that individuals bring with them into the later years of life (Kastenbaum, 1995). A life course perspective will help guide this research study by providing a framework for describing ways in which participation in physical exercise changes and remains consistent as people move throughout the life course. The life course perspective assumes that individuals who are in the same stage of the life course may have much in common: their biological development, the kinds of roles they have experienced (e.g., worker, spouse, or parent), the number of years behind them, and the potential years ahead. Likewise, people at different life stages differ in these respects (Hooyman & Kiyak, 1996).

The strengths of the life course perspective are the examination of individual development within the context of events occurring across time and comparison of similarities and differences among cohort groups. A life course framework also provides a better understanding of changes in timing, duration, and sequences of transitions of early experiences on life course patterns. It also considers both normative and non-normative pathways in the life course and acknowledges heterogeneity of timing and sequencing of life events. This framework focuses on change and stability through generations and lends itself to qualitative methodologies that offer in-depth examination of life histories (Bengtson & Allen, 1993).

There are also critiques of the life course perspective. Most life course research examines transitions rather than trajectories and does not cover the entire life course. Researchers also tend to focus more on intercohort comparisons and not enough on within-cohort differences or similarities (George, 1996). The majority of the research conducted using a life course perspective has not covered the entire life course, and most studies labeled as life-course research do not include older adults (George, 1996). Specifically, much research in later life has addressed work, retirement, and family transitions.

Participation in physical exercise is a lifelong preference that demonstrates continuity throughout the life course. Older adults will be more motivated to participate in exercise programs in later life if they have been physically active throughout the life course. Therefore, a life course perspective that focuses on the premises of timing, process, and context will allow for a more comprehensive understanding of how the exercise patterns of older adults are constructed and how participation in physical exercise changes or remains continuous as people move throughout the life course.

Strengths and Weaknesses of Exercise and Aging Literature

Research in the area of exercise and aging has made tremendous strides in the past decade. A review of the literature shows a great deal of diversity on age and types of participants included in exercise studies. The literature covers groups ranging in age from 39 to 94, and research subjects have included sedentary persons, enrollees in health care organizations, exercise class attendants, community and nursing home residents, master athletes, older adults with disabilities, and cardiac rehabilitation outpatients.

Another strength of the research is the diversity of outcome variables examined. For example, outcomes include change in exercise levels, patterns, duration, frequency, athletic self-efficacy, program attendance, and intention of exercise. Although the literature holds a great deal of strengths, researchers are also well aware of its weaknesses, or the existing gaps in the literature.

Fitness is very personal and should be determined by each individual in relation to whatever activity he or she wishes to undertake in the community at any given time. How individuals perceive their participation in physical exercise will vary from one individual to another according to the activity and the situation in which it is to be undertaken. Researchers need to employ methodologies, theories, and frameworks (e.g., in-depth interviews, life course framework) that will capture older adult's personal histories of their participation in physical exercise. In addition, longitudinal research is needed in order to examine continuity and change in physical exercise participation in later life.

The lack of a theoretical basis to guide and support the research is a major weakness in the exercise and aging literature. Very few researchers rely on theoretical frameworks to guide their work and to help explain differences in motivation to exercise among older adults (Roberts, 1992). Few studies have considered a life course framework, and those that have, limited study participation to women. Late life exercise patterns of older individuals appear to be linked in very

different ways to their past. Few studies have tried to describe in detail the actual lifetime exercise experiences of older individuals. By applying a life course framework to exercise and aging studies, researchers can more thoroughly understand older adults' life course patterns and participation in physical exercise.

Significance of Research in Relation to Existing Work

The findings of this research will enable individuals to broaden their images of aging and the aged, and increase their understanding and awareness of the complex process of aging through lifelong participation in physical exercise. The findings of this study may assist educators and health promoters to better understand, predict, and promote participation in physical exercise across individuals lives. I designed this study to explore lifetime participation in physical exercise in a comprehensive way, and to allow understandings to emerge from the dialogue of elderly men and women. A life course framework provided a foundation for this research study.

A majority of the literature suggests voids and inadequacies in our knowledge and understanding of exercise and aging. As researchers, we need to know more about how physical exercise fits into the overall life patterns of older adults, about continuities in physical exercise, and about the experiences older adults have faced in the long term that may have affected their level of participation (Atchley, 1993). This research played a crucial role in discovering how accessible physical exercise was to men and women born at the beginning of the century, how participation in adult years was affected by specific life course roles and transitions, how the meaning of physical exercise may have changed, and whether physical exercise is still of value to them in their sixth, seventh and eighth decades of life.

