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Time for exercise? : insights of retired women

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Time for Exercise?
Insights of Retired Women

by

Mary Ann O'Hanesian

An Abstract

of a thesis submitted in partial fulfillment

of the requirements for the degree of

Master of Science in Exercise

and Sport Sciences at

Ithaca College

September 1999

Thesis Advisor: Dr. Greg Shelley

ABSTRACT

Nine retired women were interviewed in a qualitative investigation of exercise participation during the one to three years following retirement. The study answered four research questions: 1. How does exercise participation change when women have more available time due to retirement? Women exercised more following retirement, but after factoring in a loss of occupational activity were only equally to slightly more active. Due to the option of exercising at preferable times of the day, they exercised more consistently, for longer periods, and enjoyed their participation more. 2. Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement? While working, the women had very structured days. In contrast, during retirement they found that when things got done was no longer important and that they did things more slowly and thoroughly. When planning their retirement the women wanted to be more active, but did not have specific plans about their exercise participation. 3. Where do retired women place exercise on a priority scale? Most women planned activities to do each day, but did not prioritize their exercise participation over other activities since they had time for everything. However, the most active women did prioritize their exercise. Active women also had more knowledge of the physical and mental benefits of exercise. Most of the women felt they should be exercising more. 4. What barriers to exercise do retired women feel? Mild temperatures, convenient facilities, and maintained places to walk positively contributed to participation. Travel, lack of experience, laziness, and health limitations were cited as barriers. Recommendations for future research and applications to promote exercise in retired women are also presented.

Time for Exercise?
Insights of Retired Women

A Thesis Presented to the Faculty of the
Graduate Program in Exercise
and Sport Sciences
Ithaca College

In Partial Fulfillment of the
Requirements for the Degree
Master of Science

by
Mary Ann O'Hanesian

September 1999

Ithaca College
Graduate Program in Exercise and Sport Sciences
Ithaca, New York

CERTIFICATE OF APPROVAL

MASTER OF SCIENCE THESIS

This is to certify that the Master of Science Thesis of

Mary Ann O'Hanesian

submitted in partial fulfillment of the requirements
for the degree of Master of Science in Exercise and
Sport Sciences at Ithaca College has been approved.

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Studies:

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July 15, 1999

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DEDICATION

This thesis is dedicated to Rosanne O'Hanesian with best wishes for a healthy and happy retirement.

TABLE OF CONTENTS

ACKNOWLEDGMENTS.....	ii
DEDICATION	iii
CHAPTER	
I. INTRODUCTION.....	1
Statement of Problem.....	5
Significance of Study	5
Research Questions	6
Delimitations.....	6
Limitations	7
Definition of Terms.....	8
II. REVIEW OF LITERATURE.....	9
Research Question 1: How does exercise participation change when women have more available time due to retirement?.....	9
Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?	11
Research Question 3: Where do retired women place exercise on a priority scale?.....	12
Research Question 4: What barriers to exercise do retired women feel?	15
Summary	18
III. METHODS.....	20
Research Design.....	20

	Sampling and Screening.....	21
	Subjects	21
	Data Collection and Recording Procedures	22
	Data Management and Analysis.....	23
IV.	RESULTS.....	25
	Research Question 1: How does exercise participation change when women have more available time due to retirement?.....	25
	Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?	30
	Research Question 3: Where do retired women place exercise on a priority scale?.....	34
	Research Question 4: What barriers to exercise do retired women feel?	39
	Summary	44
V.	DISCUSSION	47
	Research Question 1: How does exercise participation change when women have more available time due to retirement?.....	47
	Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?	51
	Research Question 3: Where do retired women place exercise on a priority scale?.....	56
	Research Question 4: What barriers to exercise do retired women feel?	60

VI.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	67
	Summary	67
	Conclusions.....	67
	Recommendations.....	68
APPENDICES		
A.	INFORMED CONSENT FORM	71
B.	INTERVIEW GUIDE	73
C.	RESEARCH QUESTIONS AND CORRESPONDING INTERVIEW GUIDE QUESTIONS.....	75
D.	OVERALL THEMES	77
E.	PATHWAY TO OVERALL THEMES FOR RESEARCH QUESTION 1	79
F.	PATHWAY TO OVERALL THEMES FOR RESEARCH QUESTION 2	80
G.	PATHWAY TO OVERALL THEMES FOR RESEARCH QUESTION 3	81
H.	PATHWAY TO OVERALL THEMES FOR RESEARCH QUESTION 4	82
	REFERENCES.....	83

CHAPTER I

INTRODUCTION

The way in which individuals fill their time is a complex interaction of intention, obligation, priorities, and habit. While everyone has the same amount of daily time to allocate to tasks and activities, choices and circumstances create an infinite number of possible combinations. When attempting to explain why an individual may or may not be involved in a given activity, the individual's relationship with time is a primary consideration.

Perceived lack of time is the most prevalent reason individuals give for dropping out of exercise programs and for maintaining an inactive lifestyle (Dishman, 1993). This is true among individuals who state an intention to exercise but ultimately do not (Godin, Shephard, & Colantonio, 1986), as well as individuals who would like to increase their current level of exercise participation (Yoshida, Allison, & Osborn, 1988).

Exercise professionals should take seriously the possibility that lack of time is a real deterrent to regular exercise participation. In a study of 20-49 year-old women, Verhoef and Love (1992) studied whether involvement in various social roles (i.e., employment, marriage and/or parenthood) had an impact on exercise participation. Based on a logistic model, parenthood was negatively related to exercise participation. In addition, these researchers studied what they termed role-related variables. Such variables included total hours spent on daily activities (i.e., job, housework, child care); amount of physical activity in daily activities; and role overload. "Feelings of overload referred to strain resulting from feelings of having

too much to do and not enough time to do it" (p. 368). These three role-related variables were negatively associated with exercising. In an overall model with both role and non-role related variables (i.e., interest in exercise, health status and social support), role overload remained a significant negative predictor of exercise participation as did perceived time barriers. In addition, role overload and perceived time barriers were predictive of the women being moderately versus very active. Of course, it is possible that time constraints and role overload result simply from poor time management skills in some individuals (Dishman, 1993).

People who intend to exercise and do not may have trouble meeting the time demands of exercise within an inefficient weekly schedule compared to those who intend to exercise and do (Godin et al., 1986). Further, the perceived ability to make use of one's time in a desired way is related to the trait of *self-efficacy*. Self-efficacy, a felt ability to exercise when faced with stress, social demands, or limited time, is the strongest predictor of exercise participation (Sallis et al., 1986; Sallis, Hovel, & Hofstetter, 1992). As a result, the relationship between time and exercise is mediated by intention, priorities, and self-efficacy.

One way to study the independent impact of available time on exercise participation is to discover if, when obligations change, participation also changes. If time is simply an excuse for lack of exercise participation rather than a barrier to participation, one would expect that when this barrier is eliminated other barriers would take its place. The added time available to retired individuals is an excellent context in which to examine the reality of time as a barrier to exercise participation. In a study of time use, Netz (1989) itemized how a sample of 167 individuals

preferred to spend their time and how they were, in fact, spending it. He then calculated the discrepancy between the individuals' desired use of time and their actual use of time. The discrepancy between actual and desired use of time was larger before retirement than after. This implied that during the retirement years people were spending more time doing what they desired. In addition, these findings indicated that the discrepancy between actual and desired use of time was larger for females than males. That is, females were spending at least part of their time in ways that they did not prefer. However, the investigator noted that this gender difference may have been confounded by education level since the male subjects in the study had a higher level of education.

The amount of time individuals spend on different activities is in turn related to priorities. This is clearly relevant with regard to exercise. Aging presents a situation where physiological deterioration is a reality. A decline in physical functioning is surely a primary concern to the aging individual. The health benefits of exercise are so well known that there is an inclination to believe that older individuals would want to engage in physical activities if given increased opportunity. In fact, women surveyed pre-retirement say they look forward to retiring to take on new activities, specifically active hobbies (Gigy, 1985).

People do have more available time when they retire. Based on the Americans' Use of Time Project conducted by the University of Maryland's Survey Research Center, lifestyles changed significantly following retirement (Robinson, 1991). On average, retirement freed up 18 hours a week for women and 25 hours for men. Some of this went into increased housework and personal care, leaving 15

newly available hours for men and 12 for women compared to their working counterparts. For the retiree, this time is open for activity. Robinson (1991) noted that employment, rather than age, is the major influence on older people's use of time. The way in which new activities become part of the retirees' lifestyle is in part related to priorities.

Not only does retirement present an opportunity to look at changes in time use among individuals, but retirement occurs at a time when exercise participation becomes particularly important to preserve functioning. "There is now a scientific consensus that moderate leisure time physical activity and occupational activity are associated with decreased premature mortality and increased health" (Dishman, 1993, p. 779). This consensus is made even more poignant by the finding that continued involvement in regular exercise preserves ability to undertake the functional activities of daily living and avoid institutionalization (Shephard, 1995). Being more active than one's peers and walking at least a mile a week were related to significant reductions in nursing home placement, annualized rates of hospital episodes, total length of stay, and total charges (Wolinsky, Stump, & Clark, 1995). Further, Peppers (1976) found that social and/or physical activities had the most positive effect of any activities on life satisfaction in retirees.

Despite the consensus on the health benefits of regular exercise and the inclination to believe that aging would create an incentive for participation, there is a startlingly low level of participation. The prevalence of vigorous and frequent activity is estimated at 10%, while the estimates of sedentary leisure time range from 30-60% (Dishman, 1993). Given the rapid growth of our aging population it is imperative to

understand the determinants of regular participation in physical activity for these individuals. “There remains an urgent need to determine the most effective methods of encouraging exercise in those who are over 65 years of age” (Shephard, 1995, p.300).

Statement of Problem

While research has documented both changes in leisure activities after retirement (Bosse & Ekerdt, 1981; Glasmer & Hayslip, 1985; Peppers, 1976) and barriers to exercise in older individuals (Jones & Nies, 1996; O’Neill & Reid, 1991), there is no information specifically addressing changes in perceived time barriers, and priority-setting, as related to exercise participation, following retirement. The influence of changing priorities following a change in available time on exercise participation is unknown.

Significance of Study

This study provided insight into the relationship between retirement and exercise participation. This information is important to those seeking to promote physical activity in the retiree. Such exercise promotion may be of interest to employers who are under increased incentive to promote well-being in their retirees since providing health care into old age is a large economic liability (Deobil, 1989). It is also worth noting that the influx of women into the work force during the past decades will cause the proportion of retired women to increase in the years to come (Gigy, 1985). For this reason, the unique insights of retired women are of particular interest. The way in which priorities and habits are established following retirement

may set a life-long post-retirement pattern. Therefore, the degree to which individuals prioritize exercise immediately following retirement is extremely relevant.

Research Questions

The following study examined four research questions related to the issues of perceived time barriers, priorities, and exercise participation following retirement.

1. How does exercise participation change when women have more available time due to retirement?
2. Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?
3. Where do retired women place exercise on a priority scale?
4. What barriers to exercise do retired women feel?

Delimitations

The following delimitations were specified as part of the research design.

This study was delimited to retirees who had retired from a full-time position in the past 1 to 3 years.

Retirees were ideal subjects for studying the relationship between increased time availability, prioritizing, and exercise behavior. Their recent change in available leisure time created an ideal context for discussing these issues. The researcher desired participants who were recently enough retired to recall their working experiences, as well as their transition to retirement. At the same time, it was important that the participants had settled into the routine of retirement through all four seasons, because seasonal variation impacts exercise participation (Mobily, Nilson, Ostiguy, & MacNeil, 1995).

This study was delimited to retired women.

The study focused on exercise behavior in women, because it was assumed that throughout their lives women engage in multiple roles as part of their social environment and may have felt particularly constrained by time and role overload prior to retiring (Verhoef & Love, 1992).

This study was delimited to women who currently worked in paid employment less than 10 hours a week.

It was desirable that the women did not have a large block of obligated time in their week, so that the contrast to their working years was maximized.

This study was delimited to women whose exercise participation during the last 5 years had not been limited in any way based on orders from a physician.

It was crucial that the women had the option to exercise. "It would be problematic to test a model of intentional behavior change with a sample that includes persons whose engagement in exercise is limited for health reasons" (Armstrong, Sallis, Hovell, & Hofstetter, 1993, p. 393).

Limitations

1. The sample was small and non-random.
2. The results were limited to the truthfulness and candor of the subjects' responses.
3. All of the interviews were completed in the summer, which may have influenced recall of overall exercise participation levels.

Definition of Terms

Retirement was defined as no longer being employed full-time in a job that used to be a career or long-term occupation.

Exercise was defined as any form of activity that could contribute to the improvement of fitness, physical performance, or health.

Interview Guide was defined as a set of questions written by the researcher for the purpose of promoting a semi-structured interview to answer the outlined research questions.

Phenomenology was defined as a type of qualitative inquiry that studies a small number of subjects to gather in-depth information concerning a specific experience.

CHAPTER II

REVIEW OF LITERATURE

An overall understanding of the impact of retirement on exercise participation begins with an understanding of retirement. Retirement has been described in the literature as a process (Minkler, 1981). The retirement event itself may be followed by a *honeymoon phase* that finds the individual positive and with a high level of activity. This may be followed by a *disenchantment phase*, which is characterized by letdown and despondency when problems such as financial concerns, health concerns, and loss of friends surfaces. Eventually, a retiree may reach a *reorientation and stability phase*, which is characterized by acceptance and adjustment to the retirement role and routine (Minkler, 1981). While these phases are not universal or of predictable length, they set a framework for considering the changes that recent retirees experience.

