

SELF-REPORTED PHYSICAL ACTIVITY
LEVELS AMONG WOMEN OVER AGE 40
IN A SUBURBAN COMMUNITY

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DEDICATION

This dissertation is dedicated to my loving partner, Steve Bulmer. His sincere appreciation of my passions and dreams inspires me to attempt great things. I also dedicate this work to my mother, Pat Minor. Her many sacrifices have made my dreams possible.

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It is not possible to thank all those who helped and supported me through the process of completing my dissertation. My life has been blessed with many wonderful, supportive, and generous people. Those acknowledged here are foremost in my mind.

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ABSTRACT

COMPLETED RESEARCH IN HEALTH SCIENCES

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The purpose of this study was to determine the self-reported physical activity levels of women over the age of 40 years residing in a suburban community. This research utilized a cross-sectional design to investigate the percentage of women currently (1) meeting the U.S. Surgeon General's guidelines for moderate physical activity, (2) meeting the ACSM guidelines for vigorous physical activity, (3) participating in recent leisure-time physical activity, and (4) participating in strengthening activities. In addition, differences based on physical activity levels were explored within the independent variables of recent leisure-time physical activity participation, strengthening activity participation, age, annual household income, educational level, marital status, child status, work status, work hours, and employer incentives for physical activity. Quantitative data were gathered anonymously through self-selected completion of a modified version of the Godin Leisure-Time Exercise Questionnaire. Questionnaires were distributed to all households ($N = 4,862$) in a particular suburban, New England community through the local town newspaper. A total of 377 women over the age of 40 years participated in the study by completing and returning their questionnaires. Epi Info software was used for data analysis. The results of this study

revealed that 53.9% of the women in the sample population reported physical activity levels that classified them as sedentary, 30.5 % met the U.S. Surgeon General's guidelines for moderate physical activity, and 15.6% exceeded this recommendation and met the ACSM guidelines for vigorous physical activity. A total of 30.2% reported participation in strengthening activities. Significant differences were found in recent leisure-time physical activity participation and strengthening activity participation based on physical activity levels. Significant differences based on physical activity levels were also found among women of different age groups, annual household income levels, marital status, and work status. Younger women, women with higher household incomes, married women, and working women were more likely to be vigorously active than their counterparts.

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CHAPTER I: INTRODUCTION

Although the benefits of physical activity are well documented, the rate of inactivity in the United States remains high. National surveys consistently report that a majority of Americans do not participate in physical activity regularly enough to reap a wide range of potential health benefits (USDHHS, 1996). According to these studies, women have lower rates of participation in physical activity than men and participation drops sharply with age. It follows therefore that middle-aged and older women belong to one of the most sedentary population groups and have the most to gain from increasing their rates of participation in regular physical activity.

Cross-sectional data from national and state based surveillance systems such as the Behavioral Risk Factor Surveillance System (BRFSS) and National Health Interview Survey (NHIS) have provided important baseline data on the physical activity levels of men and women in the United States. In both surveys, the highest rates of physical inactivity have been found in the older age groups, among people with the lowest educational levels, and for those with lowest incomes. While these surveys have provided an overall demographic profile of persons of various levels of physical activity, they have not provided specific information that can be used to guide the development of specific community-based interventions.

A large percentage of the U.S. population resides in suburban communities

(Bureau of the Census, 1997). There is some evidence that physical activity levels in suburban populations may not be consistent with national and state-based population samples (CDC, 1998). Members of a specific suburban community group share a common environment and are more likely to have common life experiences. National-and-state based population studies contain a cross-section of people from a wide range of community environments and life experiences. It is important therefore to explore whether characteristics such as age, educational level, and income are related to physical activity levels in suburban communities in the same manner that they are related within national-and-state-based samples. Currently, very little information is available on the physical activity levels and determinants of physical activity among middle-aged and older women living in suburban communities. By understanding the characteristics of women of various physical activity levels, appropriate, targeted community-based intervention programs can be developed to assist women with increasing their levels of physical activity.

Purpose of the Study

The purpose of this study was to determine the physical activity levels of a sample of women over the age of 40 years residing in a suburban community. Average weekly physical activity, recent participation in leisure-time physical activity, and participation in strengthening activities were determined. In addition, this study examined what differences based on physical activity levels exist within the independent variables of

age, annual household income, educational level, marital status, child status, work status, work hours, and employer incentives for physical activity.

Research Questions

The following research questions were addressed by this study:

1. What percentage of women in the sample report regular physical activity levels that were sufficient to meet the moderate exercise recommendations from Physical Activity and Health: A Report of the Surgeon General (USDHHS, 1996)?
2. What percentage of women in the sample report regular physical activity levels that were sufficient to meet the vigorous exercise recommendations from the American College of Sports Medicine (ACSM, 1998)?
3. What percentage of women in the sample report recent participation in leisure-time physical activity?
4. What percentage of women in the sample report regular participation in strengthening activities?
5. In this sample, what significant differences exist based on physical activity levels within the independent variables of (1) recent leisure-time physical activity participation, (2) strengthening activity participation, (3) age, (4) annual household income, (5) educational level, (6) marital status, (7) child status, (8) work status, (9) work hours, and (10) employer incentives for physical activity?

Definition of Terms

The following terms were defined for the purpose of this study:

1. Physical Activity. Any body movement produced by the contraction of skeletal muscles that increases energy expenditure above the basal level (USDHHS, 1996).
2. Regular Moderate Physical Activity. Physical activity performed a minimum of 30 minutes at a moderate intensity (such as brisk walking) or a minimum of 45 minutes at a mild intensity (such as easy walking) at least five days per week. Total weekly physical activity that expends approximately 150 kilocalories of energy per day or 1,000 kilocalories per week (USDHHS, 1996).
3. Regular Vigorous Physical Activity. Physical activity involving rhythmic contractions of large muscle groups performed at least three times per week for at least 20 minutes per day (minimum of 10 minute bouts accumulated throughout the day) at an intensity that the participant defines as “strenuous - causing the heart to beat rapidly.”
4. Marital Status. The condition of being married or not married. For purposes of this study, women that self-identified as separated, divorced or widowed were classified as “not married”. Women that self-identified as married or living in a marriage-like relationship were classified as “married.”
5. Child Status. The condition of having or not having children under 18 years of age living in the home.
6. Work Status. The condition of currently working or not currently working outside the home.

7. Work Hours. The classification of the amount of work performed outside the home as either part-time or full-time. For purposes of this study, part-time work was defined as work performed outside the home for an average of less than 30 hours per week. Full-time work was defined as work performed outside the home for an average of 30 hours or more per week.

8. Employer Incentives for Physical Activity. The presence of exercise facilities, supplemented exercise facility memberships, or other direct rewards for physical activity participation at the individual's place of employment.

9. Recent Leisure-Time Physical Activity. Reported participation in any leisure-time physical activity during the previous four weeks.

10. Strengthening Activities. Weight training or other activities intended to increase muscular strength.

Limitations

This study was limited by the following and therefore may not be generalizable to other populations.

1. Participants were recruited exclusively from a suburban New England community. The majority of people residing in this community self-identified as Caucasian.

2. The sample was a convenience sample of people who elected to participate in the study by completing and mailing a survey questionnaire that had been sent to their home as an insert in the weekly community newspaper.

3. The study was conducted during the winter season in the Northeast region of the United States. Seasonal weather variations may have influenced participants' overall perceptions of their average weekly physical activity.

Delimitations

The following were delimitations for this study:

1. All participants were women over the age of 40 years.
2. All participants were required to be English speaking.
3. All participants were required to be without disabilities that prevented them from participating in regular moderate or regular vigorous physical activity.

Assumptions

The following assumptions were made for this study:

1. All participants provided truthful information in their survey responses.
2. All participants were capable of correctly describing their average weekly level of physical activity.

Rationale for the Study

Regular physical activity has been identified as an important component of women's health and wellness. Physical activity is beneficial for women of different ages, backgrounds and cultures, and has been shown to positively influence many aspects of physical and mental health (Pate et al., 1995). Regular physical activity reduces women's risk of dying from coronary heart disease, and developing high blood pressure, colon cancer, and diabetes. It helps maintain healthy bones, muscles and joints, and

helps control weight, build lean muscle, and reduce body fat. Physical activity has also been associated with important psychological and quality-of-life improvements by reducing symptoms of anxiety and depression and fostering improvements in mood and feelings of well-being (Department of Health and Human Services (USDHHS), 1996).

In 1996, the U.S. Surgeon General's Report on Physical Activity and Health concluded that significant health benefits could be obtained by including 30 minutes of moderate intensity physical activity on most, preferably all days of the week. Participation in mild physical activities were also identified as providing important health benefits (USDHHS, 1996). This report concluded that for most people, even greater health benefits can be obtained by engaging in regular physical activity of more vigorous intensity or of longer duration (USDHHS, 1996).

Despite the well-established benefits of regular physical activity, millions of U.S. women remain inactive. Women consistently report lower instances of physical activity than men, and overall, physical activity declines continuously as age increases (Pate et al., 1995). Statistics such as these have prompted The U.S. Department of Health and Human Services (USDHHS) to recognize physical activity as an important priority area in the latest report, Healthy People 2010. One objective in this report is to increase from 15% to 30% the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day (USDHHS, 2000).

National statistics and objectives provide important baselines upon which to establish and track intervention programs to increase physical activity levels for the

nation. To provide effective community-based programs, however, it is essential that specific data be collected from the particular types of communities where the interventions will take place (Green & Kreuter, 1991). Prior to this study, an insufficient amount of data was available on the physical activity levels of women over the age of 40 years residing in suburban communities. The data contained in this study provides important baseline information for the development of effective, targeted intervention programs to increase physical activity levels among women in this group living in suburban communities.

CHAPTER II: REVIEW OF THE LITERATURE

This literature review will cover several topics pertaining to women's physical activity. Topics addressed in this chapter include the health benefits of physical activity for women, physical activity recommendations, current physical activity levels among women, demographic factors associated with women's physical activity levels, and techniques for measuring physical activity.

The Health Benefits of Physical Activity for Women

Cardiovascular disease is the leading cause of death for women in the U.S. (USDHHS, 2000). Research on this topic has been more extensive among men than women. The Surgeon General's report indicated that only eight of 55 population-based studies on cardiovascular disease and physical activity or cardiorespiratory fitness included women (USDHHS, 1996). Despite these disparities in research, several large cohort studies have related physical activity and cardiorespiratory fitness to the risk of cardiovascular disease mortality in women (Blair et al., 1989; Blair et al., 1996; LaCroix et al., 1996). These studies have provided sufficient evidence that physically active women have more favorable cardiovascular disease risk profiles than inactive women.

In addition to a reduction in cardiovascular risk, physical activity has also been shown to reduce colon cancer risk among women. It has been suggested that the

reduction in transit time through the gastro-intestinal tract may lower disease risk by decreasing exposure to possible carcinogens (Shepard, 1993). Slattery et al. (1988) studied occupational and leisure-time activity in 119 females diagnosed with colon cancer and 204 female controls. The authors found that vigorously active women had a lower risk of colon cancer than women who were inactive.

In 1998, the Centers for Disease Control and Prevention reported eight million cases of diagnosed diabetes in the U.S. (CDC, 1998). Many studies have contributed to the conclusion that exercise is beneficial for the prevention of diabetes among women. In one particular study, Mayer-Davis et al. (1998) interviewed 1,467 subjects about their participation in physical activity. Insulin sensitivity was measured by a frequently sampled intravenous glucose tolerance test (FSIGT). The authors concluded that insulin sensitivity was higher in participants with higher levels of physical activity. This was consistent for both vigorous and non-vigorous activities. In a review article of 125 references, Ivy (1997) concluded that individuals who maintain a physically active lifestyle are much less likely to develop impaired glucose tolerance and non-insulin dependent diabetes mellitus.

Osteoporosis is the most prevalent metabolic bone disease in Western societies and affects about 30% of all postmenopausal white women (Ilich et al., 1996). The relationship between physical activity and osteoporosis has been researched extensively among women. Evidence suggests that bone mineral increases in response to the application of mechanical stress (Parfitt, 1994). A meta-analysis of studies dealing with

the effects of aerobic exercise on bone density at the hip in postmenopausal women suggests that site-specific aerobic exercise has a positive effect on bone density (Kelley, 1998). Pruitt et al. (1992) conducted a controlled study of postmenopausal women and demonstrated that a nine-month weight-training program was useful for maintaining bone mineral density in the lumbar spine. Coupland et al. (1999) conducted a cross-sectional study in 580 postmenopausal women, aged 45-61 years living in Nottingham, England. Participants completed a detailed interviewer-administrated physical activity questionnaire and had bone density measured at five sites using dual energy x-ray absorptiometry. This study identified two forms of physical activity, namely stair-climbing and brisk walking, that were associated with increased bone mineral density at the hip and whole body in postmenopausal women. In 1991, Snow-Harter and Marcus demonstrated that athletic women have higher bone densities than non-athletic women, further supporting the hypothesis that exercise is effective in maintaining bone mass.

In addition to all of the physical benefits of regular physical activity, there is strong evidence that physical activity also enhances women's psychological health. Physical activity helps improve the mental health of both clinical and non-clinical populations (USDHHS, 1996). In a critical review of the literature, Weyerer (1992) found that, even after adjustment for physical health status, people who were more active were less depressed. These findings are supported by several intervention studies conducted in community and laboratory settings (DiLorenzo et al., 1999; Landers et al., 1994; McAuley, 1994). In a study of 82 adult participants in a 12-week aerobic fitness

program, DiLorenzo and colleagues (1999) found exercise-induced increases in aerobic fitness to have beneficial short-term and long-term effects on psychological outcomes.

Physical Activity Recommendations for Women

Sedentary lifestyle is widely recognized as an independent risk factor for the development of many chronic diseases (USDHHS, 1996). However, the quantity and quality of physical activity necessary to produce health benefits has been a topic of controversy during the past decade. In 1990, The American College of Sports Medicine (ACSM) released a position stand titled The Recommended Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory and Muscular Fitness in Healthy Adults (ACSM, 1990). The recommendations for aerobic exercise in this document were based on studies that measured changes in maximal oxygen uptake with exercise training. The authors concluded that aerobic exercise should be performed 3-5 days per week at an intensity of 50-85% of maximal oxygen uptake for 20-60 minutes per session in order to produce improvements in cardiorespiratory fitness. This 1990 ACSM document also provided guidelines for resistance training for healthy adults. The authors recommended that all healthy adults complete at least one set of 8-12 repetitions of 8-10 exercises that condition major muscle groups at least two days per week. For many years, the aerobic and strength training recommendations from the 1990 ACSM position stand paper were used as primary objectives for interventions to increase activity levels among women in the U.S. population.

Although it is still widely accepted that regular vigorous activity may be required for improvements in cardiovascular fitness, more recent epidemiological data indicates that important health benefits can also be gained through participation in regular moderate activity (Blair et al., 1993). Because of the emerging data supporting the health benefits of moderate-intensity exercise, in 1995, the American College of Sports Medicine and the Centers for Disease Control and Prevention were prompted to revise their public health recommendations regarding physical activity (Pate et al., 1995). These revised recommendations now state that “every U.S. adult should accumulate 30 minutes or more of moderate intensity exercise on most, preferably all, days of the week.”