Considering that the majority of the literature on exercise and aging is atheoretical, there needs to be a greater use of theoretical frameworks to support future research and findings in the exercise and aging literature. Research grounded in theory provides a better understanding of older adults' participation in exercise across the life course. Incorporating a life course perspective provided a more holistic picture of how exercise participation has changed or remained continuous as people encountered several different societal processes and opportunities, and life course roles and transitions throughout their lives. Understanding how older adults exercise patterns changed or remained the same required input from a variety of perspectives at various phases of the life course (i.e., adolescence, young adulthood, middle adulthood, and late adulthood).

CHAPTER III

METHODOLOGY

The purpose of this study was to explore older adults' perceptions of participation in physical exercise throughout their life. It offers a precise understanding of how societal processes and opportunities, life course roles and transitions, and individual meanings of physical exercise influence older adults' participation in physical exercise. In this study, I attempt to identify the factors in adults' lives that may or may not lead to continuous participation in physical exercise now that they are old. Included in this chapter is an explanation of qualitative methods, a description of the sample selection procedures, definitions of factors contributing to participation in physical exercise, data collection procedures, and limitations of this study.

Qualitative Methodology

Qualitative methods are well suited to discover and uncover information about which little is known (Strauss & Corbin, 1998). Qualitative methods are used to understand a particular social situation, event, role, group, or interaction. A qualitative approach is an investigative process by which the researcher makes sense of a social phenomenon by contrasting, comparing, replicating, categorizing and classifying the object of study. The use of qualitative methods exposed the depth and breadth of participants' exercise experiences and enabled me to explore the ways different people make sense of their participation (Bogdan & Bilken, 1992). This method provided me with the opportunity to ask questions that emerged during the research process that helped clarify and enhance meanings about physical exercise.

Sample

Sample Selection Criterion

The sample for this study was drawn from 139 GoldCard-members of the Wellness Center, an exercise facility located in Southwest Virginia. Individuals who are 55 years of age or older are entitled to a GoldCard membership, which entails a 15% discount on yearly membership fees. Persons eligible to participate in this study had to be (a) community-living, (b) 65 years of age or older, (c) a member of the Wellness Center for at least six months prior to data collection, and (d) in attendance at the Wellness Center at least three times a week for at least 20 minutes per visit. The membership time requirement was included because researchers suggest that adherence to an exercise regimen often drops dramatically after the first six months of participation (Dishman, 1994; Gillett & Caserta, 1996). I based the frequency of participation criteria on the traditional

exercise prescription that emphasizes participation in physical exercise (vigorous or moderate) involving large muscles groups at least three times a week for 20 minutes each time (Bokovoy & Blair, 1994). After an extensive review of the Wellness Center's database, I found that 24 of the 139 members met all of the criteria for the study (See Table 1).

Exercise Participation Records

Frequency of participation information was gathered through a user login database at the Wellness Center. All participants swipe their membership cards on a computer activated login register as they enter the Center. When the membership card is swiped, the time, date, and name of the member are logged into the Center's daily log of participants. Thus, Wellness Center employees have an accurate and detailed daily account of members who attend the Center.

The Director of the Wellness Center provided me with a list of GoldCard members. From this list, I identified all members of the Wellness Center who are 65 years of age and older and extracted the date (month, day, and year) that each member joined the Center. For confidentiality reasons, this membership list could not leave the Wellness Center. This did not limit me in any way from finding the specific information that I needed to identify participants who met the criteria for this study. Although the membership list provided me with a great deal of information on each member, it did not describe how often these members attended the Wellness Center. The Director of the Wellness Center gave me permission to search the database for a detailed description of member's participation regimen. I spent approximately four hours searching the member login data to find all the people that met the age and membership criteria from the GoldCard membership list to discover if they also met the frequency criterion. The findings from the 55+ GoldCard membership list are provided in Table 1.

Sample Selection

I mailed each of the 24 Wellness Center members meeting the inclusion criteria a letter inviting them to participate in the study. The letter described the purpose of the study, methods, volunteer importance, and confidentiality assurance (Appendix A). In the invitation letter, participants were asked, if interested, to sign their name on the volunteer sign-up sheet that was located at the front desk in the Wellness Center. The sign-up sheet was left at the Wellness Center throughout the course of the study. One week after I sent the invitation letters I began telephoning each of the persons who signed up for the study. I discussed with them the details of the study and

answered any questions that they had. At that time, I also set up a date and time to conduct the interviews.