The following study examined four research questions related to the retirement experience. In particular, issues of perceived time barriers, priorities, and exercise participation following retirement were of interest. The review of existing literature was organized around the four research questions.

Research Question 1: How does exercise participation change when women have more available time due to retirement?

The results of existing research have documented consistent participation in physical activity before and after retirement (Glasmer & Hayslip, 1985), and even confirmed increased post-retirement participation in many cases (Bosse & Ekerdt, 1981; Midanik, Soghikian, Ransom, & Tekawa, 1995). However, this participation

varied a great deal from individual to individual within each study. A cross-sectional study compared the health behaviors of 320 HMO members who had retired in the past two years to the behaviors of 275 non-retired members. Retired subjects were more likely to report engaging in "regular exercise" (73%) than those who had not retired (53%) (Midanik et al., 1995). These data were based on self-report in response to the question, "Regular exercise: yes vs. no?" When separate analyses were performed for men and women, both showed significantly greater exercise participation in retirement.

A similar finding was documented by a longitudinal study. At a three-year follow-up, 125 male participants had been retired for one to three years. The retired men had a higher level of participation in physical activities after retirement than they did prior to retirement (Bosse & Ekerdt, 1981). However, the authors could not dismiss the possibility that this finding may have been due to other influences besides retirement. They did not compare the changes in physical activity in the retirees to changes in the continuing workers over the same follow-up period. Another caution associated with these results was that the authors only looked at changes in the group as a whole, so information regarding changes within individuals was not available. With the exception of physical activity, it was concluded that people maintain a perception of stable participation in leisure activities moving from the pre-retired to retired years. The authors concluded that the best strategy to encourage participation in activities may be to deepen existing leisure inclinations than encourage new ones.

Similarly, Peppers (1976) examined changes in the leisure activity participation of 206 male retirees through recall of pre-retirement experiences. The

results indicated a rise in the number of activities in which the men participated, but little change in the kind of activities (i.e., sedentary, active, social and isolate) before and after retirement. A more rigorous approach was taken by Glasmer and Hayslip (1985) who conducted a 6-year longitudinal study of 82 men who were primarily semi-skilled blue collar workers. They found a slight decline in the total number of activities after retirement and a pattern of stability in activities in the physical category (i.e., bowling, camping, fishing, gardening, golf, hunting, and odd jobs around house). Therefore these authors concluded that physical activity in retirement was related to pre-retirement participation. However, the authors clarified that this result primarily reflected the majority of people who did not participate in physical activities before or after retirement. For each individual there were some changes in activities. They took up new activities and dropped old ones. Robinson (1991) found that while older people were generally more sedentary than younger people, they did spend more time walking than younger people. In addition, there was no significant difference in time spent on outdoor sports, recreation, and hobbies in older individuals compared to younger individuals.

Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?

The perception of time is an interesting phenomenon. From the outside, retirement looks to offer ample time to pursue activities, and those who presume that they do not participate in activities because of time barriers believe that things will change after retirement. In the three-year longitudinal study mentioned above, "eventual retirees had tended to overestimate their future levels of social, physical,

and cultural activities relative to subsequent experience in retirement” (Bosse & Ekerdt, 1981, p. 653).

This was similar to the findings of Gigy (1985), who compared the attitudes of 25 women who were planning to retire and 30 women who had retired in the past two to five years. When asked about the benefits of retirement, 67% of pre-retired women mentioned the benefit of having free time to pursue activities, yet only 17% of retired women mentioned this. In terms of what they considered appealing about retirement, 61% of the pre-retired women responded it would be having enough time to pursue specific activities while only 24% of the retired women reported this. Rather, 52% of the retired women responded they most liked being free from fixed obligations so they could make their own schedules.

Research Question 3: Where do retired women place exercise on a priority scale?

The process by which exercise may move up and down in priority in one’s life was not specifically mentioned in the literature, but the process from intention to action has been studied. Authors have distinguished between factors influencing adoption of activity versus maintenance of activity (Dishman, Sallis, & Orenstein, 1985; Kendzierski, 1990; Marcus & Simkin, 1994; Sallis, et al., 1986; Sallis, et al., 1992). Central to moving exercise from an intention to an action were the beliefs and cognitive characteristics of the individuals involved (Kendzierski, 1990).

Intentions develop based on attitudes held by an individual. Kendzierski (1990) explained that intentions form through decision making or an evaluation of usefulness. In the case of exercise, intention could be formed based on an understanding of the health and wellness benefits of exercise participation. A study

of older workers and retirees in Canada identified several characteristics distinguishing individuals who indicated an intention to participate in a fitness program aimed at retirees from those who did not intend to participate (Godin, Beamish, Wipper, Shepard, & Colantonia, 1988). Those who indicated a willingness to be involved in the program tended to be older, female, and in clerical positions. Other relevant characteristics included not perceiving distance to the facility as a barrier and being a current member of the institution's athletic facility. Those willing to participate were also likely to have been involved in fitness activities during the past five years, yet felt their fitness was below average for their age group. In general, intentions have failed to predict subsequent exercise participation (Dishman, 1993).

Kendzierski (1990) did two studies aimed at understanding the relationship between intentions and the adoption of exercise behavior. The basis for each study was that, in order for an intention to be actualized, the intention must be strengthened and protected against interference until action is performed. Kendzierski's findings demonstrated that intentions predicted behavior only for individuals who displayed an intrinsic tendency to take action.

Godin et al. (1986) realized the importance of studying individuals who stated an intention to exercise separately from those who had no intention. Individuals who intend to exercise may be aware of the benefits of exercise and may differ from those who had weighed the pros and cons and still had no interest. Both Godin et al. (1986) and Kendzierski's (1990) revealed that research is necessary to address the process by

which intentions become strengthened and how real or perceived barriers influence action.

The step that can take one over barriers towards action is planning. Referring back to the work of Kendzierski (1990), a distinction between action oriented and state oriented individuals was made. *Action oriented* individuals focus on both present and future states and make plans to arrive at the future state, while *state oriented* individuals focus on past, present and future, but do not make plans for changing the present situation. Action orientation was found to moderate the relationship between intentions and behavior. As hypothesized in Kendzierski's (1990) study, exercise adoption and attendance at an aerobics class were predicted from intentions for action oriented but not state oriented individuals. College-aged subjects who had thought about and made plans to start an exercise program were more likely to have actually started an exercise program eight weeks later. Talking with family and friends also increased adoption, as did gathering information related to starting a program such as calling a fitness center. Planning was found to be important for both experienced and inexperienced exercisers, although talking with family and taking steps towards starting a program was significantly predictive only for experienced exercisers. This was presumably because experienced people knew what steps to take when starting a program.

Goal setting was also discussed in the literature. Personal goal attainment, satisfaction, and enjoyment of activities have been predictive of maintained participation in work site and gerontological exercise programs (Dishman, 1993). In Kendzierski's (1990) study, women who specified the number of aerobics classes to

attend in a time period attended very close to that number. Women who predicted class attendance attended more classes than those women with no specific number in mind.

Another comprehensive theory of change that was applied to exercise behavior is the transtheoretical model (Armstrong, et al., 1993; Marcus & Owen, 1992; Marcus & Simkin, 1994). In the transtheoretical model, individuals are said to progress through stages of precontemplation, contemplation, preparation, action, and maintenance during the process of changing a behavior such as exercise participation. A study by Armstrong et al. (1993), demonstrated that beliefs at a given stage were the basis for progression to the next stage. Subjects who reported no vigorous exercise at baseline were classified as either contemplators or precontemplators. Two years later these individuals were contacted and their exercise participation was assessed. The baseline classification of contemplator or precontemplator was a significant predictor of the adoption of vigorous exercise at the two-year follow up. This implied that individuals who at least thought about exercise were more likely to adopt such activity.

Research Question 4: What barriers to exercise do retired women feel?

Barriers to exercise, social support for exercise, exercise self-efficacy, benefits of exercise, and enjoyment of exercise were predictive of exercise participation in post-retirement adults (Schuster, Petosa, & Petosa, 1995). Situational barriers (i.e., convenience of facilities or weather) were consistently mentioned in the literature as reasons for inactivity. As with time, "perceived barriers were conceptualized as antecedents or cues for inactivity, but they could instead represent rationalization for

lack of activity” (Sallis et al., 1992, p. 248). Interestingly, convenient environments helped men begin to exercise, but they were not sufficient to create the frequency of exercise needed to achieve increases in cardiovascular fitness (Sallis et al., 1992). Patterns of activity across the United States implied that situational barriers such as weather and lifestyle may be influential. Adults in the West and Midwest were more active than adults residing in the South and East (Dishman, et al, 1985). The four most popular activities for older adults (i.e., walking, yard work, golf, and gardening) are the ones most affected by season (Mobily, et al., 1995). Comparatively fewer people do aerobics, calisthenics, cycling, dancing, or fitness/exercise, which are the activities less influenced by weather. This same study also concluded that if people were finding winter alternatives, they were more committed exercisers. If people did not exercise in warm weather, it was unlikely that they would participate in cold weather.

A change in routine was another potential barrier that could interrupt or end a previously continuous exercise program (Dishman, 1993). “Relocation, medical events, and travel can impede the continuity of activity reinforcement and create new barriers” (Dishman, 1993, p. 791). However, Dishman further stated that interruptions and life events had less impact as the exercise activity became habit and/or if the individual anticipated and planned for the change, recognized the interruption was temporary, or developed the self-discipline to stay active.

Investigators studying older adults living in senior housing developed a survey that included possible exercise barriers characterized as knowledge , psychological, physical health, and administrative barriers (O’Neill & Reid, 1991). Knowledge

barriers included barriers such as: "I don't have enough time; I do not need as much physical activity now that I am older; and There are many risks to my health if I get too active at my age" (p. 393). Examples of psychological barriers were: "I'm not disciplined enough; and I have worked hard my whole life and now I want to relax and do things I have always wanted to do" (p. 393). Physical health barriers concerned feelings such as: "I get tired easily; and My doctor told me to be careful and not to exert myself" (p. 393). Lastly, administrative barriers included: "It is too expensive; and Transportation is difficult" (p. 393). Of the 199 mostly female, subjects ranging in age from 55 to 90 years, approximately 87% of the subjects reported at least one barrier. Interestingly, 58% felt they were receiving enough exercise through their daily routine. This barrier was classified as a knowledge barrier. Knowledge barriers were the most prevalent barriers reported and were reported by 62% of the subjects. These researchers concluded that education on the importance of exercise was sorely needed (O'Neill & Reid, 1991).

Similarly, a study of 30 African American women aged 60 to 90 assessed the top benefits and barriers to exercise cited (Jones & Nies, 1996). The top barriers reported included: "Places for me to exercise are far away; I am fatigued by exercising; I think people in exercise clothes look funny; I am afraid to walk in my neighborhood; and Exercise is hard work" (p. 156). The top benefits cited were: "Exercise decreases feelings of stress and tension; I enjoy exercise; Exercise improves my mental health; Exercise increases my muscle strength; and Exercise is good entertainment" (p. 156).

Lack of exercise participation may also be self-perpetuating. One study found those who had not yet begun to exercise had little confidence in their ability to exercise and saw exercise as having nearly as many costs as benefits (Marcus & Owen, 1992). This may be particularly relevant to older women. Wilcox and Storandt (1996) studied 121 women aged 20 to 85 and found that age was negatively related to self-efficacy. Confidence in one's ability to walk, jog, lift objects, walk up stairs, and do sit-ups decreased with age. Yet, age had less influence on perceived self-efficacy towards walking than other exercises. These investigators also found that younger women had a more positive attitude towards exercise compared to older women who did not exercise. However, older women who did exercise had a positive attitude towards exercise despite age.

Summary

The research has documented consistent participation in physical activity before and after retirement (Glasmer & Hayslip, 1985), and even increased participation in many cases (Bosse & Ekerdt, 1981; Midanik et al., 1995). Retired women reported that they most liked retirement because retirement freed them from obligations and gave them choices of how to fill their time (Gigy, 1985). Older women reported many barriers to exercise including those characterized in the knowledge and psychology categories (Jones & Nies, 1996; O'Neill & Reid, 1991).

The inter-relatedness of barriers, intentions, and behaviors was apparent in the literature and fundamental to the present study. Self-efficacy is the trait that coalesces an individual's beliefs and behaviors. Self-efficacy is defined as a felt ability to exercise when faced with stress, social demands or limited time (Armstrong et al.,

1993; Sallis et al., 1992) or as having confidence in one's ability to perform physical activity despite various barriers (Marcus & Owen, 1992). Self-efficacy is a strong predictor of exercise behavior (Armstrong et al., 1993; Sallis et al., 1992). Clearly this trait has potential significance to moderating time use in recently retired women.

CHAPTER III

METHODS

A qualitative study of nine retired women ($n=9$) was conducted to describe common experiences related to exercise and retirement. The research design, subject selection, and data analysis are detailed in the following chapter.