These revised public health recommendations were not intended to supersede the previous ACSM recommendations for exercise but, instead, provide a broader range of alternatives for exercise among U.S. adults (Pate et al., 1995). In 1998, The American College of Sport Medicine published a revised position stand, The Recommended Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory and Muscular Fitness, and Flexibility in Healthy Adults (ACSM, 1998). The ACSM maintained the position that aerobic exercise should be performed 3-5 days per week at 50-85% of maximal oxygen uptake for 20-60 minutes per in order to produce improvements in cardiorespiratory fitness. The ACSM also maintained the recommendation that all healthy adults complete at least one set of 8 - 12 repetitions of 8-10 exercises that condition major muscle groups at least two days per week. An important change in this document however was the allowance for the duration of

aerobic exercise to be either continuous or intermittent (minimum of 10 minute bouts accumulated throughout the day). Another important change in this document was acknowledgement that the quantity and quality of exercise needed to attain health-related benefits may be different than what is required for fitness benefits. ACSM stated the following in the 1998 position stand paper:

It is now clear that lower levels of physical activity (particularly intensity) than recommended by this position stand may reduce the risk for certain chronic degenerative diseases and improve metabolic fitness and yet may not be of sufficient quantity or quality to improve VO₂ max.” “Thus, the ACSM now views exercise / physical activity for health and fitness in the context of an exercise dose continuum. That is, there is a dose response to exercise by which benefits are derived through varying quantities of physical activity ranging from approximately 700-2000 plus kilocalories of effort per week. (p. 976)

Wide-spread acknowledgement of the benefits of moderate physical activity has prompted a number of governmental agencies to establish specific goals to increase the proportion of the U.S. population that engages in regular moderate physical activity. In 1996, Physical Activity and Health: A Report of the Surgeon General was published (USDHHS, 1996). This landmark document has become the standard for public health interventions to increase physical activity and, most recently, provided the foundation for the establishment of health objectives for physical activity in the Healthy People 2010 report (USDHHS, 2000). The 1996 Surgeon General’s Report recommends that “every U.S. adult should accumulate 30 minutes or more of moderate intensity exercise on most, preferably all, days of the week.” (p. 28) This report also states that participation in mild intensity physical activities such as easy walking is also desirable

and can also provide health benefits. The report states that in cases where mild activities are selected, participation should be extended for a longer duration than 30 minutes (USDHHS, 1996).

As a result of important public health recommendations such as those contained in the 1996 Surgeon General's Report on Physical Activity and Health, public health efforts are no longer directed exclusively at increasing the vigorous-intensity physical activity levels of women in the U.S. population. Emphasis in public health is now given to the objective of moving women from a sedentary state to a minimal level of physical activity. Specific objectives in the Healthy People 2010 report include increasing to 30% the proportion of the U.S. population that reports regular physical activity and decreasing to 15% the proportion of the U.S. population reporting no physical activity at all (USDHHS, 2000).

Physical Activity Levels Among U.S. Women

Despite the well-established benefits of regular physical activity and the more broad standards encouraged by public health agencies, a significant percentage of U.S. women remain inactive. In addition, women report lower instances of physical activity than men and physical activity levels tend to decline with age (Pate et al., 1995).

Information on U.S. trends for physical activity among women are provided by a number of national and state-based surveillance systems sponsored by the Centers for Disease Control and Prevention. These surveillance systems track health behaviors including leisure-time physical activity. The Behavioral Risk Factor Surveillance

System (BRFSS) is an ongoing study in the U.S. that collects risk factor data from 135,000 adults annually. The BRFSS has included questions on physical activity since 1986. This survey utilizes self-reported data to determine the percentage of the population reporting (1) no leisure time physical activity, (2) regular, sustained physical activity, and (3) regular, vigorous physical activity (USDHHS, 1996).

The 1998 BRFSS study defined physical inactivity as no reported leisure-time physical activity in the previous 2-4 weeks (CDC, 1998). Based on this definition, the BRFSS revealed that 27.7% of the U.S. population is physically inactive and women experience higher rates of physical inactivity (29.9%) than men (25.7%). Statistics for the state of Connecticut in 1998 were similar to those of the nation, with 27.1% of the state population reporting no leisure-time physical activity, an increase 1.5% from the 1996 BRFSS when only 25.6% of the state population reported no leisure-time physical activity.

The 1998 BRFSS study defined regular and sustained physical activity as any type and intensity of activity that occurs five times or more per week and 30 minutes or more per occasion (CDC, 1998). Based on this definition, the 1998 BRFSS revealed that only 20.4% of the U.S. population engaged in regular and sustained physical activity, and women experienced lower rates of sustained physical activity (19.5%) than men (21.8%). Regular and sustained physical activity levels for the state of Connecticut in 1998 (20.4%) were identical to those of the nation (20.4%), representing a slight decrease from 1996 (21.4%).

The 1998 BRFSS surveillance study defined regular vigorous physical activity as rhythmic contraction of large muscle groups, performed at 50% or more of estimated age-and-sex-specific maximum cardiorespiratory capacity three times per week for at least 20 minutes per occasion (CDC, 1998). Based on this definition, the 1998 BRFSS revealed that only 13.3% of the U.S. population engaged in regular, vigorous physical activity. For the first time in the history of the BRFSS, the percentage of women who reported similar rates of regular, vigorous physical activity (13.6%) were similar to those of men (13.5%). Data were similar for the state of Connecticut, with 14.6% of women and 13.7% of men reporting regular, vigorous physical activity.

Community-based studies on physical activity levels among women over the 40 years of age are very limited in number and have utilized inconsistent methodology. As a result, it is difficult to draw specific conclusions regarding the prevalence rates of inactivity among women in urban, suburban, or rural communities.

In 1994, Marcus and colleagues conducted a worksite study of women's physical activity levels. These researchers surveyed 431 employed women with a mean age of 41.1 years with regard to physical activity participation. A total of 27% of this sample reported participation in regular physical activity. Regular physical activity was defined as participation in activity 3 times per week for a minimum of 20 minutes per session. This definition did not include specific requirements for intensity.

Scharff and colleagues (1999) surveyed 653 women, ages 18 and older, from community-based medicine clinics in southeastern Missouri. These researchers

reported considerably higher levels of physical activity participation among women in their sample. In this study, 43% of the women reported physical activity levels that were sufficient to meet the U.S. Surgeon General's guidelines of participation in moderate intensity activities at least five days per week for at least 30 minutes per session. (USDHHS, 1996)

Verhoef and Love (1994) studied a large sample of 1,113 women ages 20–49 years of age in Calgary, Canada. These researchers also reported considerably higher levels of physical activity participation among women than did Marcus and colleagues. A total of 24% of the women with children and 39% of women without children in this sample reported regular vigorous physical activity. Regular vigorous physical activity was defined as participation in activities from a pre-selected list at least three times per week for a duration of at least 20 minutes per session.

Another study conducted by King et al. (1990) surveyed 399 male and female employees, mean age 42.7 years regarding physical activity participation. These researchers reported even higher physical activity levels than Marcus et al., Scharff et al., and Verhoef et al. A total of 45% of the respondents in this sample identified themselves as current exercisers. There were no significant differences in physical activity levels between men and women in this study. Current exercise was defined as participation in aerobic activity at least three times per week for at least 20 minutes per session.

In yet another study, Eaton and colleagues (1994) examined physical activity levels in a rural New York county. These researchers found 55% of the women to be physically active. Physical activity in this study was defined as engaging in physical activity at a sufficient intensity to break a sweat at least one time per week.

As a result, of the small number of studies conducted with community-based groups and the inconsistent methodology utilized, it is difficult to accurately quantify the physical activity levels of women in specific types of community settings. It is important that additional research of this type be conducted in order to develop a more clear and accurate picture on this issue.

Demographic Factors Associated with Physical Activity Levels

A number of studies have examined the factors associated with physical activity levels among U.S. women. These findings suggest that women's physical activity levels may differ in relation to age, ethnicity, education, household income, marital status, child status and work status.

Age and Physical Activity Level

The prevalence of physical inactivity among women in the U.S. has been shown to vary with age. National surveys have consistently found that older women have a higher prevalence of physical inactivity than younger women (USDHHS, 1996). Data from the 1994 Behavioral Risk Factor Surveillance System (BRFSS) indicated that women over age 75 years had the highest rate of physical inactivity (50.5%) and women ages 18-29 years had the lowest rate (25.4%) (USDHHS, 1996). Community-based

research studies have yielded similar results. Scharff and colleagues (1999) surveyed 653 women ages 18-75 years from four community-based family medicine clinics. These researchers found that 67% of women in the oldest age category (60 years and older) were physically inactive and not meeting the guidelines recommended by the U.S. Surgeon General's report versus 41% of the youngest age category (18-29 years).

While the prevalence of inactivity has consistently been shown to be higher among older women, vigorous activity levels have not consistently been shown to be lower. Data from both the 1991 National Health Interview Survey (NHIS) and the 1992 BRFSS study indicated that vigorous rates of physical activity were highest among women ages 65 and older. A number of researchers have explained this difference by pointing out the greater amount of leisure-time available to older adults and the use of an age-related relative intensity classification for the majority of national surveillance surveys (USDHHS, 1996). Because cardiorespiratory capacity declines with age, activities that would be of moderate intensity for younger adults become vigorous for older adults. If these surveys had used an absolute intensity classification, the estimated rates of vigorous activity participation would have fallen dramatically with age (USDHHS, 1996). In contrast to the national surveillance study data, Sternfeld and colleagues (1999) used an absolute intensity classification questionnaire to assess relationships between physical activity and demographic factors. Their sample was 2,636 randomly selected, ethnically diverse women ages 20-65 years. The results of

this study showed that older women were least likely to be in the highest quartile of sport / exercise and active-living indices.

Ethnicity and Physical Activity Level

The prevalence of physical inactivity among women in the U.S. has also been shown to vary in relation to ethnicity. Research studies have consistently shown that White women have a higher prevalence of participation in physical activity than Non-White women (USDHHS, 1996). The 1994 Behavioral Risk Factor Surveillance System (BRFSS) revealed that White women had the lowest rates of physical inactivity of any ethnic group. In this study, 29.8% of White women reported no leisure-time physical activity in the past month compared to 44.2% of Hispanic women and 46.3% of Black women. In this same study, White women reported the highest levels of moderate and vigorous physical activity. A total of 26.9% of White women reported participation in regular, moderate physical activity versus 21.1% of Hispanic women and 19.2% of Black women. A total of 16.5% of White women reported regular, vigorous physical activity compared to 11.8% of Hispanic women and 9.9% of Black women (USDHHS, 1996).

The U.S. Women's Determinants Study conducted in 1996-1997 also demonstrated a significant difference in the physical activity levels of women from different ethnic groups. The research design utilized for this study was a modified-random sample telephone survey of 2912 Black, Hispanic, American Indian-Alaskan Native, and White women ages 40 and older. In this study, White women were found to experience the

lowest rates of physical inactivity (30.7%) compared to Hispanic women (32.0%), American Indian / Alaskan Native women (45.5%), and Black women (41.3%) (Eyler et al., 1999).

It should be noted that several researchers have suggested that it is necessary to identify more comprehensive measures of physical activity for women of various racial and ethnic groups for future research (Eyler et al., 1999; Ainsworth et al., 1993; Yeager & Macera, 1993). The current practice of using questions on “leisure-time” physical activity to determine overall levels of physical activity may be inappropriate for those women who have no “leisure-time.” Ainsworth et al. (1993) found a significant increase in reported activity levels among minority women when a component of household physical activity was added to the questionnaire.

Education and Physical Activity Level

Another factor that has been studied in relation to physical activity levels among U.S. women is educational attainment. A number of national studies have consistently shown that women with less education experience higher levels of physical inactivity and lower levels of moderate and vigorous activity than women with more education (USDHHS, 1996). The 1994 BRFSS data indicated that women who had not graduated from high school had the highest rate of physical inactivity (54.6%) followed by women who had graduated from high school (36.8%) and finally women who had graduated from college (20.6%). Women who had not graduated from high school also had the lowest rate of regular moderate physical activity (7.4%) compared to women who had

graduated from high school (12.7%) and women who had graduated from college (22.9%) (USDHHS, 1996).

A number of research studies have found similar results with regard to education and physical activity. In a survey of 653 adult women, Scharff et al. (1999) found that women over the age of 60 with more than 12 years of education were 1.9 times more likely than less educated women to perform leisure-time physical activities. In another survey of 2,636 women, Sternfeld et al. (1999) found women with the highest level of participation in sports-exercise and active-living behaviors were more likely to be college-educated. Yusuf et al. (1996) analyzed data on 5018 female respondents ages 65 and over to the 1990 National Health Interview Survey. These researchers found women with 12 or more years of education were almost twice as likely to engage in regular physical activity as women who did not have 12 years of education. In yet another study, Ransdell and Wells (1998) analyzed physical activity levels of 521 urban women relative to education and found women without a college education to have the lowest levels of participation in leisure-time physical activity.

Socioeconomic Status and Physical Activity Level

Socioeconomic status and area of residence are other factors that have been researched in relation to women's physical activity levels. The research findings on these topics have been mixed. Several studies have shown lower reported levels of physical activity among women with low annual household incomes than among women with higher annual household incomes (USDHHS, 1996). The 1996 BRFSS

data indicated that 41.2% of women with household incomes of less than \$10,000 per year reported no physical activity compared to 30.9% of women with household incomes of \$20,000-\$34,999 per year and 17.5% of women with household incomes of greater than \$50,000 per year (CDC, 1998). Other studies have not demonstrated a significant difference in women's physical activity levels based on income. Randsell and Wells (1998) conducted an analysis of physical activity in a diverse sample of 521 urban women. These researchers did not find income to be a significant predictor of high levels of leisure-time physical activity for any of the women in the study.

It is not clear whether physical activity levels are directly related to income or if other factors such as poverty status or the degree of urbanization of a person's area of residence are more effective at explaining the observed differences. Yen and Kaplan (1998) studied data from 1,737 residents in Alameda, California and found that residential area had an independent effect on mortality risk. Poverty area residence was negatively associated with physical activity levels even after controlling for income, education, smoking status, body mass index, and alcohol consumption.

Data from the 1996 Behavioral Risk Factor Surveillance System (BRFSS) indicate that the level of leisure-time physical activity may be related to the degree of urbanization. Data on physical activity were analyzed for 118,778 respondents, randomly selected from all parts of the U.S. The degree of urbanization of respondents was classified by using the U.S. Department of Agriculture's rural-urban continuum codes which describe metropolitan and non-metropolitan counties by degree of

urbanization and nearness to metropolitan areas. The overall prevalence of physical inactivity was lowest in central metropolitan areas with populations greater than 1 million (27.4%) and highest in rural areas (36.6%). The second lowest levels of physical activity (34.4%) were reported in small, suburban communities with populations between 2,500-19,999 persons. This relationship remained significant even after adjusting for sociodemographic factors such as age, education, and income levels (CDC, 1998).

Family Status, Work Status and Physical Activity Level

Family status and work status are other factors that have been studied in relation to women's physical activity levels. Research on characteristics such marital status, parenthood, and current employment has resulted in mixed findings.

Janzen and Cousins (1995) examined women's leisure-time physical activity with respect to being married and having spousal support. Through consolidation of the available literature on this topic, these researchers concluded that leisure-time and leisure choices are altered upon marriage, and women, in particular shed their independence and share the sedentary or physically active lifestyle of their spouse. In another study, Verhoef and Love (1992) conducted a cross-sectional survey of 1,113 women aged 20–49. These researchers found that married women had higher rates of physical inactivity than unmarried women. Looking at this topic from a slightly different perspective, Goldman and colleagues (1995) studied the effects of marital status on health and mortality at the older ages. These researchers analyzed data from

the Longitudinal Study of Aging, 70 Years and Over (1984–1990). It was determined that marital status was associated with health and survival outcomes at the oldest ages. Single women had better health outcomes than married women. Being widowed was associated with poorer health outcomes.

Verhoef and Love (1994) also analyzed data from a large urban sample of 1,113 women ages 20–49 to determine whether there was a relationship between parenthood and physical activity level. This study found that women without children were significantly more likely to be physically active than women with children. The differences were greatest for women under the age of 40. In another study, Marcus and colleagues (1994) conducted a cross-sectional study of 431 women in a worksite setting. It was found that the presence of children under that age of 18 in the home was significantly related to decreased physical activity among women in this sample.

Waldron and colleagues (1998) investigated the interacting effects of three major roles – employment, marriage, and motherhood – on women's physical health. These researchers analyzed longitudinal data for 3,331 women from the National Longitudinal Surveys of Young Women (1978–1988). It was found that employment had beneficial effects on health for unmarried women but not for married women. Marriage had beneficial effects on health only for women who were not employed.

Overall, the relationship between physical activity level and the roles of marriage, parenthood and employment are not well understood. Studies on these topics have

resulted in mixed findings. Further research on these topics is appropriate and necessary.

Measurement of Physical Activity

Many different methods are used to assess physical activity. Physical activity measurement has been conducted using procedures that range from precise laboratory techniques to single-item questionnaires (Miller et al., 1994). These methods include the measurement of maximal oxygen uptake, objective measures of energy expenditure, use of activity measurement devices, and the completion of physical activity questionnaires. Self-report survey questionnaires have historically been the most suitable methods of measurement for epidemiological research and surveillance studies (Dishman, 1994).