The older adults were told that the interview could be conducted at the Wellness Center or a place of their convenience. I also gave them a choice of interview days (Monday, Thursday or Friday); interview appointments were made at their convenience, not mine. The majority of the interviews were conducted either before or after participants' workout in order to eliminate any unnecessary outings. I asked all of the older adults to complete a preinterview checklist before the face-to-face interview. The purpose of this preinterview recall checklist was twofold. The checklist enhanced memory recall of participation in physical exercise and prompted participants to begin thinking about participation in exercise across the life course in preparation for the in-depth interview (Appendix B). I developed the checklist based on definitions of what activities constitute physical exercise found in the research literature. I asked participants to place a checkmark on the exercises that they participated in during adolescence (10-17), young adulthood (18-39), middle adulthood (40-64), and late adulthood (65+). Participants were asked to bring the recall checklist with them to the interview session. Immediately after scheduling a date and time to conduct the interview, I either mailed the pre-interview checklist with a reminder attached of the date and time of the interview or left it for the older adults at the front desk of the Wellness Center if they indicated that they would be attending the center the following day.

I waited approximately 10 days for volunteers to sign up for the study then I telephoned the participants that I had sent letters to that had not volunteered. I recruited six additional individuals who had not signed up for the study at the Wellness Center. I made two follow-up telephone calls and left several messages with the other nine participants that I had not heard from. Two of the nine individuals contacted me and thanked me for inviting them to be in the study but politely declined my invitation. The remaining seven individuals never returned my phone calls nor responded to the messages I left on their answering machines.

I telephoned participants the night before to remind them of the time of their interviews. All 15 interviews were conducted in a private office located at the Wellness Center. Interviews lasted between 30 and 95 minutes. At the start of each interview, participants read and signed an informed consent form that assured complete confidentiality of the interview content (Appendix C).

Table 1

Statistics from Wellness Center's 55+ GoldCard Membership list at the Wellness Center

Criterion	Men	Women	Total
Total members 55+	85	106	191
Members who are 65+	34	32	66
Members who are 65+ and members for at least six months	33	31	64
Members 65+, who are members for at least 6 months, and who frequent the Center at least three times a week	14	10	24

Sample Description

Fifteen older adults, nine men and six women, participated in this study (Table 2). They ranged in age from 65 to 75, with an average age of 71 years ($SD= 3.6$). All fifteen participants identified themselves as White; two participants were part Native American. All fifteen participants were married (four of the participants were married to each other); however, two had been previously widowed and had re-married. Six (40%) of the participants have an associates or bachelors degree, four (27%) reported having some college or post high school, three (20%) have a graduate or advanced degree, one (7%) individual went to high school education and one individual (7%) completed elementary school. Twelve of the respondents reported their occupation as retired and four were partially retired. The median yearly income of the sample was \$38,000-48,999. Seven (47%) of the participants rated their present health as excellent, four (27%) said their health was good, and four (27%) rated their health as fair.

I asked the older adults several questions about their membership and participation at the Wellness Center (Table 3). Participants' memberships ranged from two to eleven years, with a

mean of five years. The members frequent the Wellness Center from three to seven times per week ($M=6.2$, $SD=3.4$). Minutes spent exercising per visit ranged from 45 to 95 ($M=13.9$, $SD=7.4$). When I asked participants to rate their current level of motivation towards exercise on a scale from one to ten, with eight to ten being extremely motivated; 12 (80%) reported that they were extremely motivated and three (20%) were motivated.

I also asked the older adults several questions pertaining to their health. Six of the participants reported having surgery or being hospitalized in the last three years. One person reported that he currently is receiving physical therapy. Eight of the participants reported that their health problems do not stand in the way of them doing things they want to and six of the older adults believed their health problems stand in the way a little. Nine of the participants reported having no health limitations on their physical activity. The six remaining older adults reported having the following conditions that, at times, limit their exercise participation; arm/elbow injury, lower back pain, arthritis, calcium deposits, nerve damage, wrist/hand injury, chest pain, knee injury, and feelings of dizziness. Finally, I asked the older adults about their personal program exercise goals. Eleven of the participants' goals included maintaining health, weight loss or control, cardiovascular conditioning, stress reduction, increase strength, sports conditioning, motivation and increase flexibility. The other four older adults reported that they exercise solely to maintain their health.