Research Design

The research design did not attempt to document activity levels in retirees *per se*, nor to gather evidence in support of a particular hypothesis. Rather it was hoped that the findings would provide further understanding of relevant issues regarding exercise participation in the retirement years. Interest was not only in what the women did, but also why they did it. For this reason, a qualitative approach utilizing basic interviewing techniques was employed to uncover motivations and feelings that would not likely emerge in simple survey methodology. In particular, the researcher employed the techniques of phenomenology to gather in-depth information about a relatively small number of subjects. Qualitative techniques have been used by other researchers studying the retirement experience including phenomenological interviews (Gigy, 1985) and content analysis of written responses (Keddy & Singleton, 1991).

As interest was on current feelings and behaviors, as well as past feelings and behaviors, retrospective recall was employed. The delayed recall technique of collecting data on activity levels is the most practical and commonly used approach to assessing physical activity (Washburn & Montoye, 1986). The major problem potentially affecting this approach is a “social desirability bias” created by

respondents' belief that reporting increased activity is more desirable than acknowledging a decrease (Stephens, 1987). However, in the present study, many women were quite blunt about their lack of exercise participation. For this reason, the researcher concluded that such bias was not a significant concern in the present study.

Sampling and Screening

Nine women ($n=9$) were chosen by purposive sampling, namely through word of mouth. For example, the first participant gave the researcher the names of three potential subjects, two of whom eventually participated. Several participants were acquaintances of a family member or co-worker of the researcher. The women were contacted by telephone and asked the following inclusion and exclusion questions:

1. Have you been retired for 1 to 3 years? (Must answer YES)
2. Do you work in paid employment more than 10 hours a week? (Must answer NO)
3. Has your exercise participation during the last 5 years been limited in any way based on orders from your physician? (Must answer NO)

All of the women contacted met these criteria. The study was approved by the Ithaca College Human Subjects Research Committee and found to insure appropriate levels of confidentiality. Each participant signed an informed consent form (Appendix A) prior to being interviewed.

Subjects

The women had been retired from full-time positions an average of 1.7 years with a range of 1 to 3.5 years. There were two exceptions to this. Participant 8 had worked only four days a week during her last year. Participant 5 had retired from her full-time position four years prior and worked part-time until she retired completely

one year before the interview. For purposes of the study Participant 5 was classified as having been retired for one year, as this was when she moved to full retirement and the time period on which most of her answers were based. The women's previous occupations included: college professor; manufacturing supervisor; administrative assistant; elementary school teacher; bank teller; school nurse; coordinator at a non-profit agency; accounts processor; and secretary. The teacher and school nurse did not work in the summers.

The mean age of the subjects was 63.3 years with a range of 57 to 70. The mean body mass index was 25.7 (kg/m^2) with a range of 18 to 32. The women considered themselves to be healthy with a group average of 8.2 on a 10-point scale of perceived health. When asked how their doctors would rate them, the average rating was a bit lower at 7.9. Six of the nine women were married. All lived in the home they had inhabited for their adult years.

Data Collection and Recording Procedures

Once a participant's eligibility was established and she agreed to participate in the study, a mutually convenient appointment for the interview was set up. In all but one case, the interviews were conducted in the participants' homes. The interviews were based on an interview guide (Appendix B). The interview guide was created specifically for this study by devising questions of potential relevance to the four overall research questions. These questions were written down and then ordered in a way that would promote flow in the interview. After the first participant was interviewed, the researcher asked for feedback on the questions. As a result of this feedback, three additional questions were added. The interview guide effectively

created a semi-structured discourse, but did not confine the dialog or prevent it from taking potentially relevant tangents. The interviews lasted between 30 and 60 minutes and were tape-recorded. Following the interview, the women completed a form to record their demographic characteristics (age, height, weight, previous occupation, marital status and perceived health).

Data Management and Analysis

The data analysis followed the steps outlined below.

1. Interview tapes were transcribed verbatim.
2. A week following the interview each participant received her transcript in the mail and was instructed to make any additions and corrections desired. All but one participant made only minor changes mostly correcting very small facts (e.g., mileage on a trip) or grammatical mistakes. One participant made more in depth corrections to her transcript in an apparent effort to make it more concise.
3. The researcher edited the transcripts to incorporate the corrections made during the participants' review.
4. The interview guide questions were grouped in relation to the overall research question they were designed to answer. Appendix C contains the four research questions along with the corresponding interview guide questions.
5. The researcher summarized each woman's response to each interview guide question. This resulted in nine paraphrased responses (i.e., one for each participant) to each interview guide question. For this process the entire interview transcript was used. For example, if a comment that was relevant to a particular interview guide question was found somewhere else in the interview (i.e., as a

response to another question) the comment was also included in the paraphrased response described above.

6. Responses for each interview guide question were reviewed across participants to determine common themes.
7. Using the common themes for each relevant interview guide question, overall themes related to the four research questions were summarized and reported in the results under each respective question. See Appendix D. Steps 4 – 7 are summarized in Appendices E, F, G, and H.

CHAPTER IV

RESULTS

This study was designed to examine how retirement impacted a number of issues related to exercise participation in women. The findings were based on interviews of nine retired women. Using interview transcripts, the researcher isolated each participant's answer to each of the four interview guide questions. This resulted in nine paraphrased answers to each interview guide question. Answers for each interview guide question were reviewed for common themes, which were then grouped in relation to the research question they were designed to answer. Using these common themes, the researcher went on to summarize the overall themes that emerged in relation to each research question. This process is summarized in Appendices E, F, G, and H. Overall themes for each of the four research questions follow.

Research Question 1: How does exercise participation change when women have more available time due to retirement?

Theme #1: Women did more formal exercise (i.e., walking, attending a fitness center or class) after retirement than before retirement.

Six of the nine women indicated that they were engaged in more exercise-related pursuits post-retirement than pre-retirement. For example, Participant 1 stated,

So in the winter even before I retired, I joined the fitness club, but I would say that after I retired I was able to be more adherent to going. I would say I would probably average four times a week and sometimes more ... this winter when I was retired, versus probably two when I wasn't retired.

Participant 5 also noted more participation.

I usually walked in the evenings while I was working, but I didn't walk that much. But since I retired, I do the walking before I go swimming. So I usually walk from seven to eight; and then I come home and I'll eat a little breakfast; and then I'll go down to the Y from nine to ten.

Of the three women who did the same amount of exercise before and after retirement, two were very active both before and after retirement, and the other did not participate at all before or after retirement. None of the women indicated a decrease in exercise after retirement.

Theme #2: After retirement women had the flexibility to exercise at preferable times of day, which led to longer, more frequent, and consistent participation.

Many of the women enjoyed the option of exercising during the day when they would have previously been working. Several women specifically mentioned exercising in the morning. For example, Participant 3 stated, "Whereas my [exercise] classes used to be later in the afternoon because I was working, now I go in the morning." Participant 1 described her schedule change and its implications:

I could go at non-busy times now. Whereas ... when I went when I wasn't retired, I was going after work generally. And not only was I tired, but there were so many people there because all the students and all the people who worked would go. And you couldn't even get on the machines, and if you did it was just crowded and you felt rushed.... But [after retirement] we were able to go during the day when it was very uncrowded and it was much more relaxing and much more conducive to exercising maybe longer.

The option of exercising for a longer period was also recognized by Participant 5.

She mentioned this change, "The length of time that I walk now, I walk a lot longer."

Participant 4 summed up her experience when she said,

Well, I would say that I am now able to exercise on a more consistent basis because, of course, my time is my own now. I still need to work at achieving that, but the possibility is there.

Theme #3: Factoring in pre-retirement occupational activity, women's overall activity level after retirement was roughly the same to slightly greater than pre-retirement.

Five of the women were only slightly active through work-related tasks. These women sat at a desk or stood behind a counter and got up and down only to attend to some photocopying or a delivery. Two of the women were moderately active. For example Participant 4 said, "Well just in the regular workday, the way the [building] was laid out, it was a lot of walking just in a normal day." Two considered themselves very active in occupational related activities. Consider the comment of Participant 2. "I walked a lot, on concrete. I would say, without hesitation, I probably walked five miles a day." Similarly, when asked if she was physically active during the course of her workday, Participant 7 stated simply, "Very."

The women seemed to realize that there were both gains and losses in their activity level after retirement. When asked how their activity level had changed post-retirement, most paused to think. For example Participant 8 said,

And you know, when you sit here and think about it, I don't know what I do ... to put my finger on it. I'm repeating myself, but I don't sit all day. I mean, I'm usually putzing around doing something, maybe I'll go upstairs clean a closet.

Similarly, Participant 4 answered,

Course, well it's kind of hard to ... I would say now that I'm retired I'm engaged probably more in physical things, because I do all my own housework; and of course with the gardening--weather permitting; and having

time to choose when I want to go for a walk. Probably I would say I might be more active now than when I was [working].

Participant 3 acknowledged more specific trade-offs. She had walked to and from her parking lot every day when she worked.

Well even though I was [now] going [to the fitness center] every day, I thought, I'm still not getting that walk that I was getting. But I figured, well I was walking maybe three miles--no big deal--in the day. But that was three miles that I wasn't getting, so you know I've tried to ... But I do a lot of physical work around the yard.... I do that and I'm not sure sometimes whether I'm evening, if it's all evening out or not.

Subject 7 considered emotional as well as physical factors when describing changes in her activity level.

It's a different kind of active. I couldn't say more active. I got extremely tired when I was working, but some of that is emotional tired too.... It's a healthier active, I think. If that makes any sense.

Overall, six women said their activity level was the same to slightly greater after retirement. Two women said that overall they were appreciably more active after retirement. These women had been in sedentary jobs and then took up an appreciable amount of exercise following retirement. Only one woman said she was less active. She went from a physically active occupation to a relatively inactive retirement.

Theme #4: Women enjoyed their exercise participation more after retirement than before.

Being able to exercise in the morning and during the day increased the women's enjoyment of their participation. As mentioned above, after retirement Participant 1 attended the fitness center during the day rather than after work. She explained that this and being free from other obligations made her exercising more enjoyable.

The time of day has changed and probably the, well I wouldn't want to call it stress level, but the amount of stimulus that is going on around me when I am [exercising] has gotten less. As opposed to struggling to race to get to that machine before someone else gets it, I don't have to do that any more. And it's the same thing with golf. I don't have to feel like well I'm not [doing] whatever I am supposed to be doing.

Participant 5 sometimes walked in the evenings during her pre-retirement years. Now she consistently exercises in the morning.

I love the mornings. They're so peaceful and they're nice and cool, so you just ... I couldn't walk in the afternoon now. Maybe at night, but by nighttime, I'm more tired than I would be in the morning, so I try to do it in the morning.

Retirement also enabled some of the women to do activities that they found to be more enjoyable. Participant 6 went to the fitness center in the evenings when she worked, but after retirement started a consistent walking program with friends every weekday morning. "I personally prefer the walking. I feel I like that better than some of the other activities."

Theme #5: Housework and gardening provided the cornerstone of the women's daily activities.

Virtually all of the women mentioned housework and gardening when describing their exercise participation. All of the women lived in their own homes, some of which were quite large. Participant 4 explained her involvement in these activities.

In the summer, it's mostly gardening, working out in the yard.... I've kind of been saving the house cleaning and everything to do in the winter now, instead of in the spring, because I can do that. And I'd rather be outside in the good weather.... I had closets that had not been looked at in thirty years! The surface got done, but in the spring was really the only time I did the heavy house cleaning as such, because that was the only time I had.

Similarly Participant 7 said,

I will say that the house requires a lot of work. The yard requires work and things that I might have otherwise had help with, now I do myself. So, I always did my own housework ... yard work, that sort of thing. So it depends. This past year I've worked hard in the yard doing things in the house I didn't have time to do before.

Participant 3 also reported, "I do all my own gardening, so I do the lawn and I do the gardening.... I shovel. I do my own shoveling. I don't have anybody come and do it. I do that myself."

Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?

Theme #1: Women did not have specific plans concerning their exercise participation after retirement, but did have visions of being more active.

Most women thought somewhat about adding more exercise to their routine after retirement, but did not have any set goals. For example, Participant 4 said, "The physical activity was one of the things that I was serious about. Probably that and getting my cooking back on the track, I think, were probably the two." Participant 6 was a bit more specific.

Well I did know that I needed to do more exercising. I had planned on walking. I mean that was one thing I really liked. I thought maybe in the winter, I'd be going back to [the fitness center], which I didn't do that first winter or second winter. But basically that was it. And I wanted to travel and do things like that. No, I did not have any specific exercise in mind. I just knew it was good for me. You know the older you get, the harder it is to start doing it. You know when you're young you don't think about that, but when you get older and you think your life is passing you by. Better start getting active, more active than you were.

One woman was most definitive about her plans. "[After retirement] was when I was going to go [to the fitness center] every day!" And for the most part she did.

Three of the women said they had no thoughts of exercising more post-retirement. Two of these women said their retirement came on suddenly or was surrounded by stressful circumstances, so they did not think much about future plans. One of these was Participant 2.

Well I didn't really know. There was a lot of stress the past couple of years before I retired, and I didn't give much thought to retiring or anything else. I was just barely functioning emotionally. So I didn't think anything about it. All I knew is that I'd be out of that stress. I think that was the biggest thing ... to get out of the stress.

The second was Participant 7. When asked if she made any plans or resolutions for her retirement, she said, "No, I didn't. And I would suggest that anyone who is going to retire should! What can I tell you?" The other who made no plans did not have an exercise program before or subsequent to retirement. Participant 9 said, "No, I really didn't think of that."