There are three basic types of physical activity questionnaires: global self-assessment, recall, and quantitative history (Hensley et al., 1993). A global self-assessment questionnaire is typically a short instrument that contains questions about the respondent's typical physical activity patterns. These types of questionnaires have been widely utilized in surveillance studies conducted by U.S. government agencies such as the Centers for Disease Control and Prevention. The advantages of these instruments are that they capture usual activity, are self-administered, and require little time on the part of the respondent. Disadvantages are that these tools are vulnerable to recall bias, and they are difficult to validate with tools such as maximal oxygen uptake tests or objective measurements of caloric expenditure due to the lack of a specified time component for recall.

The Godin Leisure-Time Exercise Questionnaire is an example of a widely used global self-assessment tool. This questionnaire has been tested for validity and reliability on a number of occasions (Godin & Shephard, 1985; Jacobs et al., 1993; Miller et al., 1994). Test retest reliability has ranged from .62-.81 for this instrument. Validity studies have demonstrated correlation coefficients of .45-.57 when compared to maximal oxygen uptake tests and Caltrac activity monitor tests. The Godin Leisure-Time Exercise Questionnaire collects frequency and duration information on three different intensity levels of physical activity, namely vigorous, moderate, and mild, and provides the respondent with examples for each activity category. One limitation of the Godin instrument is that it only measures leisure-time physical activity.

Another type of instrument used to assess physical activity is the recall instrument. Recall instruments assess physical activity during a specific period of time. Popular recall instruments include the Seven-Day Physical Activity Recall (Sallis et al., 1985) and KIHD 24-Hour Total Physical Activity Record (Salonen & Lakka, 1987). Surveys with short time frames have the advantage of being less vulnerable to recall bias and more practical to evaluate with objective tools (Krisk & Casperson, 1997). One problem with recall instruments is that they sample physical activity within a narrow range of time and may not accurately capture typical physical activity patterns. As a result of this limitation, seasonal variations in physical activity patterns may not be detected with this type of instrument (Ransdell & McMillen, 1997).

A third type of instrument for measuring physical activity is the quantitative history questionnaire. Quantitative history questionnaires measure physical activity during a specific life period. The Historical Leisure Activity Questionnaire (Kriska et al., 1990) is an example of a popular quantitative history questionnaire. These instruments attempt to link memorable life events with physical activity patterns. One strength of quantitative history instruments is that they have the potential to capture lifetime physical activity patterns rather than exclusively capturing current activity. Weaknesses in this instrument include dependence on the respondent's long-term memory and the additional amount of time required to administer this more lengthy questionnaire.

The problem of measuring physical activity with survey instruments has received wide attention by researchers in public health (Ainsworth et al., 1994; Ransdell & McMillen, 1997). To date, the majority of research findings regarding physical activity levels and determinants have come from self-report survey instruments. Since the concurrent validity of these instruments has not been determined, it is difficult to compare the results of various studies. It has been suggested by a number of researchers in the field of exercise science that measures of physical activity used in surveillance studies and intervention studies should be standardized or reconciled (Dishman, 1994; King et al., 1992; Sallis et al., 1992). Early studies in the field of physical activity epidemiology often published significant results with the presumption that such results automatically implied that the instrument was reliable and valid. Today, evidence of instrument reliability and validity is becoming the scientific norm

(Kriska & Caspersen, 1997). It is essential that researchers continue to report reliability and validity data if the field is to move closer to the goal of standardization.

CHAPTER III: METHODOLOGY

The methodology of this quantitative study is discussed in relation to its population, procedures used to sample the population, instruments used to measure the variables, procedures used to collect the data, and statistical techniques that were used to treat the data.

Population and Sample

The study population consisted of women over the age of 40 years residing in a suburban New England community. All women over the age of 40 years residing in this particular community were invited to participate in this research study. This community had a total population of approximately 12,286, with approximately 2,865 women over the age of 40 years (U.S. Census, 1995). Communication with these women took place through the town's complimentary weekly newspaper (Appendix A) and personal communication between the researcher and individuals in the community. In addition, the survey questionnaires served to inform women about the study and invite them to participate. Each survey questionnaire included a letter that explained the purpose and procedures for the study.

The sample for this study consisted of 377 women over the age of 40 years residing in this suburban New England town. These participants were women who had become aware of the study, received a survey questionnaire, and elected to complete the survey

and return it by mail. Participation was voluntary and uncompensated. A total of 392 women over the age of 40 years completed and returned survey questionnaires during a two-week period of time. After eliminating surveys that did not meet the research criteria and surveys that contained missing data, the sample was reduced to 377. This sample of 377 respondents represented approximately 15% of all women over the age of 40 years residing in this community. The demographic characteristics of this sample were consistent with the 1990 regional Census data reports for this community with regard to ethnicity and age distribution.

Permission to conduct this study was obtained from the Human Subjects Review Committee (HSRC) at Texas Woman's University (Appendix B). In accordance with guidelines provided by the HSRC, all survey questionnaires included a pre-approved cover letter that served as a method of providing informed consent to participants regarding their participation in the study. This letter informed participants that their consent to participate in the study would be indicated by their completed and returned questionnaire. This letter also assured participants of complete anonymity and confidentiality (Appendix C).

Procedures

A cross-sectional research design was used in this study. Quantitative data was gathered through the self-selected completion of anonymous survey questionnaires by a convenience sample of women over the age of 40 years residing in a suburban New

England community. One survey questionnaire was mailed to each residence in the community ($N = 4,862$) as an insert in a one-time mailing in the weekly town newspaper. This was a complimentary newspaper that was mailed on a weekly basis to each household in the town. Post office boxes were not included in this mailing.

Additional data collection took place through the personal distribution of questionnaires to female residents over the age of 40 years. This distribution took place through four female community leaders who were previously identified. These women distributed questionnaires to family, friends, and members of the community groups with which they were affiliated. An additional 250 surveys were distributed directly by the researcher at the local grocery store and at a social gathering at the local retirement facility. Data collection took place during a two-week period of time in the month of February, 2000.

Participants self-selected to complete the survey questionnaire. All participants were instructed to return their surveys by mail in order to insure that responses remained anonymous and confidential. Survey forms were printed as a self-mailing format with pre-paid postage indicated on the reverse side of the survey questionnaire (Appendix D). A total of 392 participants returned their survey questionnaires, with 339 participants returning their surveys by mail and 53 participants utilizing an anonymous drop box in their community center facility. After excluding surveys that did not meet the research

criteria and excluding surveys that had missing data, a total of 377 surveys were used for data analysis.

Instrumentation

The instrument used in this study was a modified version of the Godin Leisure-Time Exercise Questionnaire (Godin & Shepard, 1985). This instrument contains questions regarding participation in leisure-time physical activity. Participants are asked to indicate the average number of times per week and average number of minutes per session that they participate in vigorous, moderate, and mild physical activities. Each category of activity is described for the participant and examples of types of activities that would qualify in each category are provided (Appendix E).

The Godin Leisure-Time Exercise Questionnaire has demonstrated reliability and validity with similar populations. Test-retest reliability was demonstrated with a correlation coefficient of .74 ($p < .05$) (Godin & Shephard, 1985). Validity was demonstrated by comparison to measures of maximum oxygen consumption with a correlation coefficient of .56 ($p < .05$) (Jacobs et al., 1993).

The actual instrument utilized for this study was a modified version of the Godin Leisure-Time Exercise Questionnaire. New statistical analyses of validity and reliability were not conducted with this modified instrument since the modifications were limited to individual questions that were treated as separate variables. The Godin-Leisure-Time Exercise Questionnaire was modified to include demographic questions

regarding age, household income, educational level, marital status, child status, work status, work hours, and employer incentives for exercise. In addition, two questions were added regarding physical activity participation. In the first question, participants were asked to indicate whether or not they had participated in leisure-time physical activity during the previous four weeks. In the second question, participants were asked to indicate their average level of participation in any type of strengthening activities. Both of these questions were taken from the Behavioral Risk Factor Surveillance System (BRFSS), an ongoing survey that has been conducted by the Centers for Disease Control and Prevention since 1981.

This modified questionnaire was pilot tested with a group of 42 women over the age of 40 years residing in a neighboring community. The questionnaire was modified slightly based on feedback from this pilot group. The questionnaire took participants in the pilot group roughly two minutes to complete.

Treatment of the Data

Upon receipt of all surveys for this study, data was entered into the Epi Info version 6.04 statistical package using the original questionnaire format (Dean et al., 1998). A complete listing of all data is provided in Appendix F. After all data entry was completed, frequency reports were reviewed and responses analyzed within each category. It was determined that specific subcategories should be combined in order to create higher frequency numbers within each subcategory and aid in the statistical

analysis procedures. Age groups were combined to create five subcategories in 10-year increments instead of the original 10 categories in five-year increments. Educational levels were combined to create two subcategories, college degree and no college degree. Women with less than high school, high school, and some college were classified as “no college degree” and women with bachelors and graduate level degrees were classified as “college degree.” Annual household income categories were combined to create three income categories of \$40,000 instead of the original six categories of \$20,000. Marital status subcategories were combined to create two categories, married and not married. Widowed, separated, and divorced women were categorized as “not married.” Married women and women living in a marriage-like relationship were categorized as “married.” There were only six women in the sample that reported living in a marriage-like relationship.

Further analysis of the data took place using the Epi Info Version 6.04 software package (Dean et al., 1998). Frequencies and percentages were calculated based on the new subcategories within each variable. In addition, data was analyzed to identify significant differences based on physical activity levels within the independent variables of recent leisure-time physical activity participation, strengthening activity participation, age, household income, educational level, marital status, child status, work status, work hours, and employer incentives for physical activity. An omnibus test using a chi-square statistical procedure was conducted on all independent variables based on

physical activity level. Significance was determined at the $p < .05$ level. In cases where the omnibus chi-square test revealed a significant difference within the variable based on physical activity level, further chi-square analyses were conducted on all possible 2x2 combinations of variables. The Yates corrected chi-square procedure was utilized for the 2x2 analyses. Significance was determined at the $p < .05$ level (Glass & Hopkins, 1996).

Tables were developed to further illustrate data collected from the survey questionnaires. Frequencies, percentages, and confidence intervals were reported for all variables. In addition, tables were created for each chi-square analysis that was conducted for the study. Microsoft Excel software was utilized to produce figures to illustrate the variables that had significant differences based on physical activity levels.

CHAPTER IV: FINDINGS

The purpose of this study was to determine the self-reported physical activity levels of women over the age of 40 years in a suburban community. In addition, this study examined differences based on activity levels within the independent variables of recent leisure-time physical activity participation, strengthening activity participation, age, educational level, household income, marital status, child status, work status, work hours, and employer incentives for physical activity. An anonymous survey questionnaire was utilized to determine physical activity levels and demographic information. This questionnaire was distributed to all households in a suburban New England community ($N = 4,862$) in February, 2000. In addition, questionnaires were also distributed in person by the researcher and selected leaders in the community. Participants self-selected to participate by completing a survey questionnaire and placing it in the mail. Upon receipt of all surveys for this study, data was entered into the Epi Info version 6.04 software package. Frequencies and percentages were calculated and chi-square statistical analyses were conducted with the data.

The results of this study are presented in this chapter. The chapter begins with a description of the demographic characteristics of the sample. Physical activity levels, recent leisure-time physical activity participation, and strengthening activity participation among the respondents in the sample are reported and relationships

between these variables are explored. Differences based on physical activity levels within the independent variables of age, annual household income, marital status, child status, work status, work hours, and employer incentives for physical activity are also analyzed and reported.

Demographic Characteristics

A total of 392 women over the age of 40 years completed and returned survey questionnaires during a two-week period of time in February, 2000. Surveys were excluded from the final analysis if women did not meet the pre-established criteria for the study. Surveys were also excluded if answers were left blank. Eight respondents were excluded due to a positive response to the question regarding physical limitations that prevented them from participating in regular physical activity. Seven respondents were excluded for declining to answer the question regarding income level. After adjusting for exclusions and missing data, 377 surveys were utilized for analysis.

Demographic characteristics of the sample are listed in Tables 1-2. This sample of 377 respondents represented approximately 15% of all women over the age of 40 years living in this community. The demographic characteristics of this sample were consistent with the 1990 regional Census data reports for this community with regard to ethnicity and age distribution. A total of 96.8% of the sample self-identified as Caucasian as compared to 95.8% in the 1990 regional census data report. The sample contained a substantial representation of women within each 10-year age group category. The sample included 152 women 41–50 years of age, 87 women 51–60 years

of age, 42 women 61–70 years of age, 55 women 71–80 years of age, and 41 women 81 years of age and over. The oldest respondents in the survey were 93 years and 92.5 years of age, respectively. Household income levels were split evenly between the three different categories, with 34.5% reporting annual household incomes of less than \$40,000, 32.1% reporting \$40,000-\$79,999, and 33.4% reporting \$80,000 and over. Approximately half of the women (48%) reported having a college degree. The majority of women in the sample worked outside the home (59.9%). A majority of the women in the sample were married (63.7%), and a majority of women did not have children under the age of 18 years living at home (76.9%).

Table 1

Age, Education, and Income of the Sample (N= 377)

	Frequency (%)	95% Confidence Intervals
Age (years)		
41 - 50	152 (40.3%)	35.4% - 45.5%
51 - 60	87 (23.1%)	19.0% - 27.7%
61 - 70	42 (11.1%)	8.2% - 14.9%
71 - 80	55 (14.6%)	11.3% - 18.7%
81+	41 (10.9%)	8.0% - 14.6%
Educational Level		
College degree	181 (48.0%)	42.9% - 53.2%
No college degree	196 (52.0%)	46.8% - 57.1%
Annual Household Income		
< \$40,000	130 (34.5%)	29.7% - 39.6%
\$40,000 - \$79,999	121 (32.1%)	27.5% - 37.1%
\$80,000+	126 (33.4%)	28.7% - 38.5%

Table 2

Marital Status and Family Status of the Sample (N = 377)

	Frequency (%)	95% Confidence Intervals
Marital Status		
Married	240 (63.7%)	58.6% - 68.5%
Not Married	137 (36.3%)	31.5% - 41.4%
Children <18 years at Home		
Yes	87 (23.1%)	19.0% - 27.7%
No	290 (76.9%)	72.3% - 81.0%
Work Outside the Home		
Yes	226 (59.9%)	54.8% - 64.9%
No	151 (40.1%)	35.1% - 45.2%
Work Hours (<u>n</u>=226)		
Full-time ^a	181 (80.1%)	74.3% - 85.1%
Part-time ^b	45 (19.9%)	14.9% - 25.7%

^a Full-time is defined as working a minimum of 30 hours per week outside the home.

^b Part-time is defined as working less than 30 hours per week outside the home.

Self-Reported Physical Activity Levels

The self-reported physical activity levels of respondents in the study are listed in Table 3. Respondents were classified into sedentary, moderately active, and vigorously active categories based on their responses to specific survey questions. Respondents indicated the number of sessions per week and average number of minutes per session for vigorous, moderate, and mild physical activities. These responses were compared to the pre-established standards for moderate and vigorous physical activity and an overall designation was made based on these criteria.

Overall, 203 women in this sample reported average weekly levels of physical activity that classified them as “sedentary.” A total of 115 women reported levels of physical activity that were adequate to meet the U.S. Surgeon General’s guidelines and be classified as “moderately active.” Only 59 women reported levels that were sufficient to meet the American College of Sports Medicine guidelines and classify them as “vigorously active.” The requirements for each physical activity classification are indicated in Table 3. Figure 1 shows the different percentages of women that met the standards for each physical activity category. A total of 53.9% of the women in the study were sedentary, 30.5% were moderately active, and 15.6% were vigorously active.