The older adults' definitions of physical exercise became evident in the preinterview exercise checklist (Appendix B). To examine the areas in which they were most involved, the individual activities were summed and divided by the total number of activities within each main category. This was done for each category within each age group for each major activity heading. Table 4 shows the standardized means and standard deviations of the preinterview findings. How the older adults defined exercise during adolescence, young adulthood, middle adulthood and late adulthood was supported in their assessment of activities across the life course. During adolescence the older adults participated in farm work, games, school (i.e., gym class), organized sports and outdoor recreational sports for physical exercise. Young adulthood physical exercise was mainly sought through employment and exercise (i.e., aerobics, calisthenics), and during middle adulthood the older adults were engaged in yardwork, family responsibilities, and physician recommended therapy. Lastly, late adulthood exercise included house chores and formalized exercise at a health club. When I began this study, I was not expecting that the preinterview checklist would clearly

support the older adults' definitions of physical exercise across the life course. This was an unanticipated outcome that provided additional support of the study findings.

Data Collection Procedures

I obtained permission to conduct this research study from the Director of the Wellness Center and from the Virginia Tech Institutional Review Board for Research Involving Human Subjects. I conducted in-depth one-on-one interviews with both men and women participants to gather rich descriptive data that enhanced my understanding of the perceptions and meanings of physical exercise from the participants' perspectives (Bogdan & Bilken, 1998).

The Interview

In-depth interviewing is a data gathering technique that is used in both qualitative and quantitative research when the goal is to "collect detail, richly textured, person-centered information from one or more individuals" (Kaufman, 1994, p. 123). In-depth interviewing is used when the researcher wants to discover what is meaningful to the individual. The in-depth interview method allows the researcher to treat the interviewee as a human being, rather than merely as a study object.

Researchers have only begun to probe the factors that contribute to older adults' maintenance of physical exercise. The use of in-depth interviews provided me with the opportunity to gain a better understanding of how and why some older adults have maintained regular exercise across the life course while others have not. By using this method, I was able to capture older adults' personal histories of their engagement in physical exercise.

The interview questions were open-ended and designed to encourage older adults to discuss their experiences and perceptions of the influence of societal processes and opportunities and life course roles and transitions on their present day exercise participation. The interview questions and probes prompted participants to think about past and present life experiences, roles, and events that may have influenced participation in physical exercise. At the end of each interview, background and demographic information was collected from each participant (Appendix D).

Table 2

Background Characteristics of the Participants

Pseudonym	Age	Education	Health	Income
Alex*	72	high school	fair	\$38,000-48,999
Shirley	66	associates/bachelors degree	good	\$60,000+
Velma**	71	some college or post high school	good	declined
Henry**	76	associates/bachelors degree	fair	declined
Annette	74	associates/bachelors degree	good	\$60,000+
Don	69	associates/bachelors degree	good	\$38,000-48,999
Willy	72	some college or post high school	excellent	\$27,000-37,999
Ralph	68	associates/bachelors degree	good	\$27,000-37,999
Lee	67	elementary school	good	\$38,000-48,999
June*	66	graduate or advanced degree	excellent	\$49,000-59,999
Mary	75	some college or post high school	good	declined
Beth	67	graduate or advanced degree	excellent	\$60,000+
Bob	71	graduate or advanced degree	excellent	\$38,000-48,999
Jerry	75	some college or high school post	fair	\$16,000-26,999
Fred	65	associates/bachelors degree	fair	declined

Note. Four of the participants declined to give any information regarding their present yearly income.

* Married couple

** Married couple

Table 3

Wellness Center Participation

Participant	Age	Membership	Days a week at WC	Minutes Spent Exercising Per Visit	Motivation to exercise
Alex*	72	3 years	4-5	60-90	extremely motivated
Shirley	66	8 years	3	60-90	extremely motivated
Velma**	71	2 years	6	45	motivated
Henry**	76	2 years	6-7	70	motivated
Annette	74	5 years	5-6	80	extremely motivated
Don	69	3 years	5-7	65	extremely motivated
Willy	72	5 years	3	70-80	extremely motivated
Ralph	68	5 years	5	85	extremely motivated
Lee	67	11 years	3-5	85	extremely motivated
June*	66	4 years	3	60-90	extremely motivated
Mary	75	7 years	3	60-90	motivated
Beth	67	4 years	3	70-80	extremely motivated
Bob	71	9 years	3-5	60-90	extremely motivated
Jerry	75	5 years	5	95	extremely motivated
Fred	65	3 years	3-5	60-90	extremely motivated

* Married couple.