Theme #2: Women felt that they had as much free time after retirement as they thought they would.

Most women seemed to interpret "having as much free time as they thought they would" to mean having time to do the things they wanted. Seven of the women answered that they did have as much free time as they thought they would. Subject 6 explained, "I feel I have more time now to do things I want to do."

Two women said that they didn't have as much time as they thought they would. Participant 4 cited the fact that she did things more slowly now.

Oh, probably not. I think you always anticipate having more time to do things than you actually end up having, and, of course, the fact that I'm doing things slower now and more thoroughly. But I'm satisfied with what I can accomplish.

Participant 1 noticed that her day could seem full due to a few strategically placed obligations.

No, I don't think so, no. I mean it's really easy to get those ... just like it was for those college students when they're freshmen, you get those little time blocks off because it is amazing how many people want to do things with you.

Theme #3: While working, the women had very structured days.

The women described their work days as very regimented. For example,

Participant 5 described her typical work day as follows:

I had a routine when I was working where I had to get up and get myself ready and do things that had to be done at home before I left for work. And then, of course, when I got home from work, I had to prepare supper and things that had to be done, you know.

Everyday tasks were highly organized. Participant 2 said, "I always knew what I was going to wear, and what I had to have done, and I had no time allowance. I couldn't *not* do it."

Theme #4: When things got done was no longer a major priority to the women.

This was an almost universal finding among the women. The women all used similar expressions to explain this newly found freedom from obligations and time constraints. Participant 2 said, "And now I can not do it! But for the most part I do it. It's just that I don't have that pressure of thinking I just have this time to do it in."

Similarly, Participant 6 said,

So I didn't get everything done today--do it next week! I can do that. I mean I would have been, I have to get this house all done today because I'm going to have ... work on Monday and whatever. But I don't feel that way any more. I don't know whether that's good or bad.

Theme #5: Women did things more slowly, more thoroughly and probably less efficiently after retirement than before.

When considering their time use, many women mentioned that they did things more slowly and thoroughly. Participant 8 concisely stated, "Whatever I do, I do a better job at it, and I enjoy it more." Similarly Participant 4 stated,

Oh I think I have a lot more time to reflect on things and enjoy doing things. Whereas before it was ... something else to get done, so let's just get it done. And simple things like really enjoying it when my kitchen floor is clean! You know just dumb things. And appreciating what I see when I'm walking. I think I just was kind of like someone with blinders on there at the end when I was working. I was just that, because it was taking up all my energy and everything else. So it seems good to know there's another world. It's always been there. I just forgot about it for a while.

Participant 1 described a loss in efficiency.

Instead of doing [social activities] in groups like we tended to do, because we were all in the same building ... now one person calls and we do something one day and another person calls.... I find I seem to do, like grocery shopping, instead of doing my one weekly grocery shopping, I tend to do it more often.

Theme #6: Most women had developed new interests or, at the very least, rekindled old interests.

Most of the new activities the women took up during retirement involved volunteer work, for example serving at a food kitchen or school cafeteria. In terms of exercise, only one woman did something totally new; she joined a swim group.

Participant 4 would like to start yoga, but since it was not offered in her town she thought that she might do it on her own with a video.

Theme #7: Women at times found themselves without enough to do.

Women mentioned the winter as being a time when it was more difficult to fill their days. For example, Participant 5 said,

Now there's even times, especially during the winter, when I get bored. I read a lot and then you watch TV, but you know you can just do so much of that. And you can get bored and you can get depressed if you just don't keep yourself active in different things.

Similarly, Participant 8 found the winter to be more difficult.

And then when you're retired, in the wintertime ... you're more confined to the house. And we do not spend an awful lot of time in the house in the summer. I mean we're out sitting on that porch ... or we'll water the plants.... But to be confined ... January, February, March, those are terrible months.

Some women balanced this tendency to feel bored or confined in the winter with more volunteer and club activities. Participant 3 explained,

And when it starts to get dark again ... when it starts getting dark around 4:30 or 5:00, I don't like that. It makes for a long evening.... Then you're picking up all your club activities.... They're more in the winter. They start in September, so it's a busier time.

Research Question 3: Where do retired women place exercise on a priority scale?

Theme #1: Women described their two highest priorities as first getting out of the house every day to do something active, and second doing things they wanted and enjoyed.

Most women were anxious to do things each day. Participant 1 explained.

Well I try to do something every day. I mean that is the way I kind of look at it. I try to do something probably at least an hour a day and a lot of the things I do aren't necessarily just straight exercising, but they're like moving and doing things that....

Similarly, Participant 7 said, "I try to leave the house at least once every day. I don't try, I do. I leave the house at least once every day to go get newspapers in the morning, to walk at night."

Participant 8 felt her desire to do something influenced her exercise participation during retirement. "I think I made more of a point of doing [an exercise video] after I

retired, 'cause I had ... the time and I just feel like I should be doing something. I don't feel that I should sit."

Other women described their priority as doing whatever they wanted. Participant 5 said, "If you feel like doing something you do it. If you don't feel like doing anything, you just don't do it. Which is kind of nice after so many years of having a routine."

Theme #2: Knowledge of the physical benefits of exercise and, in particular, the recognition that these benefits are related to aging corresponded to activity level.

The most active women knew the physical benefits of exercise first hand and could express them clearly. Many of the benefits these women mentioned were directly related to counteracting the effects of aging, namely arthritis. Participant 3 gave a long list.

[Exercise] is good for the circulation. Good to keep all the working parts going because arthritis can set in. It helps somewhat to control the weight. I feel a lot better mentally. For your breathing, for your heart, just for your mobility, for your balance, for your ... Hopefully reduce the possibility of osteoporosis.

Participant 5 was also very active and noted,

[Exercise] certainly does make you feel better ... Of course when you get older, you get in trouble with arthritis and it does help an awful lot with arthritis. I know I have trouble with my legs. But walking helps an awful lot. And swimming does too. It just helps keep your body fit, you know.

Participants 1 and 6 mentioned seeing beneficial results on laboratory tests, for example lowered glucose and cholesterol levels.

Less active women gave a more vague response to this question. Participant 8 responded,

Oh well obviously, it's better for your health. Ah, I don't know, it just makes you feel good. It makes me feel good. And really I just like to walk. And as I said, it's obviously better for your health.

Participant 2 who did not have an exercise program had this to say about the benefits of exercise.

I truly don't know. I've always been active, but never exercise-type active. I walked a zillion miles a day [when I worked], I didn't feel like I needed a whole lot more exercise than that. I don't know if there are. I suppose there are benefits. Probably strengthens your heart, but what good is that going to do if I'm going to sit here and smoke?

Theme #3: Women felt the mental benefits of exercise were important as well.

Interestingly, the mental benefits of exercise were mentioned as often as the physical benefits by the most active women. Participant 3 described why she became more active in her late adulthood.

Well part of it was that I went through a divorce, and I needed a physical outlet. I needed something to help me get through that. And that sort of got me started again on doing [exercise] a little more seriously. It began as a mental release and then it began to become more mental and physical.

Participant 7 explained the multi-faceted benefits of her exercise participation.

Oh, mental health is first. And then obviously, and then physical because of osteoporosis and trying to build bone mass.... That's been suggested to me that that's a problem. And I guess simply that you feel better. You know, the air and the whatever ... When I say mental health, it gets all the other concerns out of your head. It removes you from the four walls and it allows you to think about other things. For me, it's important.... So I mean the exercise accomplished a number of things for me, probably made me hook up with a neighbor, and physically I needed to do it. I knew I needed to do it.

Theme #4: Most women did not prioritize their exercise participation over other activities since they felt they had time for everything, but the women who did prioritize exercise were the most active.

Questions related to this theme were asked as a series of comparisons. For example, "If you had a given morning, which would be a higher priority exercise or housework?" Most women did not seem to relate to this scenario. That is, the women did not feel confined in this way and claimed that they only faced such choices in special circumstances. The response of Participant 8 was characteristic.

I don't know. That's a difficult question because I have time to do both ... I mean it's not like, well, do I have to let my house ... Probably doing the housework to keep the place clean and it's a big house ... But it's still kind of like I said, I don't feel that I have to prioritize. Normally, I don't feel like I have to prioritize those. [Is it more of a preference issue?] Yeah, I would let the exercise ... Yeah, because like I said, yesterday I had to get ready because I knew we were going to be gone. It was going to be a busy day. Yeah, if I have things that I feel have to be done, like you know, the tomatoes are going to be ready, and you have to get them done.

A few women mentioned placing less emphasis on housework since their houses did not require as much time after retirement as when they had families at home.

Volunteering was a time consuming part of the women's lives, but still left time for exercise. Participant 5 described this balance.

Well I think I have the time to take care of my volunteer, because I don't have that much at home that has to be done. Like I say, supertime I'll fix supper for us, but if we don't feel like, if I don't feel like fixing supper we might go out and have a hamburger. Meals aren't that big of a deal now with just the two of us.

The consistent exercisers did make exercise a priority. These women limited other activities or compartmentalized their exercise so there was minimal interference between it and other activities. Participant 3 had this to say.

My highest priority is to make sure I get exercise. That's to keep moving. I know I won't miss that. Other things will take ... will be secondary ... I could, you know it's very easy to say yes to belong to a lot of organizations, and I just decided I wouldn't do that. You know I've been asked, well why don't you join this club or that, the garden club or the women's club or something like that. And I decided no, because if I do that, that means I'm not going to exercise and I don't want to do that.

Participant 6 expressed a similar priority.

My highest priority, right now? The only thing that I make sure I do every single day, besides my three meals, is my walk.... The reason we do it early in the morning is so that we have time then during the day to do whatever else we want to do. That is usually the first thing I do in the morning. I just do it. It's just automatic.

Participant 1 specifically related her exercising to her priorities. "[Going to the fitness center] is something that I know I have to do to keep healthy and keeping healthy is one of my priorities since I chose to retire early."

Theme #5: Women felt they should be exercising more than they did and had beliefs about what their participation should be.

More than half of the women said they did not believe that they exercised enough. When asked if she exercised enough, Participant 8 answered,

Probably not, probably not. No, because twenty minutes to a half an hour a day, three or four times a week, I don't think that's enough. [I] probably should do more. But then I tend to get lazy too, you know.

Participant 9 said,

No, no. Probably mostly from what I know I should do ... Because I don't do any real exercise. I don't have any exercise program.... And I know I probably should.

Participant 2 who did not have a regular exercise program said,

Well I think I exercise enough for me, but I'm sure for the standards I don't.... Well you're always hearing about you need to do this and this and this, cardiovascular and all that. I don't do that.

The women also had beliefs about optimal forms of exercise and length of exercise duration. For example Participant 5 stated a belief about walking.

But I don't know if the length of time is as much a benefit as doing it, you know. If you walk for half an hour, I think it's just as much benefit as if you walk for an hour. You're still getting benefit because you are out exercising.

Participant 6 noted, "Well I think that I could possibly do other exercise besides walking. I mean more of the weight-type things. And I should add it to my exercise routine, but, truthfully, I haven't done it." Participant 8 mentioned this. "Walking is the best thing you can do. Swimming, I guess maybe, is better, but walking is very good."

Research Question 4: What barriers to exercise do retired women feel?

Theme #1: Women did not participate in athletics in their younger years.

Most of the women were not active in organized athletic programs in their younger years. When asked if she played sports when she was young, Participant 4 said,

Oh, no. No. No, I tried to get as far away from that as I could. No. I did some swimming and that was about it. Well, I would have to participate in Phys-Ed classes. But by choice? No way. I'm a good spectator!

Some of the women did not have the option. Participant 6 stated, "No, because when I went to school, I went to Catholic school, and we did not have any sports activities for girls. That's way back in the 50's - 40's actually." Along the same lines, Participant 7 said,

No, no. There were reasons why I didn't though. It wouldn't have been probably that I wouldn't have liked to, but the family situation was such that it wasn't possible then. So I think I probably would have liked to, but I didn't.

Maybe not surprisingly, the most active women did participate in their younger years. Participant 3 said, "I don't think I was an athlete, but I participated in a lot of sports. Yes, all through school. So I think I always liked physical activity." Participant 5 was also enthusiastic, "Oh yes, yes. I played volleyball in school. I bowled. I skated. I roller-skated. I ice skated. Everything!"

Theme #2: After retirement, women exercised both alone or at a scheduled time with others.

Two women said they exercised alone, and two said they exercised with others. Most said they did a combination of the two. Women's participation with others was related to some interesting issues. Some of the women with spouses mentioned that they wished their spouses were more active and that they could do more together. For example Participant 6 said,

And there are times when I'd like to do a lot more than I'm doing now. My husband isn't always able to do it and so I sort of step back. He's not physically able to do as much as I am. But he's been active all his life, I mean skiing and tennis and golf and basketball. I mean he's been extremely active in all of those things. So it's hard when you can't do that though.

On the other hand, Participant 9 credited her husband with making her more active.

I probably wouldn't do anything outside if it [weren't] because he [my husband] likes to. If I lived alone, I probably wouldn't have any flowers. But I do like to work with them now. But we work with them together, so it's something that we can do together, you know.

Participant 1 brought up an issue that was mentioned by a number of women, namely that most of her friends still worked.

Golf is something you usually do with one at least one or two other people.... I find since I retired early that more of my friends are still working than are retired. So it was a little bit more of a challenge. So I seem to be [golfing] more [in the summer] since people are [on vacation] and can do it with me.