Table 3

Physical Activity Categories for the Sample (N=377)

Physical Activity Category	Frequency (%)	95% Confidence Intervals
Sedentary ^a	203 (53.9%)	48.7% - 58.9%
Moderately Active ^b	115 (30.5%)	25.9% - 35.5%
Vigorously Active ^c	59 (15.6%)	12.2% - 19.8%

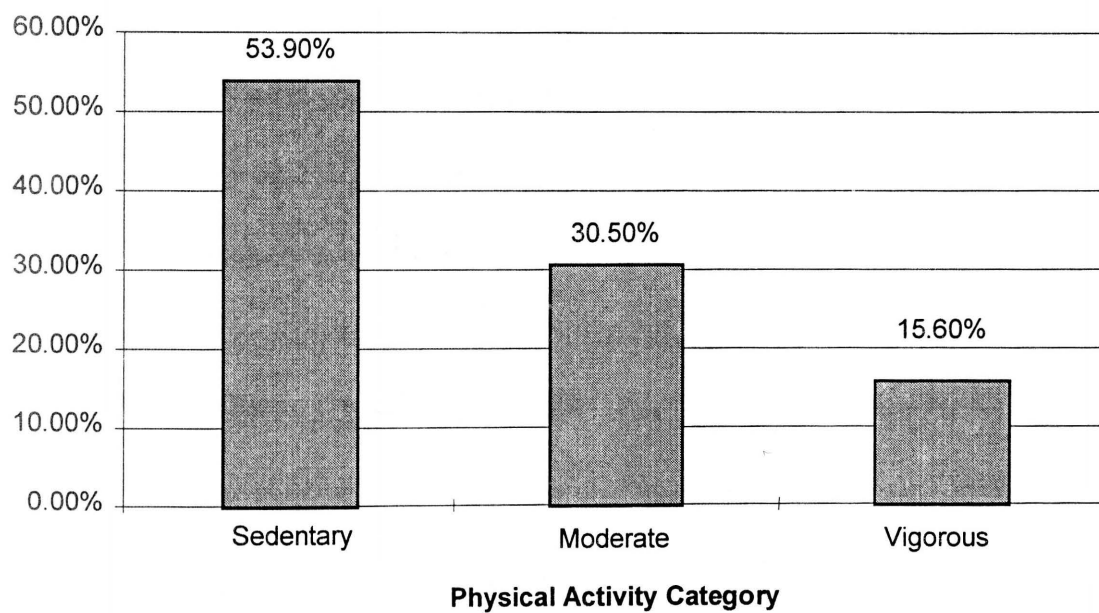
^a Sedentary is defined as not meeting the guidelines for either moderate or vigorous activity

^b Moderate is defined as participation in a minimum of 30 minutes of moderate activity for a minimum of 5 days per week or participation in a minimum of 45 minutes of mild activity for a minimum of 5 days per week.

^c Vigorous is defined as participation in a minimum of 20 minutes of activities that the participant defines as strenuous, causing the heart to beat rapidly, for a minimum of 3 days per week.

Figure 1

**Physical Activity Categories of Women > 40 Years of Age
In a Suburban Community**



Recent Leisure-time Physical Activity Participation

Participation in recent leisure-time physical activity among respondents in the study was determined by a yes or no response to the question “Have you participated in any leisure-time physical activity in the past four weeks?” It is important to note that this question did not assess the amount of leisure-time physical activity performed during this period of time. It is therefore not possible to assess the physical activity level of these women during this time period, only whether or not they were active. Recent leisure-time physical activity participation for the sample is listed in Table 4. Overall, 215 (57.0%) of the women in this sample reported recent physical activity participation and 162 (43.0%) of the women reported no recent participation.

Table 4

Recent Leisure-Time Physical Activity Participation in the Sample (N =377)

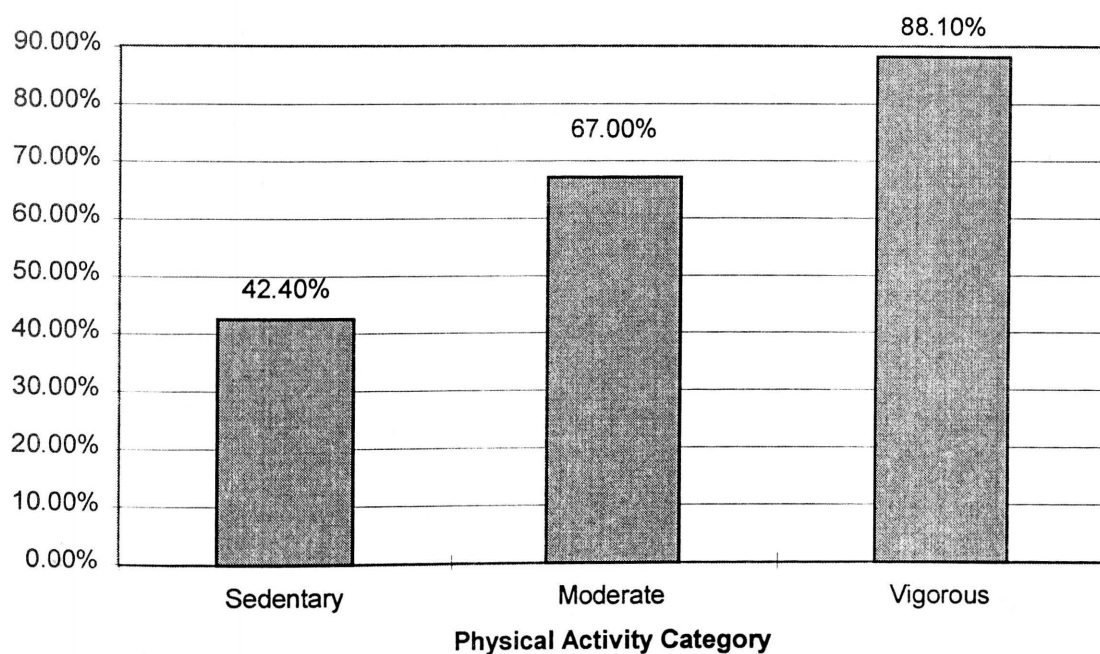
	Frequency (%)	95% Confidence Intervals
Recent Activity ^a		
Yes	215 (57.0%)	51.9% - 62.1%
No	162 (43.0%)	37.9% - 48.1%

^a Recent activity is defined as having reported participation in any leisure-time physical activity in the previous 4 weeks.

Differences in the percentage of women in each physical activity category reporting participation in recent leisure-time physical activity are shown in Figure 2. Only 42.4% of sedentary women in the sample reported recent participation in leisure-time physical activity versus 67.0% of the moderately active women and 88.1% of the vigorously active women.

Figure 2

Percentage of Women in Each Physical Activity Category Reporting Participating in Recent Leisure-Time Activity



Chi-square analysis revealed a significant difference ($p < .05$) between physical activity level classifications (sedentary, moderately active, vigorously active) and participation in recent leisure-time physical activity. Table 5 shows the results of the chi-square analysis between these two variables. As a result of this significant difference, post hoc Yates corrected chi-square analyses were conducted on all possible 2x2 combinations of variables. Comparisons were made between sedentary and moderately active respondents, sedentary and vigorously active respondents, and moderate and vigorously active respondents against participation in recent leisure-time physical activity. Significant differences were found at all levels of comparison. Table 6 shows the results of the post hoc analysis. The results show that vigorously active individuals in the sample were more likely to have participated in recent leisure-time physical activity than moderately active individuals or sedentary individuals. Moderately active individuals were also more likely than sedentary individuals to have participated in recent leisure-time physical activity.

Table 5

3 x 2 Contingency Table of Physical Activity Category and Recent Leisure-timePhysical Activity Participation *

Recent Activity (<u>N</u> = 377)	Physical Activity Category			Total Frequency (%)
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	
Yes				215.0 (57.0%)
Observed	86.0 (42.4%)	77.0 (67.0%)	52.0 (88.1%)	
Expected	115.7	65.6	33.6	
No				162.0 (43.0%)
Observed	117.0 (57.6%)	38.0 (33.0%)	7.0 (11.9%)	
Expected	87.3	49.5	25.4	
Total	203.0	115.0	59.0	377.0

$$X^2 (2, \underline{N} = 377) = 45.74, (p = .001)$$

* X^2 significant at $p < .05$

Table 6

Post Hoc Tests of Physical Activity Category and Recent Leisure-time Physical ActivityParticipation

Recent Activity (<u>n</u> = 318)	Physical Activity Category		
	Sedentary ^a . Frequency	Moderate Frequency	Total Frequency (%)
Yes			
Observed	86.0	77.0	163.0 (51.3%)
Expected	104.1	59.0	
No			
Observed	117.0	38.0	155.0 (48.7%)
Expected	98.9	56.0	
Total	203.0	115.0	318.0
Recent Activity (<u>n</u> = 262)	Physical Activity Category		
	Sedentary ^b . Frequency	Vigorous Frequency	Total Frequency (%)
Yes			
Observed	86.0	52.0	138.0 (52.7%)
Expected	107.0	31.1	
No			
Observed	117.0	7.0	124.0 (47.3%)
Expected	96.0	27.9	
Total	203.0	59.0	262.0
Recent Activity (<u>n</u> = 174)	Physical Activity Category		
	Moderate ^c . Frequency	Vigorous Frequency	Total Frequency (%)
Yes			
Observed	77.0	52.0	129.0 (74.0%)
Expected	85.1	43.7	
No			
Observed	38.0	7.0	45.0 (26.0%)
Expected	29.9	15.3	
Total	115.0	59.0	174.0

* Yates corrected X^2 significant at $p < .05$ ^a X^2 (1, n = 318) = 16.80, (p = .001)^b X^2 (1, n = 262) = 36.60, (p = .001)^c X^2 (1, n = 174) = 8.05, (p = .005)

Strengthening Activity Participation

Participation in strengthening activities among respondents in the sample was determined by their responses to specific survey questions. Respondents indicated their number of strengthening activity sessions per week and average number of minutes per session. Any indicated levels of weekly strengthening activity qualified the respondent as “participating in strengthening activities.” It is important to note that this level of participation may not be adequate to obtain health benefits. Overall, only 114 (30.2%) of the women in the sample reported participation in strengthening activities and 263 (69.8%) of the women reported no participation. The percentage of women reporting participation in strengthening activities is listed in Table 7.

Table 7

Strengthening Activity Participation for the Sample (N = 377)

	Frequency (%)	95% Confidence Intervals
Strengthening Activity ^a		
Yes	114 (30.2%)	25.7% - 35.2%
No	263 (69.8%)	64.8% - 74.3%

^a Strengthening activity is defined as reporting regular participation in any type of strengthening activities. No minimum frequency or duration was designated.

Differences in the percentage of women in each physical activity category reporting participation in strengthening activities are shown in Figure 3. Only 22.2% of the sedentary women and 22.6% of the moderately active women in the sample reported participation in strengthening activities versus 72.9% of the vigorously active women.

Chi-square analysis revealed a significant difference ($p < .05$) between physical activity level classifications (sedentary, moderately active, vigorously active) and participation in strengthening activities. Table 8 shows the results of the chi-square analysis between these two variables. As a result of this significant difference, post hoc Yates corrected chi-square analyses were conducted on all possible 2x2 combinations of variables. Comparisons were made between sedentary and moderately active respondents, sedentary and vigorously active respondents, and moderate and vigorously active respondents against participation in strengthening activities. Table 9 shows the results of the post hoc analyses. Vigorously active individuals in the sample were more likely to have participated in strengthening activities than moderately active individuals or sedentary individuals.

Figure 3

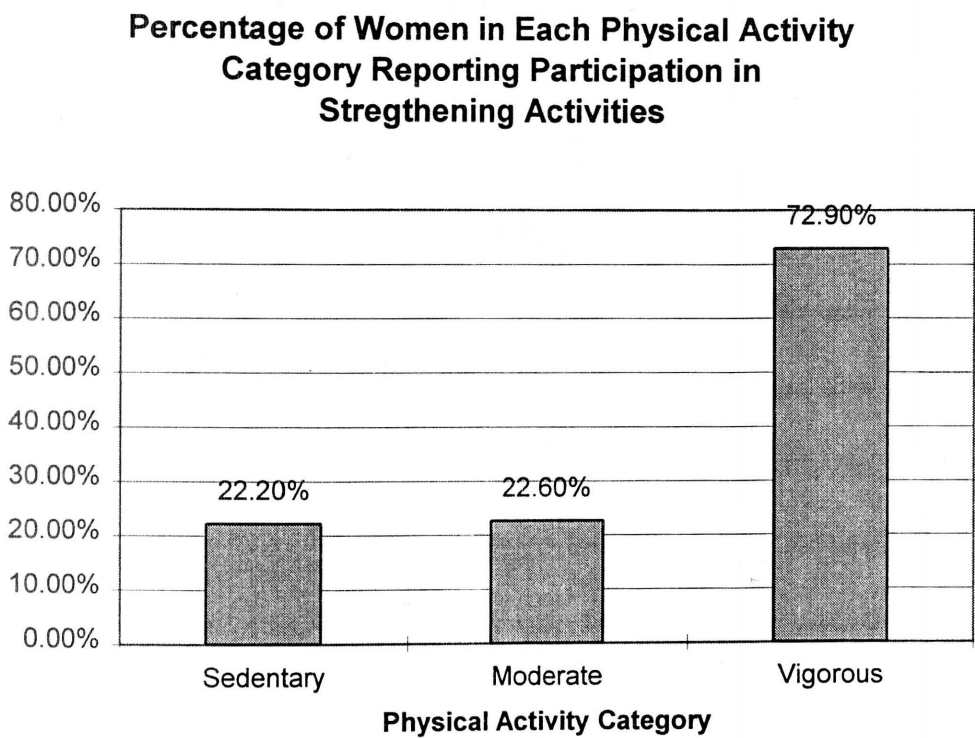


Table 8

3 x 2 Contingency Table of Physical Activity Category and Participation in Strengthening Activities *

Strength Activity (N = 377)	Physical Activity Category			
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	Total Frequency (%)
Yes				114.0 (30.2%)
Observed	45.0 (22.2%)	26.0 (22.6%)	43.0 (72.9%)	
Expected	61.3	34.7	17.8	
No				263.0 (69.8%)
Observed	158.0 (77.8%)	89.0 (77.4%)	16.0 (27.1%)	
Expected	141.7	80.3	41.2	
Total	203.0	115.0	59.0	377.0

$X^2 (2, N = 377) = 60.30, (p = .001)$

* X^2 significant at $p < .05$

Table 9

Post Hoc Tests of Physical Activity Category and Participation in StrengtheningActivities

Strength Activities (<u>n</u> = 318)	Physical Activity Category		
	Sedentary ^a Frequency	Moderate Frequency	Total Frequency (%)
Yes			
Observed	45.0	26.0	71.0 (22.3%)
Expected	45.3	25.6	
No			
Observed	158.0	89.0	247.0 (77.7%)
Expected	157.7	89.4	
Total	203.0	115.0	318.0
Strength Activities (<u>n</u> = 262)	Sedentary ^b *	Vigorous Frequency	Total Frequency (%)
Yes			
Observed	45.0	43.0	88.0 (33.6%)
Expected	68.2	19.8	
No			
Observed	158.0	16.0	174.0 (66.4%)
Expected	134.8	39.2	
Total	203.0	59.0	262.0
Strength Activities (<u>n</u> = 174)	Moderate ^c *	Vigorous Frequency	Total Frequency (%)
Yes			
Observed	26.0	43.0	69.0 (39.7%)
Expected	45.7	23.4	
No			
Observed	89.0	16.0	105.0 (60.3%)
Expected	69.3	35.6	
Total	115.0	59.0	174.0

* Yates corrected X^2 significant at $p < .05$ ^a $X^2 (1, n = 318) = 0.00, ns (p = .960)$ ^b $X^2 (1, n = 262) = 50.46, (p = .001)$ ^c $X^2 (1, n = 174) = 39.11, (p = .001)$

Differences in Physical Activity Level Based on Age

The sample contained a substantial number of women from each 10-year age group category included in the survey questionnaire (see Table 1). Chi-square analysis revealed a significant difference ($p<.05$) in physical activity level classifications (sedentary, moderately active, vigorously active) between women of different age groups. Table 10 shows the results of the chi-square analysis between these two variables. A total of 48.0% of women ages 41–50 were classified as sedentary compared to 49.4% of women ages 51–60, 50.0% of women 61–70, 67.3% of women 71–80, and 70.7% of women 81 years of age and over. The percentage of sedentary, moderately active, and vigorously active women in each age group is shown in Figure 4.