** Married couple.

Table 4

Activities Across the Life Course

Exercise Categories	Adolescence (10-17)	Young Adulthood (18-39)	Middle Adulthood (40-64)	Late Adulthood (65+)
House Chores				
Mean	.4133	.4933	.5467	.6533
SD	.3662	.3990	.3962	.3502
Farm Work				
Mean	.3667	.1833	.0500	.0333
SD	.3255	.3057	.1035	.0880
Yard Work				
Mean	.4664	.5200	.5867	.5200
SD	.2992	.3278	.2669	.2808
Games				
Mean	.5467	.1600	.0800	.0133
SD	.2669	.1882	.1656	.0516
School				
Mean	.4500	.1500	.0167	.0000
SD	.1402	.2070	.0646	.0000
Organized Sports				
Mean	.1889	.1111	.0222	.0000
SD	.2509	.1500	.0586	.0000
Family Responsibility				
Mean	.0000	.3333	.3778	.0889
SD	.0000	.1782	.2133	.1526

(table continues)

Table 4. (continued)

Exercise Categories	Adolescence (10-17)	Young Adulthood (18-39)	Middle Adulthood (40-64)	Late Adulthood (65+)
Employment				
Mean	.1333	.2889	.1556	.0222
SD	.2108	.3301	.2133	.0860
Outdoor Recreational Sports				
Mean	.3833	.3500	.2833	.1417
SD	.1201	.1902	.1201	.0645
Exercise				
Mean	.0778	.1111	.0777	.1000
SD	.0861	.1206	.1239	.1228
Physician Recommended				
Mean	.0222	.0222	.1333	.1111
SD	.0861	.0861	.2456	.2412
Formal Exercise at Health Club				
Mean	.0000	.0000	.4133	.5867
SD	.0000	.0000	.3335	.2560

Note. Standardized means.

Pilot Interviews

I conducted a pilot study to test the effectiveness of the interview protocol. I conducted two pilot interviews with a man and a woman at the Blacksburg Senior Center. Each of the participating individuals responded to open-ended questions designed for the interview process and were asked to fill out the preinterview checklist and a demographic questionnaire at the end of the interview. I

asked the two participants for any suggestions that they may have to help improve my interview format. The interviewees found some redundancy in the interview instrument. I proceeded by evaluating their suggestions and made necessary changes (i.e., eliminated or reworded questions) to the interview instrument and process. Although the pilot interviews were not used in the study itself, the process contributed to refining the interview guide and demographic worksheet.

Definition of Terms

Physical Exercise. For purposes of this research study, it was important to have a broad definition of physical exercise in order to gain a better understanding of what older people did for exercise before health clubs were popular and easily accessible. Within this broad definition of physical exercise, I considered active physical leisure, formal exercise (e.g., health club or outdoors), sport, occupational work, and domestic chores, together with other factors modifying the total daily energy expenditure. It was important for this research to combine all of the previously mentioned activities in the definition of physical exercise in order to assess the overall level of continuous engagement in physical exercise.

Stages of the Life Course. I was interested in understanding the meanings that older men and women give to exercise, and how these meanings have changed across these stages of the life course: adolescence (10-17), young adulthood (18-39), middle adulthood (40-64), and later adulthood (65 +). This break down of age groups was adapted from Daniel Levinson's model of adult development (1978, 1980, 1986, 1990) and Helen L. Bee's (1996) definition of adulthood.

Life Course Roles and Transitions. A role is a concept from sociology describing the expected behavioral and attitudinal content of any one social position, such as a teacher, mother, or employer. Life course transitions "refer to changes in status (most often role transitions) that are discrete and relatively bounded in duration, although their consequences may be observed over long time periods" (George, 1996). Examples of roles are worker and parent relating to the life course transitions of retirement and the empty nest period.

Societal Process and Opportunities. Societal process is important in understanding why people do what they do over the life course. Habitual exercise has been found to be largely related to socialization processes and opportunities which, at an early age, have the potential to affect the activities of people for the rest of their lives (Morris, 1991). Socialization processes refer to how people are introduced to or influenced into sport, play, and exercise by members of society, such as family, friends and peers. An opportunity is defined as a situation or condition favorable for

attainment of a goal. Examples of physical exercise opportunities are organized sports, such as baseball, hockey, kick the can, skating, and pick up ball games (Whaley & Ebbeck, 1997).