Participant 2 had a very similar comment.

I would golf more often, but I don't know a lot of people. I worked for so many years in [town], that I never developed any kind of a social following [near home]. I don't really have anybody to golf with. If I did, I would golf more often.

The women who participated with others found it motivating. Participant 5 found that a scheduled activity with others was helpful.

Yes, I definitely do [think it makes me stick with it], because I know the girls that swim from that nine to ten, and that schedule, knowing the girls [are] going to want me to go down there...

Participant 6 also enjoyed the camaraderie. "I enjoy [walking] and I like doing it because I'm with my friends and we chat and all that kind of stuff. And the time passes quickly."

Theme #3: Mild temperatures in both summer and winter were very influential to exercise participation.

Many of the women truly enjoyed spending time outside in the summer.

Participant 3 said, "I just want to be outdoors as long as it's light. It's so nice and light until nine o'clock. I love it." Heat, however, was mentioned as a deterrent to exercising. Participant 8 lamented, "Ah, the heat the last couple of days. I mean when you get up in the morning and it's so hot and humid, I just haven't felt like [exercising]." Rain was also mentioned as a barrier.

Many of the women maintained their walking in the winter. When asked if winter was a deterrent to her walking, Participant 4 said, "No, not unless it's bitter cold. I am not that dedicated. But if it's in the thirties or whatever and the wind isn't

ghastly, why I can do that!” Participant 6 attributed the origins of her walking group to mild weather.

We started in the summertime.... I had a friend that retired a year after I did and because the weather was so mild, we were able to do it all winter.

Theme #4: Convenient facilities and maintained places to walk were conducive to exercising.

Facilities helped mediate problems due to the weather. For example, Participant 3 said, “I mean when it gets hot like this, I’m glad to go to an air-conditioned place to do [exercise], because the humidity really gets to me.”

Participant 4 said,

I enjoy walking at [the local college~campus], because it’s level and the pavement is safe and you aren’t going on cracks on the sidewalk and stuff. And I can do that even in the~winter because that’s so well maintained.

Participant 6 even mentioned the importance of gear for winter participation, “I have those boots you can wear to walk in.”

Lack of facilities was a barrier to exercise cited by two of the women.

Participant 8 attributed her inconsistent participation to inconvenience.

And not to have, to make an excuse either, but there are a lot of times I think if I had the facilities ... As you can see, this house is very old and doesn’t have like a basement-family room type thing. And so everything ... If you have your treadmill ... It is done right here. Now I’m not saying definitely I would do things different, but I’d probably, I probably would ‘cause I wouldn’t mind doing my treadmill. If I ... didn’t have to have it in the middle of the living room floor all the time, or in there on the carpet.... You know, it sounds like a flimsy excuse, but you know it’s not really an excuse. It’s the truth.

Theme #5: Self-discipline was a factor in participation.

Participant 5 explained the root of her consistent participation.

I'll tell you what. There are lots of mornings I'll be in bed and I'll say, "I don't know if I want to walk, maybe I'll just lay here for another hour." But I argue with myself and I'll tell myself, "Get up and get going!" So I get up and go. Now there's times I have to go someplace, like maybe out of town or something like that and then I won't walk. But I try. I force myself. Because it's so easy to just lay in bed and not do anything you know. And you can get in an awful rut by doing things like that.

Two inconsistent exercisers mentioned this tendency as well, but did not seem inclined to counteract it. Participant 8 said, "But then I tend to get lazy too, you know." Similarly Participant 9 attributed her lack of participation to physical limitations and "my laziness or something like that."

Theme #6: Women believed their physical conditions limited their participation.

Several women felt that their physical conditions made exercising problematic. Participant 2 summed up her exercise participation as,

Not a whole lot. I have an arthritic knee and unlike a lot of arthritics, exercise doesn't help. The walking is about the most I can do. I asked the doctor about riding a bike, and she said that wasn't really great. It's the motion that just aggravates it. It doesn't... It's like some things you can exercise out and it feels better. With me, it doesn't. It just makes it worse and then I'm laid up for a day or two.

Participant 4 also felt that her participation was limited by physical factors.

What I find myself doing in the summer is if I'm doing heavy cleaning or heavy gardening then ... Well actually there may be some physical basis for not then going for a long walk, because then my back does start to complain. And I try to listen, because if I don't, I end up going through a really bad session with it.

When asked if she had an exercise program, Participant 9 answered.

No, no, and probably the reason for that is that I have had both of my hips replaced. So it's difficult for me to walk and be on my feet for very long at a time ... That was, oh how many years ago, 1978, when I had that done. So, it's been quite a few years that I've been a little bit restricted as far as things like that go ... My legs aren't as strong as they used to be, but I can do most

things that I want to. But that's mostly the reason that I'm not real active in different kinds of exercise and that sort of thing. Like I couldn't play volleyball or anything like that now, because my legs won't stop me well enough, you know, when you need to stop. So I can't have any lunging or anything like that ... So that's mostly the reason that I don't, you know, at least walk or something like that is because of physical disabilities.

Theme #7: Travel had an influence on participation.

When asked what might keep them from exercising, two consistent walkers mentioned travel. Participant 5 said, "Now there's times I have to go someplace, like maybe out of town or something like that and then I won't walk." Similarly, Participant 6 said, "The only thing that would keep me from walking is if I were out of town."

Looking at travel from another angle, Participant 8 spent the winter in a warmer climate and felt that the change of scenery influenced her to exercise more.

And I love to walk, but I really ... I don't know why, I just don't do it. Now, we go [south] ... I walked almost everyday there around the campground, which was two miles.... I mean we did a lot of things different down there, both of us.

Summary

Research Question #1: How does exercise participation change when women have more available time due to retirement?

Women did more formal exercise (i.e., walking, attending a fitness center or class) after retirement than before retirement. Part of this was attributed to the fact that after retirement women had the flexibility to exercise at preferable times of day. Several women commented that this flexibility contributed to longer and more enjoyable participation as well. Women also did more housework and gardening post-retirement, which provided the cornerstone of their daily activity. Despite the

increase in participation, the women's overall activity level before and after retirement was roughly the same to slightly greater. This was due to the loss of occupational activity.

Research Question #2: Do women perceive their pre-retirement feelings about time and exercise differently post-retirement?

While working, the women had very structured days. When the women began thinking about retirement they did have visions of being more active, but did not have specific plans about what their exercise participation would be. Women felt that they had as much free time after retirement as they thought they would, but found their relationship with time to be much different. Many women mentioned that when things got done was no longer a major priority. Women also did things more slowly, more thoroughly and probably less efficiently after retirement than before. Most women had developed new interests or, at the very least, rekindled old interests, but the women varied with respect to the number of obligations they took on post-retirement. Several women mentioned that at times they found themselves having to make an effort to find enough to keep busy, especially in the winter.

Research Question #3: Where do retired women place exercise on a priority scale?

Women described their two highest priorities as first getting out of the house every day to do something active, and second doing things they wanted and enjoyed. Most women did not prioritize their exercise participation over other activities since they had time for both. However those who did prioritize, participated the most. The most active women also had the most knowledge of the physical benefits of exercise and recognized, in particular, that these benefits were related to successful aging.

These women also felt the mental benefits of exercise were important. Most of the women felt they should be exercising more than they did and had beliefs about what their participation should be.

Research Question #4: What barriers to exercise do retired women feel?

Several factors were mentioned as positively contributing to participation, for example mild temperatures in the summer and winter, convenient facilities, and maintained places to walk. Self-discipline was also an important factor. Travel was cited as a barrier, as was lack of participation in athletics in their younger years. In addition, several women believed their physical conditions limited their participation. A tendency to exercise either alone or with others was mentioned by some women as potentially positive and by others as limiting.

CHAPTER V

DISCUSSION

The results of this study provided a wealth of information regarding women's attitudes towards exercise participation in the one to three years following retirement. Although previous research investigated exercise levels before and after retirement, as well as perceived benefits and barriers to exercise in older adults, the present study added to the field of knowledge by using qualitative research to connect the two. Themes emerged that were related to changes in participation, priorities, and perceived barriers following retirement. This chapter discusses the overall themes that emerged from the study and how these related to the four research questions and the relevant literature.

Research Question 1: How does exercise participation change when women have more available time due to retirement?

The following themes provided information about this question.

1. Women did more formal exercise (i.e., walking, attending a fitness center or class) after retirement than before retirement.
2. After retirement women had the flexibility to exercise at preferable times of day, which led to longer, more frequent, and consistent participation.
3. Factoring in pre-retirement occupational activity, women's overall activity level after retirement was roughly the same to slightly greater than pre-retirement.
4. Women enjoyed their exercise participation more after retirement than before.
5. Housework and gardening provided the cornerstone of the women's daily activities.

While the study did not document exact levels of participation by the women, each woman was asked to describe her exercise participation before and after retirement. Most of the women described an increase in participation in formal

exercise pursuits (i.e., walking and fitness center participation) after retirement. None of the women in the present study claimed to do less formal exercise, however three did the same amount including one who did not participate before or after retirement. This finding was similar to the results of other studies that found increased rates of exercise participation after retirement (Bosse & Ekerdt, 1981; Midanik et al., 1995). In addition to standard exercise pursuits, the women indicated increased participation in popular activities such as housework and yardwork. In fact, walking, yard work, golf, and gardening have been found to be the top four activities for older adults (Mobily et al., 1995).

Speculation would lead to the conclusion that the retirement lifestyle was contributing to this increased participation. In terms of household activity, women who did not have the opportunity to do extra housework and gardening while they were working were making this a part of their lifestyle in retirement. Participant 7 stated, "The yard requires work, and things that I might have otherwise had help with, now I do myself."

Women who exercised consistently before retirement were also exercising more. Consider the comment by Participant 1.

So in the winter even before I retired, I joined the fitness club. But I would say that after I retired I was able to be more adherent to going. I would say I would probably average four times a week and sometimes more ... this winter when I was retired, versus probably two when I wasn't retired.

In this case, retirement was allowing the participant to deepen her previous commitment to exercise. Participant 4 described how she felt about her exercise participation before retirement.

So I was pretty consistent, not as consistent as I would have liked to have been. But that was kind of dropping off the last few years because I just didn't have the energy to do it after [work].

This comment implied that while Participant 4 had hopes of exercising consistently before retirement her lifestyle made it difficult for her. It is clear that after retirement Participant 4 was able to exercise more consistently. "Well I would say that I am now able to exercise on a more consistent basis because, of course, my time is my own now. I still need to work at achieving that, but the possibility is there." This comment conveyed the highly important point that the change in the women's exercise behavior following retirement was related to flexibility in scheduling and overall enjoyment. However, more time did not guarantee increased participation, but only made it possible.

After retirement women had the flexibility to exercise at preferable times of day, which led to longer, more frequent, and consistent participation. Women were, in fact, using their new flexibility to make exercising a more pleasurable experience. Due to the new freedom to exercise at different times of day and to do activities previously made impossible due to work obligations, the women enjoyed their exercise participation more post-retirement. This is highly significant since enjoyment has been predictive of exercise participation in post-retirement adults (Schuster et al., 1995). Similarly, personal goal attainment, satisfaction, and enjoyment of activities have been predictive of maintained participation in work site and gerontological exercise programs (Dishman, 1993).

However increased participation in standard exercise, housework, and gardening following retirement did not imply that the women were more active

overall. For example, two of the women who were very active during their pre-retirement workday and, as a result, did not exercise recreationally, began participating in some recreational exercise following retirement. This meant that in an analysis of exercise participation, their participation level was considered to have increased during retirement while their overall level of activity may or may not have changed. Based on the women's descriptions of their exercise participation, post-retirement exercise levels were also compared to total pre-retirement activity levels (i.e., formal exercise as well as occupational activity). This approach, as well as asking women directly how their activity level had changed, led to a similar conclusion. That is, there was a net equivalence to slight increase in overall activity following retirement. This implied that some women needed to increase their exercise levels during retirement just to make up for a loss in work-related activity. The available literature on changes in exercise participation following retirement does not specifically address this point. The message that retirees may need to compensate for loss of occupational activity with increased activity in other areas should be considered.

In summary, it appeared that following retirement women participated in formal exercise and house and yard related activities to a greater degree than they did pre-retirement due to their new flexibility in daily scheduling. Women who have had rushed or unpleasant experiences with exercise pre-retirement should be encouraged to try exercising again possibly at different times of day, such as in the morning, to make up for a loss in occupational activity.

Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?

Several themes were related to this research question.

1. Women did not have specific plans concerning their exercise participation after retirement, but did have visions of being more active.
2. Women felt that they had as much free time after retirement as they thought they would.
3. While working, the women had very structured days.
4. When things got done was no longer a major priority to the women.
5. Women did things more slowly, more thoroughly and probably less efficiently after retirement than before.
6. Most women had developed new interests or, at the very least, rekindled old interests.
7. Women at times found themselves without enough to do.

In retrospect, the women remembered their working day as very regimented with little time for non-essential activities. Lack of time is mentioned in the literature as being a barrier to exercise due to poor time management skills (Dishman, 1993). However, comments made by the participants in the present study make this unlikely, because as a group they were accomplished at managing their time. Participant 5, said,

You know when you're working, you have a routine and you... You think well I have to get this done and this done before I go to work. And then when you come back from work, you have to do things in order to get them done.