Figure 4

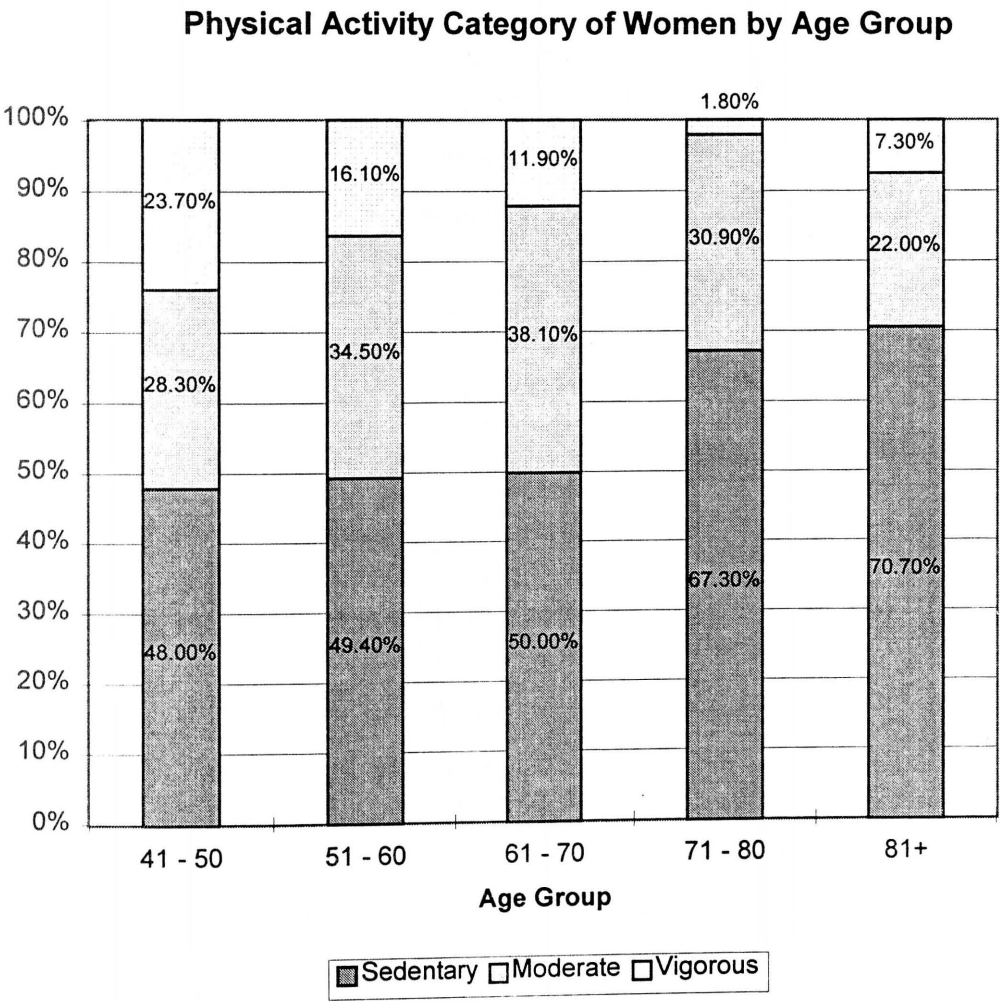


Table 10

3 x 5 Contingency Table of Physical Activity Category and Age *

Age in Years (<u>N</u> = 377)	Physical Activity Category			Total Frequency (%)
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	
41- 50				152.0 (40.3%)
Observed	73.0 (48.0%)	43.0 (28.3%)	36.0 (23.7%)	
Expected	81.8	46.3	23.8	
51 - 60				87.0 (23.1%)
Observed	43.0 (49.4%)	30.0 (34.5%)	14.0 (16.1%)	
Expected	46.9	26.6	13.6	
61 - 70				42.0 (11.1%)
Observed	21.0 (50.0%)	16.0 (38.1%)	5.0 (11.9%)	
Expected	22.5	12.8	6.6	
71 - 80				55.0 (14.6%)
Observed	37.0 (67.3%)	17.0 (30.9%)	1.0 (1.8%)	
Expected	29.7	16.8	8.6	
81+				41.0 (10.9%)
Observed	29.0 (70.7%)	9.0 (22.0%)	3.0 (7.3%)	
Expected	22.1	12.5	6.4	
Total	203.0	115.0	59.0	377.0

$$X^2 (8, \underline{N} = 377) = 23.07, (p = .003)$$

* X^2 significant at $p < .05$

As a result of this significant difference, post hoc Yates corrected chi-square analyses were conducted on seven of the possible 2x2 combinations of age group variables beginning with the most extreme age groups. Comparisons were made between sedentary and moderately active respondents, sedentary and vigorously active respondents, and moderate and vigorously active respondents against the following age group categories: (1) 41-50 years and 81+ years, (2) 41-50 years and 71-80 years, (3) 41-50 years and 61-70 years, (4) 41-50 years and 51-60 years, (5) 51-60 years and 81+ years, (6) 51-60 years and 71-80 years, and (7) 51-60 years and 61-70 years. Tables 11 - 17 show the results of the post hoc analyses.

The results of the post hoc chi-square analyses revealed that women in the sample 41-50 years of age were more likely to be vigorously active than were women 81+ years of age or women 71-80 years of age. Women 51-60 years of age were also more likely to be vigorously active than were women 71-80 years of age. There were no other significant differences found in the physical activity levels of women from different age groups.

Table 11

Post Hoc Tests of Physical Activity Category and Ages 41 – 50 vs. Ages 81+

Age in Years (<u>n</u> = 154)	Physical Activity Category		
	Sedentary _a Frequency	Moderate Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	43.0	116.0 (75.3%)
Expected	76.8	39.2	
81+			
Observed	29.0	9.0	38.0 (24.7%)
Expected	25.2	12.8	
Total	102.0	52.0	154.0
Age in Years (<u>n</u> = 141)	Sedentary _b *	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	36.0	109.0 (77.3%)
Expected	78.8	30.1	
81+			
Observed	29.0	3.0	32.0 (22.7%)
Expected	23.2	8.9	
Total	102.0	39.0	141.0
Recent Exercise (<u>n</u> = 91)	Moderate _c Frequency	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	43.0	36.0	79.0 (86.8%)
Expected	45.1	33.9	
81+			
Observed	9.0	3.0	12.0 (13.2%)
Expected	6.9	5.1	
Total	52.0	39.0	91.0

* Yates corrected X^2 significant at $p < .05$ _a X^2 (1, n = 154) = 1.73, ns (p = .188)_b X^2 (1, n = 141) = 5.78, (p = .016)_c X^2 (1, n = 91) = 1.06, ns (p = .304)

Table 12

Post Hoc Tests of Physical Activity Category and Ages 41 – 50 vs. Ages 71 - 80

Age in Years (<u>n</u> = 170)	Physical Activity Category		
	Sedentary _a Frequency	Moderate Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	43.0	116.0 (68.2%)
Expected	75.0	40.9	
71 - 80			
Observed	37.0	17.0	54.0 (31.8%)
Expected	35.0	19.1	
Total	110.0	60.0	170.0
Age in Years (<u>n</u> = 147)	Physical Activity Category		
	Sedentary _b *	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	36.0	109.0 (74.1%)
Expected	81.5	27.4	
71 - 80			
Observed	37.0	1.0	38.0 (25.9%)
Expected	28.5	9.6	
Total	110.0	37.0	147.0
Age in Years (<u>n</u> = 97)	Physical Activity Category		
	Moderate _c *	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	43.0	36.0	79.0 (81.4%)
Expected	48.8	30.1	
71 - 80			
Observed	17.0	1.0	18.0 (18.6%)
Expected	11.2	6.9	
Total	60.0	37.0	97.0

* Yates corrected X^2 significant at $p < .05$ _a $X^2 (1, \underline{n} = 170) = 0.29, \underline{ns} (p = .591)$ _b $X^2 (1, \underline{n} = 147) = 12.26, (p = .001)$ _c $X^2 (1, \underline{n} = 97) = 8.32, (p = .004)$

Table 13

Post Hoc Tests of Physical Activity Category and Ages 41 – 50 vs. Ages 61 - 70

Age in Years (<u>n</u> = 153)	Physical Activity Category		
	Sedentary _a Frequency	Moderate Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	43.0	116.0 (75.8%)
Expected	71.3	44.7	
61 - 70			
Observed	21.0	16.0	37.0 (24.2%)
Expected	22.7	14.3	
Total	94.0	59.0	153.0
Age in Years (<u>n</u> = 135)	Physical Activity Category		
	Sedentary _b Frequency	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	36.0	109.0 (80.7%)
Expected	75.9	33.1	
61 - 70			
Observed	21.0	5.0	26.0 (19.3%)
Expected	18.1	7.9	
Total	94.0	41.0	135.0
Age in Years (<u>n</u> = 100)	Physical Activity Category		
	Moderate _c Frequency	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	43.0	36.0	79.0 (79.0%)
Expected	46.6	32.4	
61 - 70			
Observed	16.0	5.0	21.0 (21.0%)
Expected	12.4	8.6	
Total	59.0	41.0	100.0

_a $X^2(1, n = 153) = 0.23, ns (p = .633)$

_b $X^2(1, n = 135) = 1.29, ns (p = .255)$

_c $X^2(1, n = 100) = 2.41, ns (p = .121)$

Table 14

Post Hoc Tests of Physical Activity Category and Ages 41 – 50 vs. Ages 51 - 60

Age in Years (<u>n</u> = 189)	Physical Activity Category		
	Sedentary _a Frequency	Moderate Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	43.0	116.0 (61.4%)
Expected	71.2	44.8	
51 - 60			
Observed	43.0	30.0	73.0 (38.6%)
Expected	44.8	28.2	
Total	116.0	73.0	189.0
Age in Years (<u>n</u> = 166)			
	Sedentary _b Frequency	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	73.0	36.0	109.0 (65.7%)
Expected	76.2	32.8	
51 - 60			
Observed	43.0	14.0	57.0 (34.3%)
Expected	39.8	17.2	
Total	116.0	50.0	166.0
Age in Years (<u>n</u> = 123)			
	Moderate _c Frequency	Vigorous Frequency	Total Frequency (%)
41 - 50			
Observed	43.0	36.0	79.0 (64.2%)
Expected	46.9	32.1	
51 - 60			
Observed	30.0	14.0	44.0 (35.8%)
Expected	26.1	17.9	
Total	73.0	50.0	123.0

_a $X^2(1, n = 189) = 0.16, ns (p = .689)$

_b $X^2(1, n = 166) = 0.90, ns (p = .342)$

_c $X^2(1, n = 123) = 1.68, ns (p = .195)$

Table 15

Post Hoc Tests of Physical Activity Category and Ages 51 – 60 vs. Ages 81+

Age in Years (<u>n</u> = 111)	Physical Activity Category		
	Sedentary ^a Frequency	Moderate Frequency	Total Frequency (%)
51 - 60			
Observed	43.0	30.0	73.0 (65.8%)
Expected	47.4	25.7	
81+			
Observed	29.0	9.0	38.0 (34.2%)
Expected	24.6	13.3	
Total	72.0	39.0	111.0
Age in Years (<u>n</u> = 89)	Sedentary ^b Frequency	Vigorous Frequency	Total Frequency (%)
51 - 60			
Observed	43.0	14.0	57.0 (64.0%)
Expected	46.1	10.9	
81+			
Observed	29.0	3.0	32.0 (36.0%)
Expected	25.9	6.1	
Total	72.0	17.0	89.0
Age in Years (<u>n</u> = 56)	Moderate ^c Frequency	Vigorous Frequency	Total Frequency (%)
51 - 60			
Observed	30.0	14.0	44.0 (78.6%)
Expected	30.7	13.4	
81+			
Observed	9.0	3.0	12.0 (21.4%)
Expected	8.3	3.6	
Total	39.0	17.0	56.0

^a $X^2(1, \underline{n} = 111) = 2.60, \underline{ns} (p = .107)$

^b $X^2(1, \underline{n} = 89) = 2.15, \underline{ns} (p = .142)$

^c $X^2(1, \underline{n} = 56) = 0.01, \underline{ns} (p = .919)$

Table 16

Post Hoc Tests of Physical Activity Category and Ages 51 – 60 vs. Ages 71 - 80

Age in Years (<u>n</u> = 127)	Physical Activity Category		
	Sedentary ^a Frequency	Moderate Frequency	Total Frequency (%)
51 - 60			
Observed	43.0	30.0	73.0 (57.5%)
Expected	46.0	27.0	
71 - 80			
Observed	37.0	17.0	54.0 (42.5%)
Expected	34.0	20.0	
Total	80.0	47.0	127.0
Age in Years (<u>n</u> = 95)	Physical Activity Category		
	Sedentary ^b *	Vigorous Frequency	Total Frequency (%)
51 - 60			
Observed	43.0	14.0	57.0 (60.0%)
Expected	48.0	9.0	
71 - 80			
Observed	37.0	1.0	38.0 (40.0%)
Expected	32.0	6.0	
Total	80.0	15.0	95.0
Age in Years (<u>n</u> = 62)	Physical Activity Category		
	Moderate ^c Frequency	Vigorous Frequency	Total Frequency (%)
51 - 60			
Observed	30.0	14.0	44.0 (71.0%)
Expected	33.4	10.6	
71 - 80			
Observed	17.0	1.0	18.0 (29.0%)
Expected	13.6	4.4	
Total	47.0	15.0	62.0

^a $X^2(1, \underline{n} = 127) = 0.85, \underline{ns} (p = .356)$

^b $X^2(1, \underline{n} = 95) = 6.68, (p = .010)$

^c $X^2(1, \underline{n} = 62) = 3.48, \underline{ns} (p = .062)$

Table 17

Post Hoc Tests of Physical Activity Category and Ages 51 – 60 vs. Ages 61 – 70

Age in Years (<u>n</u> = 110)	Physical Activity Category		
	Sedentary ^a Frequency	Moderate Frequency	Total Frequency (%)
51 - 60			
Observed	43.0	30.0	73.0 (66.4%)
Expected	42.5	30.5	
61 - 70			
Observed	21.0	16.0	37.0 (33.6%)
Expected	21.5	15.5	
Total	64.0	46.0	110.0
Age in Years (<u>n</u> = 83)			
	Sedentary ^b Frequency	Vigorous Frequency	Total Frequency (%)
51 - 60			
Observed	43.0	14.0	57.0 (68.7%)
Expected	44.0	13.1	
61 - 70			
Observed	21.0	5.0	26.0 (31.3%)
Expected	20.0	5.9	
Total	64.0	19.0	83.0
Age in Years (<u>n</u> = 65)			
	Moderate ^c Frequency	Vigorous Frequency	Total Frequency (%)
51 - 60			
Observed	30.0	14.0	44.0 (67.7%)
Expected	31.1	12.9	
61 - 70			
Observed	16.0	5.0	21.0 (32.3%)
Expected	14.9	6.1	
Total	46.0	19.0	65.0

^a $X^2(1, \underline{n} = 110) = 0.00, \underline{ns} (p = .991)$

^b $X^2(1, \underline{n} = 83) = 0.06, \underline{ns} (p = .799)$

^c $X^2(1, \underline{n} = 65) = 0.14, \underline{ns} (p = .710)$

Differences in Physical Activity Level Based on Educational Level

The sample was closely distributed between the criteria of having a college degree (48.0%) and not having a college degree (52.0%) (see Table 1). Chi-square analysis indicated that there was not a significant difference ($p < .05$) in physical activity level classifications (sedentary, moderately active, vigorously active) between women in the sample that had a college degree and women that did not have a college degree. Table 18 shows the results of the chi-square analysis between these two variables.

Table 18

3 x 2 Contingency Table of Physical Activity Category and Educational Level

Educational Level (N = 377)	Physical Activity Category			
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	Total Frequency (%)
College Degree				181.0 (48.0%)
Observed	97.0 (53.6%)	49.0 (27.1%)	35.0 (19.3%)	
Expected	97.4	55.2	28.3	
No College Degree				196.0 (52.0%)
Observed	106.0 (54.1%)	66.0 (33.7%)	24.0 (12.2%)	
Expected	105.6	59.8	30.7	
Total	203.0	115.0	59.0	377.0

$$X^2 (2, N = 377) = 4.37, \text{ ns } (p = .112)$$

Differences in Physical Activity Level Based on Annual Household Income

The sample was evenly distributed with regard to reported annual household income level (see Table 1). Chi-square analysis revealed a significant difference ($p < .05$) in physical activity level classifications (sedentary, moderately active, vigorously active) between women of different income levels. Table 19 shows the results of the chi-square analysis between these two variables. A total of 65.4% of women in the annual household income category of <\$40,000 were classified as sedentary compared to 52.9% of women in the \$40,000–\$79,999 category, and 42.8% of the women in the \$80,000+ category. The percentage of sedentary, moderately active, and vigorously active women in each age group is indicated in Figure 5.