Data Analysis

Data analysis was based on a qualitative form of inquiry. The types of physical exercises and the meanings the participants associated with them were examined using an open-coding procedure. Open coding is part of the analysis process that pertains specifically to the naming and categorizing of phenomena through the close examination of data (Strauss & Corbin, 1998).

Each interview was audiotaped, listened to, and transcribed verbatim immediately after the interview to permit constant comparison and analysis during the interview process (Strauss & Corbin, 1998). I made corrections to the transcripts on the electronic copy and printed out the corrected copies of the transcripts. I then made a copy of each transcript and the original copies were securely stored in a locked file. I used the duplicate copy to analyze the data. Participant documents (i.e., preinterview checklist, demographic questionnaires, transcripts and tapes) were coded by number to help ensure confidentiality and anonymity. I was the only person who had access to the tapes containing the interviews. I also made field notes after most of the interviews to record my feelings about the interview session and the participants' participation in exercise.

I initially spent four days reading through each of the participants' transcripts without taking any notes. This allowed me to get a feel for the total data set. During the reading process, I recorded process notes about my interpretation of the data and my ideas about the themes I saw emerging at that point. I also made note of the theories that were related to each theme. I then read through the data set one more time and made a list of potential coding categories. At that point I developed a preliminary coding scheme including 30 coding categories grouped into 5 coding families.

After discussing the preliminary coding scheme with my advisor, I revised the coding scheme to include 20 coding categories grouped into four coding families (See Appendix F for final coding scheme). I then read through and coded the pilot study interview transcripts to determine if the coding scheme I developed could be used to characterize the data. After coding the two pilot study interviews, I believed that the coding scheme accurately fits the data.

Based on multiple readings of the older adults' transcripts, I used an open coding process to generate a comprehensive understanding of themes and patterns in the data (Bogdan & Bilken, 1998; Strauss & Corbin, 1998). I applied the coding scheme to the data by sorting the responses to

each of the interview questions and comparing them for similarities, differences, and contradictions. After coding each transcript, I created a document ordered by coding category and electronically moved all the coded text into that document. This was extremely helpful in that I had one document with all of the coded data arranged according to the coding scheme. I printed a copy of this document, which was 92 pages in length.

By using this method of data analysis, patterns across individual participants based on similar exercise history became evident via the individuals' words instead of through statistical procedure or subjective content analysis (Whaley & Ebbeck, 1997). The intent of this study was not to capture the actual experiences shared by older adults or to reduce the data into measurable, quantifiable categories such as might be done in a quantitative data analysis (Whaley & Ebbeck, 1997). In this study, I was interested in what the participants thought was important in their exercise history and what may have influenced their past and present exercise status.

Limitations of the Study

I relied on a convenience sample for my research and, thus the findings may not be generalized to the entire population of older adults. This sample was also at a socioeconomic advantage (\$44,000), compared to the average income of \$30,000 made by the rest of their older adult counterparts in this geographical location (Claritas, Inc., personal communication, April 8, 1999). However, the information learned from the participants can contribute a great deal to the exercise and aging literature as a representation of healthy, physically active older adults of good financial means.

Researchers often claim that older adults are not able to maintain mental records of activities in which they participate, nor do they always recall the extent of their participation in various activities. These retrospective problems are inherent in any type of research when individuals are asked to recall experiences from earlier life stages. Recognizing these limitations, I asked participants to complete a preinterview recall instrument to help facilitate recall of their participation in physical exercise during specific stages of life.

Finally, this study was conducted with a predominately white sample, which precluded examining ethnic or racial influences on exercise behavior. However, a person's race or ethnicity was not a criterion that needed to be met in this study. Participation in this study was open to anyone who met the study criteria. The racial mix at the Wellness Center can not be determined because there are no known statistics to identify race of Wellness Center members. Although there

are no statistics, due to the fact that I am a member of the Wellness Center, I have been able to conclude that the majority of the members are predominately white.

The sample of convenience was chosen due to the limited number of exercise facilities in this geographical area (Southwest Virginia). I am a member of the Wellness Center and have developed a good rapport with the Director, employees, and most importantly, with the members of the Wellness Center. I have become acquainted with, and befriended, several of the older adult members. Developing a strong level of rapport and trust with sample members can benefit the research. I believed that because the older adults are familiar with both my name and my face that this influenced their enthusiasm about and participation in this investigation.