The women seemed organized and structured, and several were even able to maintain consistent exercise participation before retirement. However, for these women the experience was often rushed. Participant 3 described getting to her aerobics class. "So I would be out of work at 4:30 and sometimes I would, if I didn't have my clothes with me, I'd rush home and then I'd rush back again."

While the women gave up this highly organized structure in retirement, they still seemed somewhat aware of time and what they could accomplish in a day.

Participant 3 was particularly organized when managing her days.

I write everything down that I'm going to do in the day. I write usually the day before, write what I'm going to do the next day. That doesn't mean I'm going to do everything, but I write, kind of plan my day. I prefer it that way. I feel better about organizing my day. Otherwise I seem to fritter away my time.

Most women took a less structured approach, but seemed concerned about accomplishing something each day. When asked to describe a typical day, many said their days varied. However, by and large, most described a fairly uniform framework to the day. Participant 1 had a characteristic description of a typical day.

Now if I don't have anything like one of those meetings planned, I usually get up around 8 or 8:30 and I go out and get the paper and I have a dog and let her out for a walk and kind of just spend an hour or so maybe with the newspaper and listening to one of the news shows on the TV or the radio probably until like 8:30 to 10:00, if I have nothing planned. Just doing that and maybe a few house kind of chores picking up the house that kind of thing. And then usually about ten, I'll think about doing something else that needs to be done.

Many of the women used expressions of delight when describing how if they didn't do something today they didn't worry, because they could do it tomorrow.

This finding was reminiscent of Gigy (1985) who found that 52% of retired women claimed that what they most liked about retirement was being free from fixed obligations so they could make their own schedules. Participant 2 described the contrast between her attitude when she worked and her attitude during retirement.

[When I was working] I always knew what I was going to wear and what I had to have done and I had no time allowance. I couldn't not do it. And now I can not do it! But for the most part I do it. It's just that I don't have that pressure of thinking I just have this time to do it in. I think most working women are like that way.

This is an important comment when considering exercise promotion in this group. While there was time available for exercise, there was the possibility that the women could apply an “If not today then tomorrow” approach to exercising as they did to other activities such as housework. This phenomenon was not specifically mentioned in the literature concerning exercise participation during retirement and should be further examined.

Similar to other studies (Gigy, 1985; Netz, 1989), the participants in the present study expressed that after retirement they had time to do the things they chose to do. This was extremely important to the women. Participants in the current study clearly enjoyed being able to control their obligations. Participant 3 consciously kept her obligations under control so she could do what was important to her.

Well I think I had prepared mentally what I was going to do or what I would accept in the way of responsibility. So I feel like I've been careful about not taking on more responsibilities than I really want to do. And that will allow me free time to do the exercise, which was very important to me, and to do ... a little traveling. I wanted to do that, to be able to see my daughter. And then to do the things I want to do around the house.

Participant 5 consciously sought out obligations, as well as used self-discipline to keep her life full and stimulating.

I think when you're retired ... there are things you have to make yourself do regardless if they don't have to be done. But if you don't feel like there's just certain things that you should do, you could get awful awful lazy. You really could. So you really have to tell yourself that you're going to do different things. You know, whether it's volunteer work or whatever you're going to do.

As related to exercise promotion, these comments imply that different approaches to scheduling should be available to appeal to a range of tendencies. For

example, some women like having an activity that is consistently scheduled during the week. Others may resent this type of schedule, because they view it as an obligation, and may be more receptive to activities that can be done when they feel like doing them.

Most of the women did not have clear goals concerning exercise participation following retirement although they did think they would do more active things such as travel. Many also intended to pursue non-active interests. Gigy (1985) also found that pre-retired women looked forward to pursuing new activities, as well as active hobbies. The present study found that most of the women carried through on many, but not all of the activities they had hoped to do. Participant 9 said,

I had a few things that I wanted to accomplish like I would like to put all my recipes into ... some kind of a file and cross-index them. And I'd like to sort out my photographs and snapshots and that sort of thing. And I had a whole list of things that I wanted to do. And I've done quite a few of them. But I haven't done them all yet, but none of them are a big rush to get done either. But it's a good feeling to be able to do a lot of the things that you don't have time to do when you're working.

Participant 2 described her plans for retirement.

I was going to re-paper and paint the whole house! And do all kinds of stuff like that. Never been good at it, I don't know why I thought just because I retired I'd be good at it-like a lot of people... I thought I'd travel more and in fact I did.

These comments were somewhat reflective of the findings of Bosse & Ekerdt (1981) who found that future retirees tended to believe they would be involved in more activities after retirement than they, in fact, end up doing.

The women in the present study had only vague goals related to exercise participation during retirement and this was not related to participation levels post-

retirement. In previous studies, plans to exercise have been found to be predictive of participation. For example, one study found that subjects who had thought about and made plans to start an exercise program were more likely to have actually started an exercise program (Kendzierski, 1990). In the present study, only Participant 3 made a tangible goal about exercising, "It was when I was going to go every day!" While she was, in fact, one of the most consistent participants during retirement, others also participated to a significant degree despite the fact that they had not made highly specific plans. So for this group of women, the impact of making specific exercise goals is unclear. A confounding factor is that, for many, retirement comes on suddenly (Gigy, 1985), as was true in the present study with two women who so described their retirement. In this case the women were not able to plan or establish specific exercise goals.

Most women rekindled old exercise interests rather than taking up new ones. This was similar to the finding of a study (Peppers, 1976) that examined changes in the leisure activity participation of 206 male retirees through recall. There was a rise in the number of activities in which people participated, but little change in the kind of activities (i.e., sedentary, active, social, and isolate) before and after retirement (Peppers, 1976). In the present study, only Participant 5 began exercising in a completely different way from her pre-retirement habits. She joined a swim group. Participant 4 expressed an interest in learning yoga, but at the time of the interview had not done so. Still, these two women demonstrated that women may be willing to try new forms of exercise if given the opportunity.

In summary, these women were experiencing the opportunity to spend their time doing things they enjoyed. They were interested in having choices rather than obligations, and were not in a hurry to get things done. For the exercise professional this implies that promoting the pleasurable and self-indulgent aspects of exercise would be well received.

Research Question 3: Where do retired women place exercise on a priority scale?

The themes related to this question were as follows.

1. Women described their two highest priorities as first getting out of the house every day to do something active, and second doing things they wanted and enjoyed.
2. Knowledge of the physical benefits of exercise and, in particular, the recognition that these benefits are related to aging corresponded to activity level.
3. Women felt the mental benefits of exercise were important as well.
4. Most women did not prioritize their exercise participation over other activities since they had time for everything, but the women who did prioritize were the most active.
5. Women felt they should be exercising more than they did and had beliefs about what their participation should be.

The participants in this study believed that their priority was to be active each day and to do things they enjoyed. Most scheduled the day around doing something active. Participant 1 explained,

Well I try to do something every day. I mean that is the way I kind of look at it. I try to do something probably at least an hour a day. And a lot of the things I do aren't necessarily just straight exercising, but they're like moving and doing things. I'm not sitting in front of the TV or reading a book or whatever.

Participant 7 described having a similar priority. "I try to leave the house at least once every day. I don't try, I do. I leave the house at least once everyday to go get newspapers in the morning, to walk at night."

The interviewer asked specifically for a description of a typical day, and most women expressed how the days were filled rather than weeks. However, several women did do volunteer work, which also created a weekly structure. Participant 5 stated,

I volunteer. I will start in September. I volunteer up at the [high school] in the cafeteria. That's on Thursdays. And then on Wednesdays, I volunteer [at a program] for the little kids. And that's Wednesday afternoons. And then on Thursdays ... I give communion up at the [hospital] from our church ... and on Fridays, I work at the ... hospital.

The most consistent participants in the study exercised every weekday. The less consistent participants attempted to schedule their exercise on a weekly basis such as three or four times a week. This implied that retired women may be best served by a daily exercise regimen that is an integral part of their day rather than an obligation scheduled on a weekly basis. The impact of daily versus weekly exercise goals for the retiree is an important topic for future research.

When asked about prioritizing exercise within their day, many women questioned the whole premise of the inquiry. Most said they did not have to prioritize exercise over other activities such as housework, because they had time for both. Many said if they had to choose, they would choose exercise, but their descriptions of their participation did not necessarily reflect this. Rather, it was the women who clearly stressed that they did prioritize their exercise participation who were the most active. The literature did not directly mention the impact of prioritizing on exercise participation, but Kendzierski (1990) found that making plans was predictive of starting an exercise program in college students. This may be true for the retired population as well. Participant 8 felt she should exercise and felt she had the time,

but in terms of priorities she was inconsistent. Likewise her exercise participation was inconsistent.

I think I made more of a point of doing [an exercise video] after I retired, 'cause I had ... the time and I just feel like I should be doing something. I don't feel that I should sit... [Which is a higher priority doing your exercise or doing your housework?] I don't know. That's a difficult question because I have time to do both.... I mean it's not like, well, do I have to let my house ... Probably doing the housework to keep the place clean and it's a big house ... But it's still kind of like I said, I don't feel that I have to prioritize. Normally, I don't feel like I have to prioritize those. [Is it more of a preference issue?] Yeah, I would let the exercise....

The participants responses to the issues of prioritizing exercise presented an ironic situation that may be typical in this population. The sense that there was no need to prioritize was creating a situation where prioritizing was particularly crucial. Some of the women did not want to have priorities that would structure their days. Participant 4 clearly wanted to keep her life flexible.

I feel that I don't want to be committed to much of anything. I don't want to have to be here at a certain time, there ... there ... there ... there, because there was just too much of that in 30 years too. I just lived by the clock. And I want to be through with that.

The attitude of Participant 5 offered a nice balance.

The reason we [walk] early in the morning is so that we have time then during the day to do whatever else we want to do. That is usually the first thing I do in the morning. I just do it. It's just automatic.

Participant 5 described a situation where the exercise was scheduled but did not interfere. The comment, "It's just automatic," implied that she did not consider her exercise to be an obtrusive external obligation. Rather it just became a natural part of her day. An exercise promotion message for the retiree should convey the idea that prioritizing may be important to consistent participation.

Most of the women knew at least some of the benefits of exercise, but this knowledge was more specific in women who exercised a lot and presumably experienced the benefits firsthand. This finding differed from that of a study of older, mostly female Canadians ranging in age from 55 to 90 years, which found "knowledge barriers" to be the most prevalent barriers (O'Neill & Reid, 1991). Knowledge barriers included such beliefs as: I don't have time; I don't need as much physical activity as I get older; and there are too many risks to my health. This may imply that the retired population differs from the general population of older adults in their knowledge concerning health and exercise. The women in the present study were quite well informed. Participant 6 said, "I get some health magazines and other magazines to try to keep up on the latest. So I do think that helps." Participant 8 said, "And gosh with television, I mean that's all you see. Well not all you see, but like I said, we like to watch the Today Show. I mean, you know, they always have exercise segments and that type of thing." Dishman (1993) found that an understanding of the health and wellness benefits of exercise participation contributed to intention to exercise, but intention failed to predict subsequent participation. For the women in the present study, knowledge may indeed have promoted intention, and it seemed likely that experiencing the exercise benefits firsthand was what influenced adherence.

The psychological benefits of exercise were extremely important to the most active women. The four most consistent participants mentioned the mental benefits of exercise. Segebartt, Nieman, Pover, Arabatzis and Johnson (1988) did not find a direct relationship between habitual moderate exercise and psychological well-being.

However, the women in the present study clearly described such effects. Participant 5 described exercise as an antidote to depression.

I think being active helps your mind and your body. Because if you're not active, if you just let yourself mope around the house and don't do anything, then you're going to get in an awful rut.

Participant 7 had a lovely description of the psychological benefits she experienced.

Oh, mental health is first.... When I say mental health, it gets all the other concerns out of your head. It removes you from the four walls and it allows you to think about other things. For me, it's important.

Over half of the women in the study felt they should be exercising more. This differed from a previous study that found that 58% of subjects aged 55 to 90 felt they were receiving enough exercise through their daily routine (O'Neill & Reid, 1991). However, in this past study many subjects did not know the benefits of exercise while in the present study the women did.

In summary, most of the women were ambiguous about the need to prioritize exercise. The sense that there was ample time to do everything gave the women the feeling that they did not have to prioritize. Yet the women who did consistently exercise made it a priority, possibly because they were also the ones who experienced clear benefits. From a practical perspective, retired women need to be educated on the importance of consciously prioritizing exercise in their day.

Research Question 4: What barriers to exercise do retired women feel?

This question had several themes due to the wide variety of barriers cited.

1. Women did not participate in athletics in their younger years.
2. After retirement, women exercised both alone or at a scheduled time with others.
3. Mild temperatures in both summer and winter were very influential to exercise participation.

4. Convenient facilities and maintained places to walk were conducive to the women exercising.
5. Self-discipline was a factor in participation.
6. Women believed their physical conditions limited their participation.
7. Travel had an influence on participation.

Barriers to exercise have been studied a great deal (Dishman, 1993; Jones & Nies, 1996; O'Neill & Reid, 1991; Schuster et al., 1995; Yoshida et al., 1985). The present study found the following barriers most prevalent: absence of participation in younger years; lack of people to exercise with; extreme hot or cold weather; lack of facilities; physical limitations; and travel. A number of these barriers have been previously found to predict lack of regular exercise in post-retirement adults (Schuster et al., 1995).