Figure 5

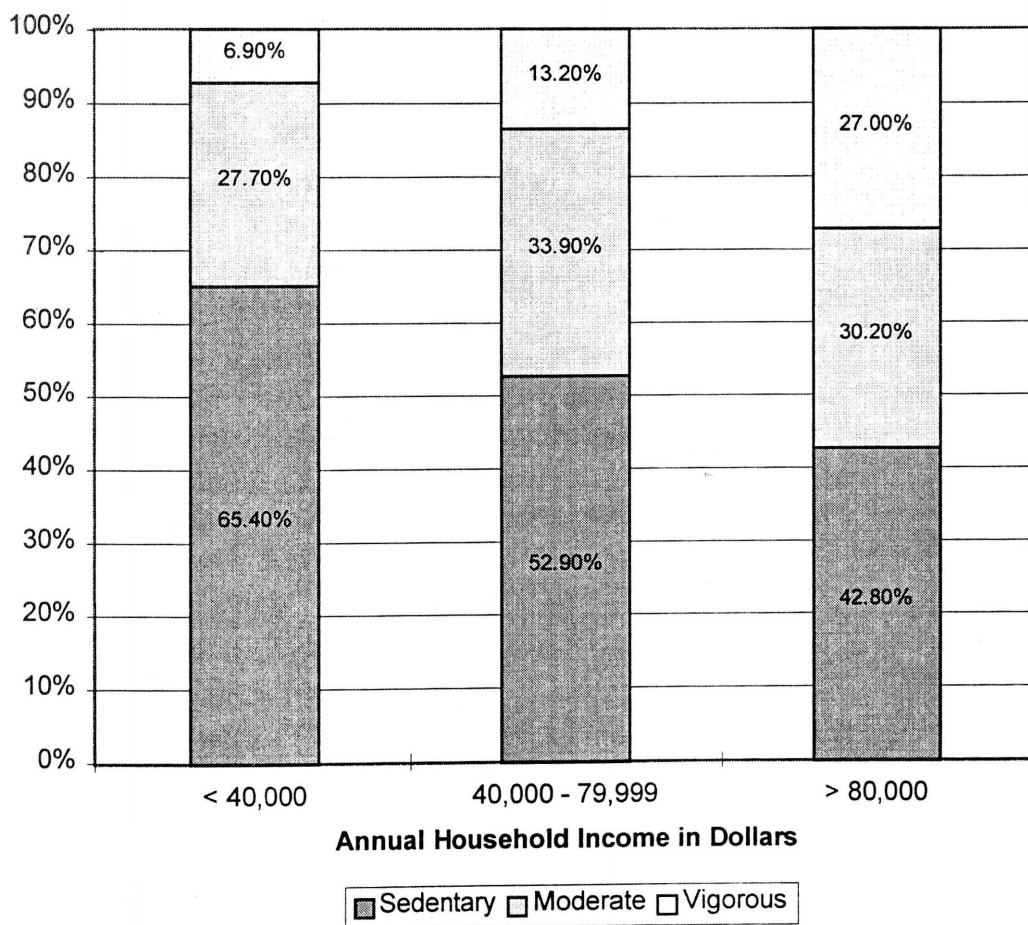
Physical Activity Category of Women by Income

Table 19

3 x 3 Contingency Table of Physical Activity Category and Income *

Annual Income (N = 377)	Physical Activity Category			
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	Total Frequency (%)
<\$40,000				130.0 (34.5%)
Observed	85.0 (65.4%)	36.0 (27.7%)	9.0 (6.9%)	
Expected	70.0	39.7	20.4	
\$40,000 - \$79,999				121.0 (32.1%)
Observed	64.0 (52.9%)	41.0 (33.9%)	16.0 (13.2%)	
Expected	65.2	36.9	18.9	
>\$80,000+				126.0 (33.4%)
Observed	54.0 (42.9%)	38.0 (30.2%)	34.0 (27.0%)	
Expected	67.8	38.4	19.7	
Total	203.0	115.0	59.0	377.0

$$X^2 (4, N = 377) = 23.98, (p = .001)$$

* X^2 significant at $p < .05$

As a result of this significant difference, post hoc Yates corrected chi-square analyses were conducted on all possible 2x2 combinations of income categories. Comparisons were made between sedentary and moderately active respondents, sedentary and vigorously active respondents, and moderate and vigorously active respondents against the following income categories: 1) \$40,000 and \$80,000+, 2) <\$40,000 and \$40,000-\$79,999, and 3) \$80,000+ and \$40,000 – 79,999. Tables 20 - 22 show the results of the post hoc analyses.

The results of the post hoc chi-square analyses revealed that women in the sample with annual household incomes of \$80,000+ were more likely to be vigorously active than were women with incomes <\$40,000 or women with incomes of \$40,000-\$79,999. There were no significant differences in physical activity levels between women with annual household incomes of \$40,000-\$79,999 and women with incomes of <\$40,000.

Table 20

Post Hoc Tests of Physical Activity Category and Annual Household Income <\$40,000
vs. \$80,000+

Annual Household Income (<u>n</u> = 213)	Physical Activity Category		
	Sedentary _a Frequency	Moderate Frequency	Total Frequency (%)
<\$40,000			
Observed	85.0	36.0	121.0 (56.8%)
Expected	79.0	42.0	
\$80,000+			
Observed	54.0	38.0	92.0 (43.2%)
Expected	60.0	32.0	
Total	139.0	74.0	213.0
Annual Household Income (<u>n</u> = 182)	Sedentary _b *	Vigorous Frequency	Total Frequency (%)
<\$40,000			
Observed	85.0	9.0	94.0 (51.6%)
Expected	71.7	22.2	
\$80,000+			
Observed	54.0	34.0	88.0 (48.4%)
Expected	67.3	20.8	
Total	139.0	43.0	182.0
Annual Household Income (<u>n</u> = 117)	Moderate _c *	Vigorous Frequency	Total Frequency (%)
<\$40,000			
Observed	36.0	9.0	45.0 (38.5%)
Expected	28.5	16.6	
\$80,000+			
Observed	38.0	34.0	72.0 (61.5%)
Expected	45.5	26.4	
Total	74.0	43.0	117.0

* Yates corrected X^2 significant at $p < .05$

_a $X^2 (1, n = 213) = 2.59, ns (p = .108)$

_b $X^2 (1, n = 182) = 19.69, (p = .001)$

_c $X^2 (1, n = 117) = 7.70, (p = .006)$

Table 21

Post Hoc Tests of Physical Activity Category and Annual Household Income <\$40,000
vs. \$40,000-\$79,999

Annual Household Income (<u>n</u> = 226)	Physical Activity Category		
	Sedentary ^a Frequency	Moderate Frequency	Total Frequency (%)
<\$40,000			
Observed	85.0	36.0	121.0 (53.5%)
Expected	79.7	41.2	
\$40,000 - \$79,999			
Observed	64.0	41.0	105.0 (46.5)
Expected	69.3	35.8	
Total	149.0	77.0	226.0
Annual Household Income (<u>n</u> = 174)	Sedentary ^b Frequency	Vigorous Frequency	Total Frequency (%)
<\$40,000			
Observed	85.0	9.0	94.0 (54.0%)
Expected	80.5	13.5	
\$40,000 - \$79,999			
Observed	64.0	16.0	80.0 (46.0%)
Expected	68.5	11.5	
Total	149.0	25.0	174.0
Annual Household Income (<u>n</u> = 102)	Moderate ^c Frequency	Vigorous Frequency	Total Frequency (%)
<\$40,000			
Observed	36.0	9.0	45.0 (44.1%)
Expected	34.0	11.0	
\$40,000 - \$79,999			
Observed	41.0	16.0	57.0 (55.9%)
Expected	43.0	14.0	
Total	77.0	25.0	102.0

^a $X^2(1, n = 226) = 1.77, ns (p = .184)$

^b $X^2(1, n = 174) = 3.02, ns (p = .082)$

^c $X^2(1, n = 102) = 0.50, ns (p = .478)$

Table 22

Post Hoc Tests of Physical Activity Category and Annual Household Income \$80,000+ vs. \$40,000-\$79,999

Annual Household Income (<u>n</u> = 197)	Physical Activity Category		
	Sedentary _a Frequency	Moderate Frequency	Total Frequency (%)
\$80,000+			
Observed	54.0	38.0	92.0 (46.7%)
Expected	55.1	36.9	
\$40,000 - \$79,999			
Observed	64.0	41.0	105.0 (53.3%)
Expected	62.9	42.1	
Total	118.0	79.0	197.0
Annual Household Income (<u>n</u> = 168)	Physical Activity Category		
	Sedentary _b * Frequency	Vigorous Frequency	Total Frequency (%)
\$80,000+			
Observed	54.0	34.0	88.0 (52.4%)
Expected	61.8	26.2	
\$40,000 - \$79,999			
Observed	64.0	16.0	80.0 (47.6%)
Expected	56.2	23.8	
Total	118.0	50.0	168.0
Annual Household Income (<u>n</u> = 129)	Physical Activity Category		
	Moderate _c * Frequency	Vigorous Frequency	Total Frequency (%)
\$80,000+			
Observed	38.0	34.0	72.0 (55.8%)
Expected	44.1	27.9	
\$40,000 - \$79,999			
Observed	41.0	16.0	57.0 (44.2%)
Expected	34.9	22.1	
Total	79.0	50.0	129.0

* Yates corrected X^2 significant at $p < .05$

_a $X^2 (1, n = 197) = 0.03, ns (p = .860)$

_b $X^2 (1, n = 168) = 6.10, (p = .014)$

_c $X^2 (1, n = 129) = 4.14, (p = .042)$

Differences in Physical Activity Level Based on Marital Status

Respondents in the sample were classified as married (63.7%) or not married (36.3%) based on their responses in the survey questionnaire. Chi-square analysis revealed a significant difference ($p < .05$) between physical activity level classifications (sedentary, moderately active, vigorously active) and marital status. Table 23 shows the results of the chi-square analysis between these two variables. 62.8% of the unmarried women in the sample were sedentary compared to 48.8% of the married women. Only 10.2% of the unmarried women were vigorously active compared to 18.8% of the married women. The percentage of married and unmarried women in each physical activity category is shown in Figure 6.

Figure 6

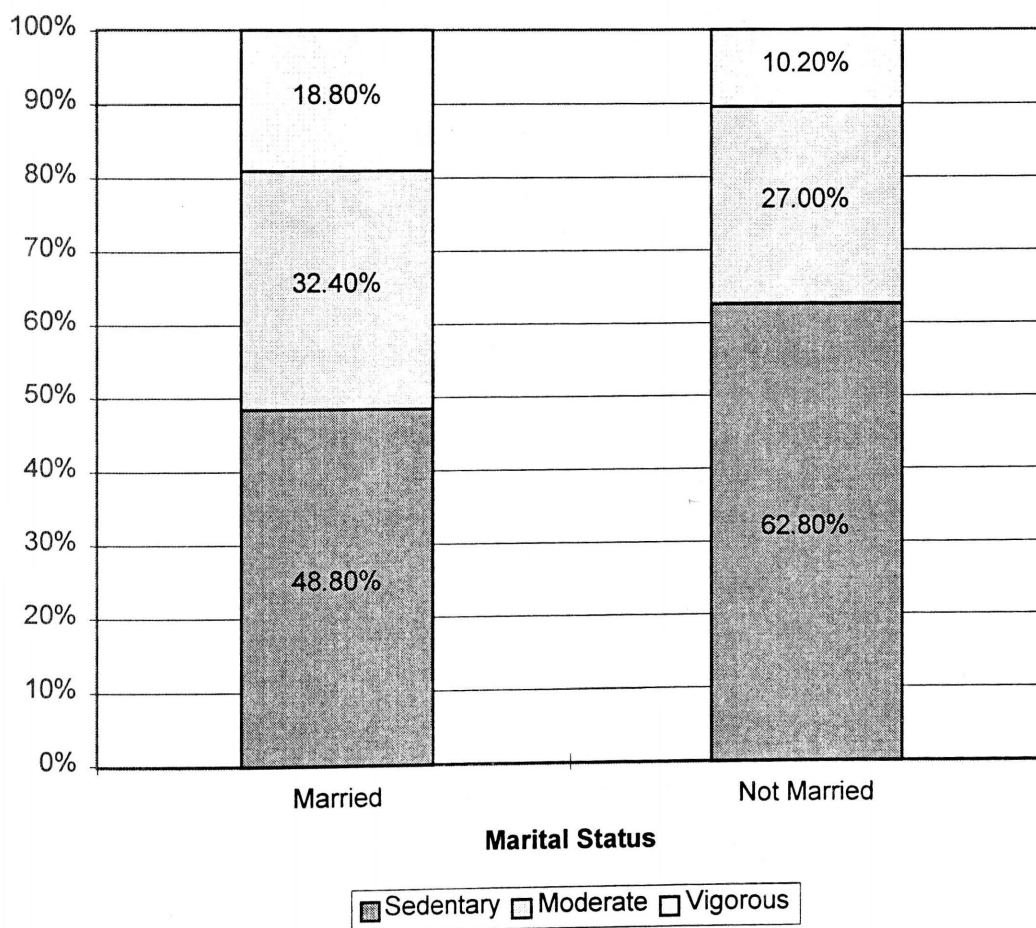
Physical Activity Category of Women by Marital Status

Table 23

3 x 2 Contingency Table of Physical Activity Category and Marital Status *

Marital Status (N = 377)	Physical Activity Category			Total Frequency (%)
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	
Married				240.0 (63.7%)
Observed	117.0 (48.8%)	78.0 (32.4%)	45.0 (18.8%)	
Expected	129.3	73.3	37.6	
Not Married				137.0 (36.3%)
Observed	86.0 (62.8%)	37.0 (27.0%)	14.0 (10.2%)	
Expected	73.7	41.7	21.4	
Total	203.0	115.0	59.0	377.0

$$X^2 (2, N = 377) = 8.10, (p = .017)$$

* X^2 significant at $p < .05$

As a result of this significant difference, post hoc Yates corrected chi-square analyses were conducted on all possible 2x2 combinations of variables. Comparisons were made between sedentary and moderately active respondents, sedentary and vigorously active respondents, and moderate and vigorously active respondents against marital status. Table 24 shows the results of the post hoc analyses. The analyses revealed that the married women in the sample were more likely than unmarried women to be vigorously active. There were no significant differences in moderate physical activity levels between the married and unmarried women in the sample.

Table 24

Post Hoc Tests of Physical Activity Category and Marital Status

Marital Status (<u>n</u> = 318)	Physical Activity Category		
	Sedentary ^a Frequency	Moderate Frequency	Total Frequency (%)
Married			
Observed	117.0	78.0	195.0 (61.3%)
Expected	124.4	70.5	
Not Married			
Observed	86.0	37.0	123.0 (38.7%)
Expected	78.6	44.5	
Total	203.0	115.0	318.0
Marital Status (<u>n</u> = 262)	Physical Activity Category		
	Sedentary ^b Frequency	Vigorous Frequency	Total Frequency
Married			
Observed	117.0	45.0	162.0 (61.8%)
Expected	125.5	36.5	
Not Married			
Observed	86.0	14.0	100.0 (38.2%)
Expected	77.5	22.5	
Total	203.0	59.0	262.0
Marital Status (<u>n</u> = 174)	Physical Activity Category		
	Moderate ^c Frequency	Vigorous Frequency	Total Frequency
Married			
Observed	78.0	45.0	123.0 (70.7%)
Expected	81.3	41.7	
Not Married			
Observed	37.0	14.0	51.0 (29.3%)
Expected	33.7	17.3	
Total	115.0	59.0	174.0

* Yates corrected X^2 significant at $p < .05$ ^a $X^2 (1, \underline{n} = 318) = 2.80, \underline{ns} (p = .094)$ ^b $X^2 (1, \underline{n} = 262) = 5.96, (p = .015)$ ^c $X^2 (1, \underline{n} = 174) = 0.97, \underline{ns} (p = .326)$

Differences in Physical Activity Level Based on Child Status

Child status in the sample was determined by a yes or no answer to the question “do you have any children under the age of 18 years living in the home?” The majority of women in the sample did not have children under 18 years of age living in the home (76.9%) (see table 1). Chi-square analysis indicated that there was not a significant difference ($p < .05$) in physical activity level classifications (sedentary, moderately active, vigorously active) between women in the sample that had children under 18 years of age living in the home and women that did not. Table 25 shows the results of the chi-square analysis between these two variables.

Table 25

3 x 2 Contingency Table of Physical Activity Category and Child Status

Children < 18 years at home (N = 377)	Physical Activity Category			Total Frequency (%)
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	
Yes				87.0 (23.1%)
Observed	42.0 (48.3%)	25.0 (28.7%)	20.0 (23.0%)	
Expected	46.9	26.6	13.6	
No				290.0 (76.9%)
Observed	161.0 (55.5%)	90.0 (31.0%)	39.0 (13.4%)	
Expected	156.1	88.4	45.4	
Total	203.0	115.0	59.0	377.0

$$X^2 (2, N = 377) = 4.66, \text{ ns } (p = .097)$$

Differences in Physical Activity Level Based on Work Status

Respondents in the sample were classified as currently working outside the home (59.9%) or not currently working outside the home (40.1%) based on their responses in the survey questionnaire (see table 1). Chi-square analysis revealed a significant difference ($p < .05$) between physical activity level classifications (sedentary, moderately active, vigorously active) and work status. Table 26 shows the results of the chi-square analysis between these two variables. A total of 61.6% of the non-working women in the sample were sedentary compared to 48.7% of the working women. Only 10.6% of the non-working women were vigorously active compared to 19.0% of the working women. The percentage of working and non-working women in each physical activity category is shown in Figure 7.

Figure 7

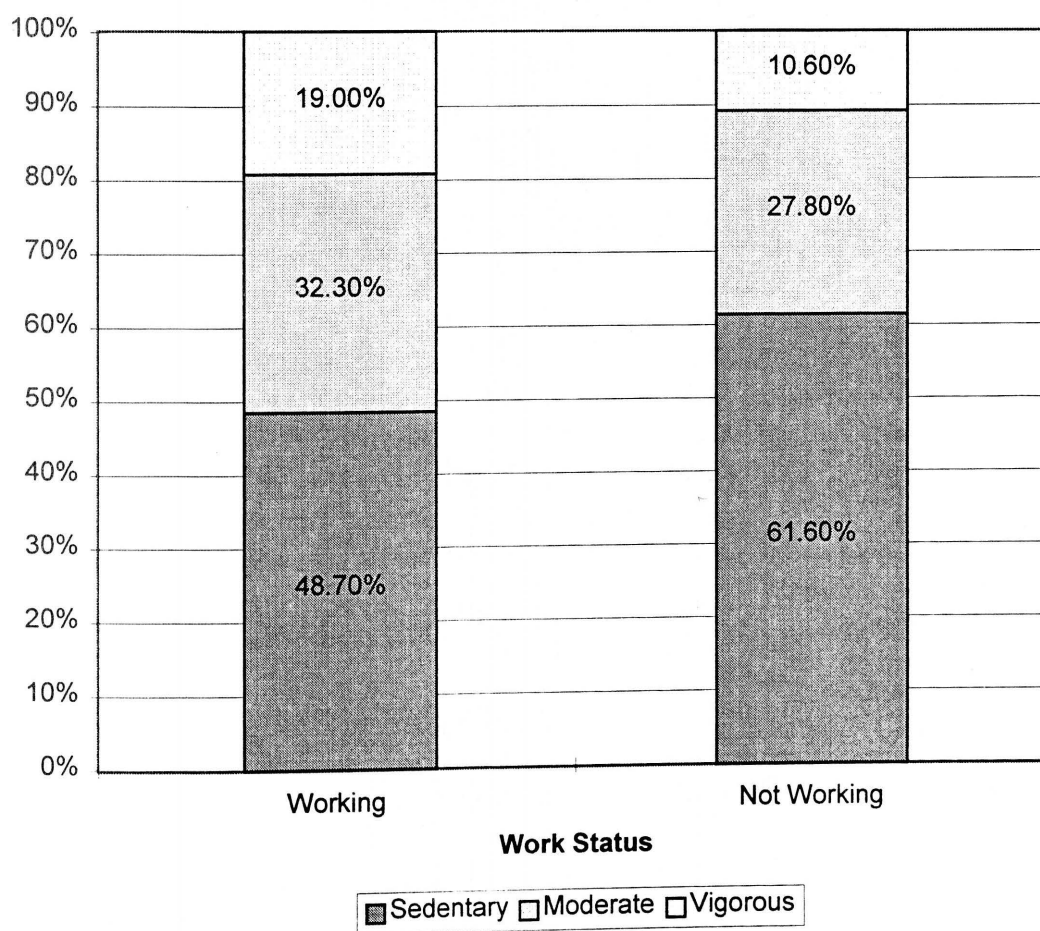
Physical Activity Category of Women by Work Status

Table 26

3 x 2 Contingency Table of Physical Activity Category and Work Status *

Work Outside the Home (N = 377)	Physical Activity Category			Total Frequency (%)
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	
Yes				226.0 (59.9%)
Observed	110.0 (48.7%)	73.0 (32.3%)	43.0 (19.0%)	
Expected	121.6	68.9	35.3	
No				151.0 (40.1%)
Observed	93.0 (61.6%)	42.0 (27.8%)	16.0 (10.6%)	
Expected	81.4	46.1	23.7	
Total	203.0	115.0	59.0	377.0

$$X^2 (2, N = 377) = 7.51, (p = .023)$$

* X^2 significant at $p < .05$

As a result of this significant difference, post hoc Yates corrected chi-square analyses were conducted on all possible 2x2 combinations of variables. Comparisons were made between sedentary and moderately active respondents, sedentary and vigorously active respondents, and moderate and vigorously active respondents against work status. Table 27 shows the results of the post hoc analyses. The results of the post hoc chi-square analyses revealed that working women in the sample were more likely to be vigorously active than were non-working women. There were no significant differences in moderate physical activity levels between working women and non-working women.

Table 27

Post Hoc Tests of Physical Activity Category and Work Status

Work Outside the home (\underline{n} = 318)	Physical Activity Category		
	Sedentary ^a Frequency	Moderate Frequency	Total Frequency (%)
Yes			
Observed	110.0	73.0	183.0 (57.6%)
Expected	116.9	66.2	
No			
Observed	93.0	42.0	135.0 (42.4%)
Expected	86.1	48.8	
Total	203.0	115.0	318.0
Work Outside the home (\underline{n} = 262)	Physical Activity Category		
	Sedentary ^b *	Vigorous Frequency	Total Frequency (%)
Yes			
Observed	110.0	43.0	153.0 (58.4%)
Expected	118.6	34.5	
No			
Observed	93.0	16.0	109.0 (41.6%)
Expected	84.4	24.5	
Total	203.0	59.0	262.0
Work Outside the home (\underline{n} = 174)	Physical Activity Category		
	Moderate ^c Frequency	Vigorous Frequency	Total Frequency (%)
Yes			
Observed	73.0	43.0	116.0 (66.7%)
Expected	76.7	39.4	
No			
Observed	42.0	16.0	58.0 (33.3%)
Expected	38.3	19.6	
Total	115.0	59.0	174.0

* Yates corrected X^2 significant at $p < .05$ ^a X^2 (1, \underline{n} = 318) = 2.23, ns (p = .136)^b X^2 (1, \underline{n} = 262) = 5.83, (p = .016)^c X^2 (1, \underline{n} = 174) = 1.16, ns (p = .282)

Based on these results, further analysis was conducted on the sample of working women to determine whether there was a significant difference in physical activity levels between women working part-time hours (less than 30 hours per week) and women working full-time work hours (at least 30 hours per week). Table 28 shows that chi-square analysis did not reveal a significant difference in physical activity levels between women working part-time hours and women working full-time hours.

Table 28

3 x 2 Contingency Table of Physical Activity Category and Work Hours

Work Hours (<u>n</u> = 226)	Physical Activity Category			Total Frequency (%)
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	
Full-time				181.0 (80.1%)
Observed	94.0 (51.9%)	52.0 (28.7%)	35.0 (19.3%)	
Expected	88.1	58.5	34.4	
Part-time				45.0 (19.9%)
Observed	16.0 (35.6%)	21.0 (46.7%)	8.0 (17.8%)	
Expected	21.9	14.5	8.6	
Total	110.0	73.0	43.0	226.0

$$X^2 (2, \underline{n} = 226) = 5.62, \underline{ns} (\underline{p} = .060)$$

In addition, analysis was also conducted to determine whether there was a significant difference in physical activity levels between working women that reported receiving employer incentives for physical activity and women that did not. Table 29 shows that chi-square analysis also did not reveal a significant difference in physical activity levels between women receiving employer incentives for physical activity and women not receiving employer incentives.

Table 29

3 x 2 Contingency Table of Physical Activity Category and Employer Incentives

Employer Incentives (<u>n</u> = 226)	Physical Activity Category			Total Frequency (%)
	Sedentary Frequency (%)	Moderate Frequency (%)	Vigorous Frequency (%)	
Yes				63.0 (27.9%)
Observed	32.0 (29.1%)	17.0 (27.3%)	14.0 (32.6%)	
Expected	30.7	20.4	12.0	
No				163.0 (72.1%)
Observed	78.0 (70.9%)	56.0 (76.7%)	29.0 (67.4%)	
Expected	79.3	52.6	31.0	
Total	110.0	73.0	43.0	226.0

$$X^2 (2, \underline{n} = 226) = 1.31, \underline{ns} (p = .518)$$

CHAPTER V: DISCUSSION

A cross-sectional survey design was utilized in this study to determine the self-reported physical activity levels of women over the age of 40 years residing in a suburban community in New England. In addition, information was also collected on recent leisure-time physical activity participation, strengthening activity participation, and the demographic variables of age, educational level, annual household income, marital status, child status, work status, work hours, and employer incentives for physical activity.

Frequencies and percentages were determined for all variable categories. In addition, chi-square analysis was conducted to identify significant differences within these variables based on physical activity level. This chapter provides an interpretation of these research findings. The specific research questions presented in chapter one will be answered, the significance of these findings and implications for health education practice will be discussed, and recommendations will be made for further research on this topic.

Research Questions

The following research questions are addressed by the results of this study:

1. What percentage of women in the sample report regular physical activity levels

that were sufficient to meet the moderate exercise recommendations from Physical Activity and Health: A Report of the Surgeon General (USDHHS, 1996)?

The results of this study indicate that 30.5% of the sample met the moderate exercise recommendations from the U.S. Surgeon General's report. These women reported a minimum of 30 minutes at a moderate intensity (such as brisk walking) or a minimum of 45 minutes at a mild intensity (such as easy walking) at least five days per week.

2. What percentage of women in the sample report regular physical activity levels that were sufficient to meet the vigorous exercise recommendations from the American College of Sports Medicine (ACSM, 1998)?

The results of this study indicate that 15.6% of the sample met the vigorous exercise recommendations from the American College of Sports Medicine. These women report participation in physical activity at least three days per week for a period of at least 20 minutes per day (minimum of 10 minute bouts accumulated throughout the day) at an intensity they define as "strenuous - causing the heart to beat rapidly."

3. What percentage of women in the sample report recent participation in leisure-time physical activity?

The results of this study indicate that 57% of the women in the sample report recent participation in leisure-time physical activity. Recent leisure-time physical activity is defined as participation in any physical activity during the previous four weeks.

4. What percentage of women in the sample report regular participation in strengthening activities?

The results of this study indicate that 30.2% of the women in the sample report regular participation in strengthening activities. Strengthening activity participation is defined as any level of regular participation in strengthening activities.

5. In this sample, what significant differences exist based on physical activity levels within the independent variables of (1) recent leisure-time physical activity participation, (2) strengthening activity participation, (3) age, (4) annual household income, (5) educational level, (6) marital status, (7) child status, (8) work status, (9) work hours, and (10) employer incentives for physical activity?

Chi-square analyses revealed a significant difference between recent leisure-time physical activity participation and physical activity levels. Vigorously active women were significantly more likely to have participated in recent leisure-time physical activity than moderately active women or sedentary women ($p < .05$). In addition, moderately active women were significantly more likely to have participated in recent leisure-time physical activity than sedentary women ($p < .05$).

Chi-square analyses revealed a significant difference between strengthening activity participation and physical activity level. Vigorously active women were significantly more likely to participate in strengthening activities than moderately active women or

sedentary women ($p < .05$). Moderately active women were not significantly different than sedentary women with regard to participation in strengthening activities.

Chi-square analyses revealed a significant difference in the physical activity levels of women of different age groups. Women ages 41-50 years were more likely to be vigorously active than women ages 71-80 years, or women over 81 years of age ($p < .05$). In addition, women ages 51-60 were more likely to be vigorously active than women ages 71-80 years ($p < .05$). There were no significant differences in the moderate physical activity levels between any age groups of women in the sample.

Chi-square analyses revealed a significant difference in the physical activity levels of women of different annual household incomes. Women with annual household incomes of \$80,000+ were more likely to be vigorously active than women with annual household incomes of \$40,000 - \$79,999 or with incomes of less than \$40,000 ($p < .05$). There were no significant differences in physical activity levels between women with annual household incomes of \$40,000 - \$79,999 and women with incomes of less than \$40,000. There were also no significant differences in the moderate physical activity levels between any income level groups of women in the sample.

Chi-square analyses revealed no significant differences in the moderate or vigorous physical activity levels of women of different educational levels. Women with college degrees did not have significantly different physical activity levels than women without college degrees.

Chi-square analyses revealed a significant difference in the physical activity levels of women of different marital status. Married women were more likely to be vigorously active than unmarried women ($p < .05$). There were no significant differences in the moderate physical activity levels between married and unmarried women in the sample.

Chi-square analyses revealed no significant differences in the moderate or vigorous physical activity levels of women of different child status. Women with children under the age of 18 years living in the home did not have significantly different physical activity levels than women without children under the age of 18 years living in the home.

Chi-square analyses revealed a significant difference in the physical activity levels of women of different work status. Women who were currently working outside the home were more likely to be vigorously active than women who were not currently working outside the home ($p < .05$). There were no significant differences in the moderate physical activity levels between working and non-working women in the sample.

Chi-square analyses revealed no significant differences in the physical activity levels of working women of different work hours. Working women who worked full-time hours (greater than 30 hours per week) did not have significantly different physical activity levels than working women who worked part-time hours (less than 30 hours per week).

Chi-square analyses revealed no significant differences in the moderate or vigorous physical activity levels of working women of different employer incentive status for physical activity. Working women receiving employer incentives for physical activity did not have significantly different physical activity levels than working women not receiving employer incentives for physical activity.

Interpretation and Significance of Results

Self-Reported Physical Activity Levels

The results of this study indicate that 53.9% of the sample of women over 40 years of age in this suburban community were sedentary. These women reported physical activity levels that were not sufficient to meet either the U.S. Surgeon General's moderate physical activity recommendations or the American College of Sports Medicine's vigorous physical activity recommendations. The number of sedentary women in this suburban community study was lower than that reported in previous national surveillance studies. The 1998 Behavioral Risk Factor Surveillance Survey (BRFSS) reported that 66.3% of women in the U.S. did not engage in regular moderate, or regular vigorous physical activity (CDC, 1998). The 1991 National Health Interview Survey (NHIS) reported that 64.4% of women in the U.S. did not engage in regular moderate, or regular vigorous physical activity (USDHHS, 1996).

There are three factors that may have contributed to the comparative difference in the percentage of sedentary women observed in this study. These factors include the

ethnicity of the sample, the residential area of the sample, and the different types of survey questionnaires used for data collection.