The women in the present study did not participate in athletics in their younger years. At the time the participants were growing up, participation in sports by girls was not as prevalent as it is today. In fact, the two most active women were the only two who were enthusiastic about their participation in organized sports during their youth. This implied that lack of previous participation may have created a barrier to participation for many women. Interestingly, women have been found to feel confident of their ability to walk despite their age (Wilcox & Storandt, 1996), and indeed, walking was the most popular activity among the women in the present study. The increased exercise participation by young women in today's societies will presumably offer many more women an experience that may help them continue to be active as they age.

Women exercised both alone or at a scheduled time with others. The most consistent participants exercised at least partly with others and at a scheduled time.

Participant 1 explained how participating with another person influenced her adherence. "Whereas this past winter, I was able to [go with a friend] ... so I had double incentive, because if I didn't go she couldn't go, because I could drive her."

Participant 5 also found that exercising at a scheduled time with others gave her an incentive to participate.

Yes, I definitely do [think it makes me stick with it], because I know the girls that swim from that nine to ten, and that schedule, knowing the girls [are] going to want me to go down there...

Social support had a more encompassing influence than simply to promote scheduling. Social support within the family was particularly important. Participant 8 described an experience before retirement.

And I'm not a social person ... [My daughter and I] went down ... to the school and did the aerobics. But, you know, my daughter lived next door and we went together. But I don't do things alone.

This implied that her daughter was instrumental in her participation. Similarly, spousal support was mentioned. Two women wished their husbands would do more while one woman felt her husband promoted her activity and participation level.

Schuster et al. (1985) also found that social support was related to exercise participation in post-retirement adults.

Mild temperatures both in summer and winter, as well as convenient facilities and maintained places to walk were conducive to the women exercising. Weather was particularly influential. All of the women in the study lived in areas with relatively long and harsh winters. Mobily et al. (1995) demonstrated that the popular activities such as walking, yard work, golf, and gardening were the activities most affected by season. Seasonal barriers were mentioned in the literature, however

questions have been raised as to whether these were true causes of inactivity or rationalizations for lack of activity (Sallis et al., 1992). The present study was conducted in the summer and found that many of the women did, in fact, exercise. While some women mentioned heat as a deterrent, in all likelihood the summer weather was promoting the best case scenario when it came to participation. For many, the option of being outdoors encouraged participation. Participant 8 pointed out that when she spent the winter in a southern climate she walked every day. This would lead one to believe that, in part, weather was not simply an excuse since the women did choose to exercise when the conditions were favorable. The women who walked routinely claimed they were fairly consistent when it came to winter participation as well. However, this may be optimistic recall. In general, people who did not exercise in warm weather were unlikely to participate in cold weather (Mobily et al., 1995) and for these people weather issues may in fact be excuses rather than barriers. Similar to the findings of Mobily et al. (1995) few women in the present study did aerobics, calisthenics, cycling, dancing, or fitness/exercise, which are the activities less influenced by weather.

Self-discipline was mentioned by several women. This is related to self-efficacy, which is a felt ability to exercise when faced with stress, social demands, or limited time and is the strongest predictor of exercise participation (Sallis et al., 1986; Sallis, et al., 1992). Participant 5 described a strong sense of self-efficacy.

I'll tell you what. There are lots of mornings I'll be in bed and I'll say, "I don't know if I want to walk, maybe I'll just lay here for another hour." But I argue with myself and I'll tell myself, "Get up and get going!" So I get up and go. Now there's times I have to go someplace, like maybe out of town or something like that and then I won't walk. But I try. I force myself. Because

it's so easy to just lay in bed and not do anything you know. And you can get in an awful rut by doing things like that.

Women also believed that their physical conditions limited their participation.

Inclusion in the study required that the women had not been told by a doctor to limit exercise participation. However the women still cited health concerns as being barriers to participation. This may be a common finding in this population. O'Neill and Reid (1991) found that 40% of their subjects aged 55-90 reported limited exercise participation due to illness or handicap. In the present study Participant 2 said,

I have an arthritic knee and unlike a lot of arthritics, exercise doesn't help. The walking is about the most I can do. I asked the doctor about riding a bike and she said that wasn't really great. It's the motion that just aggravates it. It doesn't... It's like some things you can exercise out and it feels better. With me, it doesn't. It just makes it worse and then I'm laid up for a day or two.

Participant 4 had recently had surgery.

But then after I got home, the mind started going to work, like, how do you know this thing is really going to work? And do I dare do ... even [though] the doctors all assured me, go ahead and do anything you feel you want to do. You are fine. You are fine. But I had to come to learn that myself, and that took time.

As time went on Participant 4 said she became more confident. Participant 9 also attributed her lack of activity to her physical limitations.

My legs aren't as strong as they used to be, but I can do most things that I want to. But that's mostly the reason that I'm not real active in different kinds of exercise and that sort of thing. Like I couldn't play volleyball or anything like that now, because my legs won't stop me well enough, you know, when you need to stop. So I can't have any lunging or anything like that.

While Participant 9 may, in fact, have been physically limited, her last comment implied a lack of familiarity with exercise options. She had mentioned in her interview that she had played volleyball when she was young, which may have

influenced her perception. Perhaps she could have found a gentler exercise. While the women were not instructed by their doctors to limit their exercise, only one woman mentioned that her doctor encouraged her to exercise, to control her glucose level.

Travel also had an influence on participation. Research has demonstrated that a change in routine could interrupt or end a previously continuous exercise program (Dishman, 1993). The participants in the present study mentioned traveling as being a barrier, but those with consistent programs tolerated the interruption. This was consistent with the literature that found interruptions and life events to have less impact as the exercise activity became habit and/or if the individual anticipated and planned for the change, recognized the change as temporary, or had the discipline to become active again (Dishman, 1993).

Finally, time was not mentioned as a barrier to exercise by the women in the study. O'Neill and Reid (1991) also found that time was not a high ranking barrier in older adults. This was in contrast to findings in younger women that demonstrated total hours spent on the job, housework, and childcare negatively impacted participation (Verhoef & Love, 1992). In fact, for the retiree time availability may promote activity. Participant 8 said "Ah, I think I made more of a point of doing it [exercise video] after I retired. 'Cause I had, you know, I have the time and I just feel like I should be doing something. I don't feel that I should sit." Participant 4 said, "Well I would say that I am now able to exercise on a more consistent basis because, of course, my time is my own now. I still need to work at achieving that, but the possibility is there." This comment acknowledged that time was no longer a barrier

yet recognized that effort was still required to make exercise a consistent part of a lifestyle.

In summary, lack of previous experience with exercise created a barrier to participation especially with regard to the variety of activities attempted. Most women seemed to feel comfortable walking and felt convenient places to walk were conducive to exercise. Physical conditions were also mentioned as a prevalent barrier. A practical application of this finding is that education concerning various types of exercise, especially those appropriate for different physical limitations, is called for.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Years of work have made retired women effective at managing their time, yet somewhat skeptical of being over-scheduled during their retirement. The women were accustomed to daily activity and tended to create at least a loose structure in which to accomplish some physical activity each day. Their priority was to do things they liked and enjoyed. The women were generally informed about the benefits of exercise and were particularly positive about the mental benefits. Many had not participated in physical activities to a significant degree when they were younger. These factors should be considered when attempting to work with and promote exercise participation in this population.

Conclusions

The insights of the retired women in this study indicated that retirement is indeed a time for exercise. Most of the women were exercising to a greater degree post-retirement compared to pre-retirement. However, most of the women thought they should be exercising more. There is a need and opportunity to promote more varied and consistent exercise participation in retired women.

Four overriding issues related to promotion of exercise in this population were revealed by this study: 1. Retired women need to be educated to prioritize. Many women felt that because they had the time and freedom to do as they pleased, there was not a need to prioritize. In fact, those women who clearly prioritized their exercise participation were the most active. 2. Exercise professionals need to

recognize that lack of previous experience with exercise is a potential barrier to participation in this group. Many women felt comfortable walking, but may have been interested in trying other activities if given the opportunity and instruction.

3. The retired woman's preference calls for daily scheduling of exercise. They planned each day, rather than weeks at a time, with the objective of doing something active each day. 4. Exercise professionals need to promote the mental and personal benefits of exercise in this group. Retired women were very aware that they were experiencing a time in their life when they could do things for themselves and many have not previously had this opportunity due to work and family obligations. For this reason, the mental and personal fulfillment benefits of regular exercise are especially appealing to this group. Retirement is a drastic change for women and the unique situation apparently creates specific needs to foster exercise promotion in this population.

Recommendations

Based on the results of this study, the following issues may be important to the promotion of exercise in retired women. These ideas may also provide a foundation for future research in this area. It is recommended that each of the following issues be studied and more thoroughly examined in future research.

1. Promoting the fact that retirees need to make up for a loss of occupational activity may be important. This reminder may encourage them to form appropriately ambitious exercise goals.
2. Promoting exercise routines that are executed daily rather than three or four times a week may be important. Retired women plan their days and are searching for

something active to do every day. Activities that are not done daily may be put off since retirees feel if they do not do it today, they can do it tomorrow.

3. Promoting activities that become habit rather than feel like an external obligation may be important. Consistency may make exercise routine rather than an external obligation, and many retired women consciously avoid obligations since they had enough while working.
4. Promoting the need to prioritize exercise participation may be important. Retired women feel that the ample time they have post-retirement makes prioritizing unnecessary when exactly the opposite is probably the case.
5. Promoting ways to maximize the fitness benefits of housework and gardening may be important. Housework and gardening were considered a vital and enjoyable component of daily activity and may provide an excellent opportunity for encouraging exercise participation.
6. Promoting the fact that relocation to maintenance-free housing must be balanced with an increase in formal exercise may be important. Living in a high maintenance environment such as a large house promoted activity in the women.
7. Promoting exercise programs that are slow and stress-free may be important. Retired women like to do things slowly and thoroughly.
8. Promoting encouragement of exercise by physicians may be important. Doctors should specifically tell older patients that they can and should exercise.
9. Promoting the psychological benefits of exercise may be important. Women are perceptive to these benefits and find them important.

10. Promoting novel choices such as swimming and yoga may be important. Women are willing to try new activities if they are available.
11. Promoting types of exercise that show quick results may be important. Experiencing benefits is related to consistent participation.

Appendix A

Informed Consent Form

1. Purpose of the Study

This study is designed to identify important issues in women's participation in physical activities in the years following retirement. This information will provide insight about whether added leisure time impacts exercise participation and how patterns are developed following retirement.

2. Benefits of the Study

Your participation will provide you with the opportunity to discuss the role of exercise in your life. By sharing your thoughts and experiences you can help identify the issues that are important for making exercise a part of a retired lifestyle.

3. What You Will Be Asked to Do

This study will take approximately one hour of your time. You will be asked open-ended questions about your participation in leisure activities before and after your retirement. There are no right or wrong answers. The interview will be tape recorded. Following the interview, you will receive a typed transcript of your interview and asked to make any corrections or changes.

4. What Can You Expect to Happen as a Result of Your Participation

You and the interviewer will set up a mutually convenient time and place for the interview. Once the interview is conducted and you have verified a transcript of your interview, your participation will be complete.

5. If You Would Like More Information About the Study

The interviewer welcomes any questions and comments you may have. Mary Ann O'Hanesian can be contacted during the day at 274-1250 or in the evenings at 277-7331. Dr. Greg Shelley is the faculty advisor on this study and can be reached at 274-1275.

Initial here _____

6. Withdrawal from the Study

There is no penalty for withdrawing from the study. You are free to skip any of the questions asked during the interview. Likewise, you are free to change your mind about participation in the study or use of your comments at any time during or after the interview.

7. How the Data Will be Maintained in Confidence

Tapes of the interview will be kept in a locked location. All information collected during the interview will be held in complete confidence. This means that the transcript of your interview will be read only by the interviewer and her graduate thesis advisor. Your comments will then be mixed with other subjects' responses for analysis and presentation. Your name and/or any other identifying characteristic will never appear on any document or transcript.

I have read the above and I understand its contents. I agree to participate in the study.

Print or Type Name

Signature

Date

Specifically, I agree to have my interview tape recorded for data collection purposes.

Signature

Date

Appendix B

Interview Guide

1. What was your previous occupation?
2. What was a typical day/week like when you were working?
3. How long have you been retired?
4. What is your typical day like now?
5. How active were you during your working day?
6. What is your highest priority in a usual day?
Is this something you like to do or have to do?
7. How about when you were working?
8. What do you feel are the benefits of exercise?
To you personally?
How about as you get older?
9. Describe your exercise habits now and before you retired.
10. Did you exercise in your teens and early adulthood?
11. How has your participation now been influenced by this participation or lack of participation?
12. Which do you consider a higher priority in your day:
Exercise or housework?
Other hobbies or exercise?
Downtime (TV, reading etc.) or exercise?
13. Do you think you exercise enough?
14. Do you exercise with others or alone?

15. What factors influence whether or not you exercise?
16. In what ways do you see your exercise participation having changed since you retired?
17. At the time of retirement did you make any plans or resolutions about exercising after retirement?
18. Do you feel like you have as much free time now that you've retired as you thought you would before you retired?
19. How do you see your use of time now compared to when you were working?
20. Have you developed any new interests since you retired?

Appendix C

Research Questions and Corresponding Interview Guide Questions

Overview

- A. What was your previous occupation?
- B. What was a typical day/week like when you were working?
- C. How long have you been retired?
- D. What is your typical day like now?

Research Question 1: How does exercise participation change when women have more available time due to retirement?

- E. How active were you during your working day?
- F. Describe your exercise habits now and before you retired.
- G. In what ways do you see your exercise participation having changed since you retired?

Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?

- H. At the time of retirement did you make any plans or resolutions about exercising after retirement?
- I. Do you feel like you have as much free time now that you've retired as you thought you would before you retired?
- J. How do you see your use of time now compared to when you were working?
- K. Have you developed any new interests since you retired?

Research Question 3: Where do retired women place exercise on a priority scale?

- L. What is your highest priority in a usual day?
Is this something you like to do or have to do?
- M. How about when you were working?
- N. What do you feel are the benefits of exercise?
To you personally?
How about as you get older?
- O. Which do you consider a higher priority in your day:
Exercise or housework?
Other hobbies or exercise?
Downtime (TV, reading etc.) or exercise?
- P. Do you think you exercise enough?

Research Question 4: What barriers to exercise do retired women feel?

- Q. Did you exercise in your teens and early adulthood?
- R. How has your participation now been influenced by this participation or lack of participation?
- S. Do you exercise with others or alone?
- T. What factors influence whether or not you exercise?

Appendix D

Overall Themes

Research Question 1: How does exercise participation change when women have more available time due to retirement?

1. Women did more formal exercise (i.e., walking, attending a fitness center or class) after retirement than before retirement.
2. After retirement women had the flexibility to exercise at preferable times of day, which led to longer, more frequent, and consistent participation.
3. Factoring in pre-retirement occupational activity, women's overall activity level after retirement was roughly the same to slightly greater than pre-retirement.
4. Women enjoyed their exercise participation more after retirement than before.
5. Housework and gardening provided the cornerstone of the women's daily activities.

Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?

1. Women did not have specific plans concerning their exercise participation after retirement, but did have visions of being more active.
2. Women felt that they had as much free time after retirement as they thought they would.
3. While working, the women had very structured days.
4. When things got done was no longer a major priority to the women.
5. Women did things more slowly, more thoroughly and probably less efficiently after retirement than before.
6. Most women had developed new interests or, at the very least, rekindled old interests.
7. Women at times found themselves without enough to do.

Research Question 3: Where do retired women place exercise on a priority scale?

1. Women described their two highest priorities as first getting out of the house every day to do something active, and second doing things they wanted and enjoyed.
2. Knowledge of the physical benefits of exercise and, in particular, the recognition that these benefits are related to aging corresponded to activity level.
3. Women felt the mental benefits of exercise were important as well.
4. Most women did not prioritize their exercise participation over other activities since they felt they had time for everything, but the women who did prioritize exercise were the most active.
5. Women felt they should be exercising more than they did and had beliefs about what their participation should be.

Research Question 4: What barriers to exercise do retired women feel?

1. Women did not participate in athletics in their younger years.
2. After retirement, women exercised both alone or at a scheduled time with others.
3. Mild temperatures in both summer and winter were very influential to exercise participation.
4. Convenient facilities and maintained places to walk were conducive to exercising.
5. Self-discipline was a factor in participation.
6. Women believed their physical conditions limited their participation.
7. Travel had an influence on participation.

Appendix E: Pathway to Overall Themes for Research Question 1

Research Question 1: How does women's exercise participation change when women have more available time due to retirement?	Interview Guide Questions	Responses	Common Themes	Overall Themes			
How active were you during your working day?	Participant 1 Participant 2 Participant 3	↗ ↗ ↗	Not/Slightly Active (1,3,5,8,9) Moderately Active (4,6) Active (2,7)	<u>Pre-retirement exercise level</u> Not active (2,7,9) Slightly active (4,5,8) Moderately active (1) Very active (3,6)			
			Participant 9		↗	<u>Working</u> No exercise participation (2,7,9) Tried to do golf and bowling leagues, but it didn't work with schedule (2) Went to fitness center after work a few to several times a week (1,3) Went to fitness center in the evening with husband (6) Walked from parking lot more than a mile each way (3) Walked with co-workers at lunch (3,4) Walked on the weekend (4) Walked in the evenings (5,6) Used fitness machines at home (4,7) Exercise participation dropped off in last years of working (4) Went to aerobics or fitness center, but stopped (4,8)	<u>Post-retirement exercise level</u> Not active (9) Slightly active (2) Moderately active (4,8) Active (1,7) Very active (3,5,6)
						Participant 1 Participant 2 Participant 3	
	Participant 9	↗ ↗ ↗		<u>Exercise post-retirement vs. pre-retirement</u> More active (1,2,4,5,7,8) Same (3,6,9)			
			Participant 1 Participant 2 Participant 3		↗ ↗ ↗		<u>Exercise post-retirement vs. pre-retirement factoring in occupational activity</u> More active (1,5,8) Same to slightly more (7) Same (3,4,6,9) Less active (2)
						Participant 9	
	Participant 1 Participant 2 Participant 3	↗ ↗ ↗		<u>Housework and gardening provided the cornerstone of the women's daily activities.</u>			
			Participant 9		↗ ↗ ↗		<u>Women did more formal exercise (i.e., walking, attending a fitness center or class) after retirement than before retirement.</u> After retirement women had the flexibility to exercise at preferable times of day, which led to longer, more frequent, and consistent participation. Factoring in pre-retirement occupational activity, women's overall activity level after retirement was roughly the same to slightly greater than pre-retirement. Women enjoyed their exercise participation more after retirement than before.
						Participant 1 Participant 2 Participant 3	
Participant 9	↗ ↗ ↗	<u>Women did more formal exercise (i.e., walking, attending a fitness center or class) after retirement than before retirement.</u> After retirement women had the flexibility to exercise at preferable times of day, which led to longer, more frequent, and consistent participation. Factoring in pre-retirement occupational activity, women's overall activity level after retirement was roughly the same to slightly greater than pre-retirement. Women enjoyed their exercise participation more after retirement than before.					

Appendix F: Pathway to Overall Themes for Research Question 2

Research Question 2: Do retired women perceive their pre-retirement feelings about time and exercise differently post-retirement?

Interview Guide Questions	Responses	Common Themes	Overall Themes
At the time of retirement, did you make any plans or resolutions about exercising after retirement?	Participant 1	No (2,7,9) Kind of (1,6,8) Yes (3,4,5)	
	Participant 2	Looked forward to doing more active things (1,5) Planned on going everyday (3)	↗
	Participant 3	No plans just wanted to be out of the stress (2) Serious about physical activity, but no specifics (4) Considered a few specific activities, but no real plan (6) Thought about it (8) Retirement came suddenly, no plans, but should have (7) No plans (9)	
	Participant 9	No (1,4) Yes (2,3,5,6,7,8,9)	
Do you feel like you have as much free time now that you've retired as you thought you would before you retired?	Participant 1	Day seems to fill in (1,7) There are certain days that are too busy (2) Consciously keep from having too many obligations (3,4) Do things more slowly now (4) Can do what's important to me (6,7) Sometimes need more to do (5,6,8) Have some obligations, but not too restrictive (9)	
	Participant 2	If I didn't do it today, I'll do it tomorrow (2,5,6,7,9) Have more choices (1,3,5)	
	Participant 3	There is now time between activities (1) Less efficient/organized, but still accomplish (1,2,7) Write notes to organize days (2,3) Efficient and organized (3)	
	Participant 9	Try to keep from having too many obligations/pressures (3,4) More time to reflect, enjoy, and nurture (4,7,8) Do things more slowly and thoroughly (4,5,8,9)	
How do you see your use of time now compared to when you were working?	Participant 1	No (1,8) Yes (2,3,4,5,6,7,9)	↗
	Participant 2	Pursuing previous interests in more depth (1) Just haven't done anything new (8) Gardening (2,3,7,9) Volunteering (3,4,5,6) More traveling/visiting (2,3,5,7) Rekindling old hobbies (2,3,4) Educational activities (3,6,7) Have some ideas for new pursuits (4,6,7) Contract work (2)	
	Participant 3		
	Participant 9		
Have you developed any new interests since you retired?	Participant 1		↗
	Participant 2		
	Participant 9		

Women did not have specific plans concerning their exercise participation after retirement, but did have visions of being more active.
Women felt that they had as much free time after retirement as they thought they would.
While working women had very structured days when things got done was no longer a major priority to the women.
Women did things more slowly, more thoroughly and probably less efficiently after retirement than before.
Most women had developed new interests or, at the very least, rekindled old interests.
Women at times found themselves without enough to do.

Appendix G. Pathway to Overall Themes for Research Question 3

Research Question 3: Where do retired women place exercise on a priority scale?

Interview Guide Questions	Responses	Common Themes	Overall Themes
What is your highest priority in a usual day?	Participant 1 Participant 2 Participant 3 Participant 9	Things for myself or things I enjoy (1,2,4,5,6,7) Doing exercise or something active (1,3,4,6,7) Getting out of the house and doing something everyday (1,7,8) Volunteer work (1) Eat regularly (6,7) Babysitting (9) Drinking coffee and reading the paper (9) No priority (2) House chores (2)	
What do you feel are the benefits of exercise? To you personally? How about as you get older?	Participant 1 Participant 2 Participant 3 Participant 9	Physical benefits (1,6,8,9) Physical and mental benefits (3,4,5,7) I don't know (2)	Women described their two highest priorities as first getting out of the house everyday to do something active, and second doing things they wanted and enjoyed. Knowledge of the physical benefits of exercise and, in particular, the recognition that these benefits are related to aging corresponded to activity level. Women felt the mental benefits of exercise were important as well. Most women did not prioritize their exercise participation over other activities since they had time for everything, but the women who did prioritize exercise were the most active. Women felt they should be exercising more than they did and had beliefs about what their participation should be.
Which do you consider a higher priority in your day: Exercise or housework? Other hobbies or exercise? Downtime (TV, reading etc.) or exercise?	Participant 1 Participant 2 Participant 3 Participant 9	<u>Exercise or housework:</u> Housework (4,8) Exercise (3,5,6,7) Can do both (7,8) Housework not a big deal (1,2,5,9) <u>Other hobbies or exercise:</u> Hobbies (1,7,9) Exercise since I make sure I don't have to choose (3,4,5,6) No hobbies (8) No response (2)	
Do you think you exercise enough?	Participant 1 Participant 2 Participant 3 Participant 9	<u>Downtime (TV, reading, etc.) or exercise:</u> Exercise (1,3,4,6) Downtime activities (9) Don't read much (2) No response (5,7) Yes (2,3,5,7) Probably not, i.e., should do more or do it more regularly (1,4,6,8) No (9)	

Appendix H: Pathway to Overall Themes for Research Question 4

Research Question 4: What barriers to exercise do retired women feel?

Interview Guide Questions	Responses	Common Themes	Overall Themes	
Did you exercise in your teens and early adulthood? How has your participation now been influenced by this participation or lack of participation?	Participant 1			
	Participant 2	↗	Did not participate out of choice (4,9)	↗ Women did not participate in athletics in their younger years. After retirement, women exercised both alone or at a scheduled time with others. Mild temperatures in both summer and winter were very influential to exercise participation. Convenient facilities and maintained places to walk were conducive to exercising. Self-discipline was a factor in participation. Women believed their physical conditions limited their participation. Travel had an influence on participation.
	Participant 3	↗	Did not participate due to circumstances (6,7)	
	Participant 9	↗	Participated somewhat, when necessary (2,8)	
	Participant 1		Involved in a lot of sports (1,3,5)	
	Participant 2	↗	Both with others and alone depending on activity and who is available (2,3,5,7)	
	Participant 3	↗	Alone (4,8)	
	Participant 9	↗	With others (1,6)	
	Do you exercise with others or alone?	Participant 1		
Participant 2		↗	<u>Factors which influence you to exercise:</u>	
Participant 3		↗	Summer/mild temperature (2,3,4,5,6,7,8,9)	
Participant 9		↗	Convenient facilities/places to walk (1,2,3,4,5)	
Participant 1			Participating with others (1,5,6,7)	
Participant 2		↗	Flexibility in time of day (1,3,5,6)	
Participant 3		↗	Enjoyment (1,5,6)	
Participant 9		↗	Able to be outside (4,5)	
What factors influence whether or not you exercise?		Participant 1		No crowds (1,3)
	Participant 2	↗	Keeping obligations under control (3,6)	
	Participant 3	↗	Scheduled activity (5,6)	
	Participant 9	↗	<u>Factors which influence you not to exercise:</u>	
	Participant 1		Winter/cold/darkness (2,3,4,5,7,8)	
	Participant 2	↗	Summer/heat (3,5,6,8)	
	Participant 3	↗	Physical/health conditions (2,4,7,9)	
	Participant 9	↗	Rain (2,3,6,7)	
	Participant 1		Spouse not able (2,6,9)	
Participant 2	↗	Travel (5,6,8)		
Participant 3	↗	Lack of equipment/facilities (8,9)		
Participant 9	↗	No one to participate with (1,2)		
Participant 1		Don't like outdoors (2,9)		
Participant 2	↗	Poor stamina/difficulty (3,6)		
Participant 3	↗	Volunteer/social obligations (1,8)		
Participant 9	↗	Other interests (8,9)		
Participant 1		Lazy (8,9)		

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