Ethnicity is a significant factor in relation to the physical activity levels of U.S. women. Research studies have consistently shown that non-White women have higher rates of physical inactivity than White women (USDHHS, 1996). In this suburban study, 96.8% of the sample self-identified as Caucasian (White). In contrast, the 1998 BRFSS study and 1991 NHIS study both utilized diverse samples of U.S. women. It is likely that the more diverse sampling procedures used by these national surveillance studies captured the higher rates of physical inactivity experienced by individuals of various ethnic minority groups. These more inclusive sampling procedures likely resulted in a higher overall percentage of inactive women.

Another factor that may have contributed to the lower percentage of inactive women in this study was the type of residential community from which the sample was drawn. This community is a small, middle-upper income, suburban community. Residential areas within this community are fairly homogenous with no distinct poverty areas. Yen et al. (1998) found that living in this type of suburban community is conducive to lower rates of physical inactivity than living in other types of residential environments. These researchers studied the physical activity levels of residents of various types of neighborhoods in Alameda, California and concluded that poverty area residence was associated with higher rates of physical inactivity independent of income, education,

smoking status, body mass index, and alcohol consumption. National surveillance data is drawn from a broad cross-section of U.S. communities, many of which are considered poverty areas. The more broad sampling procedures used by the 1998 BRFSS and 1991 NHIS studies likely resulted in a higher overall percentage of inactive women than found in this suburban community study.

The type of survey questionnaire used for data collection is another factor that may have contributed to the lower percentage of inactive women reported in this study. The questionnaire used for this study was a global self-assessment tool called the “Godin Leisure-Time Exercise Questionnaire.” This instrument contained questions that specifically asked participants to report their average weekly amount of physical activity in three separate categories, namely, vigorous, moderate, and mild. The survey instruments utilized in the 1998 BRFSS and the 1991 NHIS studies did not contain questions that delineated three different categories of physical activity. It is possible that respondents in these national studies did not recognize mild types of activity as types of physical activity that should be reported. This lower reporting of moderate physical activity would have resulted in a higher percentage of women being classified as inactive.

In this suburban community study, 30.5% of the women reported moderate levels of physical activity. These moderate activity levels were higher than those reported by the 1998 BRFSS study (20.4%) and the 1991 NHIS study (20.7%). A total of 15.6% of the

women in this suburban community study reported vigorous levels of physical activity. These vigorous activity levels were very similar to the 1998 BRFSS study (13.3%) and 1991 NHIS study (14.9%). The difference in percentages of moderately active women between this study and the national surveillance studies and the similarity in the percentages of vigorously active women is consistent with the explanations offered in the previous section. If women were more likely to report mild exercise with this study's instrument, these differences would be observed in the moderate physical activity category as opposed to the vigorous activity category.

Recent Leisure-time Physical Activity Participation

The results of this study indicate that 57% of the women in the sample reported participation in leisure-time physical activity during the previous four weeks. This number was significantly lower than the 1998 Behavior Risk Factor Surveillance Survey (BRFSS) which reported a 73.3% participation in recent leisure-time physical activity. One possible explanation for the lower rates of recent leisure-time physical activity participation observed in this suburban community study is the season in which the study was conducted. Data collection for this study took place in the winter, during the month of February, 2000. This Northeast community had experienced some cold weather and snow during the four-week period of time prior to data collection. It is possible that these weather conditions resulted in the reporting of lower rates of recent leisure-time physical activity participation. National survey data are collected during a

variety of seasons, in various parts of the country, not all of which experience cold weather that limits options for leisure-time physical activity.

As would be expected, a higher percentage of women in the moderate and vigorous physical activity categories reported recent leisure-time physical activity participation than in the sedentary category. Both moderately active women and vigorously active women were significantly more likely to report participation in recent leisure-time physical activity than were sedentary women. In addition, vigorously active women were significantly more likely to report participation in recent leisure-time physical activity than moderately active women. These findings reveal an apparent higher level of commitment to year round activity on the part of the vigorously active compared to moderately active women in this study. A total of 88.1% of the vigorously active women reported participation in leisure-time activity in the previous four weeks compared to 67% of the moderately active women and 42.4% of the sedentary women. It is possible that the vigorously active women were committed to their exercise programs in a way that inspired them to find other alternative ways to maintain their exercise routines during the winter months.

These findings should be investigated further before any specific conclusions can be reached. It is important to note that the structure of the question used to evaluate recent leisure-time physical activity was very limiting. This question did not assess the amount of activity that had occurred during the previous four-week period of time, only

that activity had taken place. It is therefore not possible to determine whether these women maintained a pattern of activity that was consistent with their physical activity classification (sedentary, moderate, or vigorous). A more detailed question about recent leisure-time physical activity would provide important information. In addition, qualitative research procedures such as interviews and focus groups would be valuable in determining the reasons for differences between moderate and vigorous groups with regard to recent leisure-time physical activity.

Strengthening Activity Participation

The results of this study indicate that 30.2% of the women in the sample report participation in strengthening activities. This number was substantially higher than previously reported percentages in national surveillance studies. The 1991 National Health Interview Survey (NHIS) reported an overall strengthening activity participation rate of only 8.8% among women (USDHHS, 1996). While these differences appear substantial, it is important to note the same limitations for comparing this study against national surveillance studies as were reported in the previous section. In addition, the survey questions used to determine participation in strengthening activities differed between the two studies. Women in this suburban community study were asked a global self-assessment question regarding their level of regular participation in strengthening activities. Women in the 1991 NHIS study were asked a more specific recall question about participation in strengthening activities during the previous two

weeks. It is possible that the global self-assessment question used in the suburban community study resulted in over reporting of participation in strengthening activities. Recall bias is widely accepted as a limitation of global self-assessment surveys (Hensley et al., 1993). It is also possible that the specific recall question of the 1991 NHIS study resulted in underreporting of participation in strengthening activities. Since recall instruments assess physical activity within a narrow range of time, they may not accurately capture typical physical activity patterns (Ransdell & McMillen, 1997).

Another possible explanation for the higher reported levels of participation in strengthening activities among women in this suburban community is the direct result of a change in behavior that occurred between 1991 and 2000. During the past decade, a number of organizations such as the National Osteoporosis Foundation have conducted public awareness campaigns regarding the benefits of strength training for the prevention of osteoporosis. It is possible that these statistics reflect the adoption of strengthening activities by a larger segment of the female population. It would be necessary to investigate this issue in greater detail before any conclusions could be reached. From a preliminary standpoint however, these results look promising.

It is very important to note that the same limitations exist with the question used to assess strengthening activity participation as described for the question used to assess leisure-time physical activity participation. Any level of participation in strengthening activities qualified women to be classified as “participating” in strengthening activities.

This question did not allow for an assessment to be made as to whether the amount and type of activities performed by these women was sufficient to produce health benefits. It is recommended that a more detailed survey be conducted in the future to determine the specific amount and type of strengthening activities being performed by suburban women over the age of 40 years. This information could provide a more complete picture of the health risk status of these women in relation to the loss of functional strength or bone mass.

An interesting observation with regard to strengthening activity participation in this suburban community study was the high rate of participation reported by vigorously active women compared to moderately active or sedentary women. A total of 72.9% of the vigorously active women in the sample report participation in strengthening activities compared to only 22.6% of the moderately active women and 22.2% of the sedentary women. Once again, it appears that the vigorously active women have a commitment to physical activity that extends beyond that of moderately active women. Vigorously active women reported both the highest rates of participation in leisure-time physical activity during the previous four weeks, and the highest rates of participation in strengthening activities. Given the growing body of evidence that strengthening activities provide substantial benefits with regard to lowering risk of osteoporosis and increasing functional capacity in later years (Coupland et al., 1999; Greendale et al., 1995; Dalsky et al., 1988), it is important to gain a more complete understanding of the

factors that motivate these vigorously active women to participate in strengthening activities.

Age

This suburban community study showed a trend of increasing rates of physical inactivity with age. A total of 48% of the women in the youngest age group were classified as sedentary compared to 70.7% of the oldest age group. This trend is consistent with that found in the 1991 NHIS, 1992 BRFSS, and 1994 BRFSS national surveys (USDHHS, 1996).

One interesting finding in this suburban community study was the significantly higher rates of vigorous activity that were observed among younger women than among older women. This study found women ages 41-50 years were more likely to be vigorously active than women ages 71-80 years, or women over 81 years of age. In addition, women ages 51-60 were more likely to be vigorously active than women ages 71-80 years. Data from national surveillance studies have not been consistent with these findings. In both the 1991 NHIS study and the 1992 BRFSS study, vigorous physical activity rates were highest among women ages 65 and older. Editors in the 1996 U.S. Surgeon General's Report on Physical Activity and Health explained these results as due in part to the greater leisure-time available to older adults and the use of an age-related relative intensity classification (USDHHS, 1996). It is noteworthy that the results of this study differed from those in the national surveillance studies because

this study did not use an age-related relative intensity classification. The instrument used for this suburban community study provided specific examples of types of activities that qualified as vigorous, moderate, or mild. It is possible that this more detailed instrument resulted in more accurate classification of types of activity among older adults.

Annual Household Income

Women with the highest annual household incomes (\$80,000+) were more likely to participate in vigorous levels of physical activity than any other income group. These women were not more likely however to participate in moderate levels of physical activity. It is interesting to note that women earning the second highest annual incomes (\$40,000-\$79,999) were not more likely to participate in vigorous or moderate physical activity than women earning the lowest annual incomes (less than \$40,000). This information is important because previously collected data from national surveillance studies have focused more on lower income categories and not gathered data regarding differences in physical activity levels among women in higher income categories. The 1991 NHIS study and the 1992 BRFSS study both collected data on five income levels that ranged from <\$10,000-\$50,000+. While both of these studies detected a pattern of increasingly lower rates of moderate and vigorous physical activity as income level decreased, neither of these studies explored differences that may exist in physical activity levels above incomes of \$50,000.

The observations made in this suburban community study seem to indicate that even in a fairly homogenous and affluent residential environment, income levels may be a factor in allowing for higher rates of participation in vigorous physical activity. Higher income levels may allow suburban women to have greater access to year round exercise facilities, childcare, flexible work hours, or other types of resources. Due to the limitations of this study with regard to the use of self-selecting participants, it is important that this topic receive further investigation before specific conclusions can be drawn.

Educational Level

The fact that this study did not reveal any significant differences in the moderate or vigorous physical activity levels of women of different educational levels is worthy of mention. Previous studies have shown a significant difference in physical activity levels between women with and without a high school education. Only four women in this study reported not completing high school. The majority of women in this study were well educated with 50.6% reporting their highest completed degree as high school and 48% reporting the completion of college degrees. It is possible that education may not be as significant a factor with regard to physical activity levels in suburban communities of well-educated women compared to other types of communities.

Marital Status and Child Status

The results of this study showed that married women were significantly more likely to be vigorously active than unmarried women. These findings contrast those reported previously in the literature for women in age groups under that age of 40 years. In a cross-sectional survey of 1,113 women aged 20 – 49, Verhoef and Love (1992) found married women to have higher rates of physical inactivity than unmarried women. These researchers also found women with children to have higher rates of inactivity than women without children. These differences were greatest for women under the age of 40. What is significant about the Verhoef and Love study however is that after adjusting for confounding variables in the study, the researchers found that only parenthood was significantly related to lower rates of physical activity participation and marital status was no longer significantly related.

The sample of women in this suburban community study was older than the population studied by Verhoef and Love (1992). In addition, only 23% of the women in this study reported having children under 18 years of age currently living in the home. Since all of the women in the study were over the age of 40, it is likely that the children living at home were older rather than younger. This study showed no significant differences in the physical activity levels between women with children and women without children. Verhoef and Love (1998) had reported the differences in physical activity levels based on parenthood in their study to be greatest for women under the

age of 40. It is possible that the higher rates of physical activity reported by married women and the lack of a significant difference between women with and without children in this study are a direct result of the higher age of the sample.

Work Status and Work Hours

The results of this study showed that women currently working outside the home were more likely to be vigorously active than women not currently working outside the home. These findings are significant because to date, very few studies have been conducted on the physical activity levels of employed versus unemployed women. There are many possible explanations for the higher rates of vigorous activity observed among employed women in this study. It is possible that there are differences between women who seek employment and women who do not. It is also possible that some types of employment afford women more opportunities for physical activity, more access to support services, more exposure to health and wellness information, or more social contacts with other women who are engaging in health promotion behaviors such as physical activity. It is important to note that all of the women in this study were over 40 years of age. A majority of women in this study were married (63.7%) and very few of these women reported having children currently living in the home (23.1%). It is possible that these working women had less family responsibilities and an increased level of support over many working women under the age of 40 years. It would be

valuable to compare physical activity levels of working women of different age groups in the future to gain more insight into the findings of this study.

It is interesting to note that there were no significant differences in the physical activity levels between women employed part-time (less than 30 hours per week) and full-time (30 hours or more per week) in this study. The higher rates of vigorous physical activity experienced by working women do not appear to be affected by the number of hours worked per week outside the home.

Employer Incentives for Physical Activity

Employer incentives for physical activity were defined in this study as the presence of exercise facilities, supplemented exercise facility memberships, or other direct rewards for physical activity at the individual's place of employment. Only 27.9% of the working women in this study reported receiving employer incentives for physical activity and these women were no more likely to participate in moderate or vigorous levels of physical activity than women who did not receive employer incentives. This is an interesting observation in light of the current Healthy People 2010 objectives to increase the percentage of employers who offer physical activity incentives and health promotion programs to workers (USDHHS, 2000). It is possible that working women in suburban community environments are less dependent on their employers for physical activity options than women in other residential environments. Factors such as commuting distance to work, a desire to use facilities that are closer to home, and the

appeal of more flexible exercise schedules may make worksite physical activity incentives less valuable for suburban community women than has previously been anticipated. Worksite fitness programs and facilities require significant investments on the part of employers. It is important that this issue receive further investigation so that a more complete understanding can be gained regarding the most effective types of resources to support physical activity among these suburban community women over 40 years of age.

Recommendations for Further Research on this Topic

All of the significant findings in this study require additional investigation. This study was limited by the use of a convenience sample, self-reported data, and the limited number of respondents (N=377). In order to draw any specific conclusions, this study should first be replicated utilizing a more random sampling procedure and larger sample group.

Future research on this topic should utilize instruments that allow for the collection of more detailed information with regard to recent leisure-time physical activity participation and strengthening activity participation. More detailed questions would allow for the assessment of whether or not these activity levels were sufficient to produce health benefits.

Further research studies should also explore the interacting effects of multiple roles on women's physical activity participation. It was beyond the scope of this study to

investigate the interacting effects of the independent variables. It is possible that various combinations of variables such as motherhood, marriage, employment and income level may have an effect on physical activity that differs from the effects of each individual variable (Verhoef & Love, 1992; Waldron et al., 1998).

Comparative research studies between suburban communities, urban communities, and rural communities of women over the age of 40 years should also be conducted in the future. The use of consistent methodology and instrumentation in these studies would allow for valid comparisons to be made between studies rather than having to use national surveillance data that was collected with different types of instruments for comparison.

In addition to the above recommendations for further quantitative suburban community studies, it is also recommended that qualitative research be conducted using techniques such as in-depth interviews and focus group conversations. Qualitative studies would allow for greater understanding of the details behind any significant differences observed among variables (Rubin & Rubin, 1995). Further investigation into how the variables of age, education, income, marital status, child status, work status, and employer incentives relate to physical activity levels among suburban women over the age of 40 could provide valuable direction for targeted intervention programs in the future.

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Appendices

Appendix A

Research Article Appearing in the Community Newspaper

SCSU prof brings research study on women's health to Cromwell

Cromwell has been selected as the basis for research project on women's health by a new resident of town.

Sandy Minor of Ranney Road, a new Southern Connecticut State University professor who moved to town last summer, is completing her work on a Ph.D. in health education at Texas Women's University.

To complete the work, she is conducting a survey among Cromwell residents on physical activity levels of women over age 40 (see the insert in this edition of *The Chronicle*).

"This is an important study," says Minor, "because current national statistics indicate that more than 60 percent of U.S. women do not engage in the recommended amount of physical activity required to improve health status and reduce risk of diseases."

As women age, their risk for many chronic diseases such as cardiovascular disease, cancer, and osteoporosis increases steadily. The risk of many of these chronic diseases can be reduced substantially by regular physical activity. In, 1996, the U.S. Surgeon General's report issued a recommendation that all Americans accumulate 30 minutes of moderate activity at least five days a week. Despite this recommendation,



Sandy Minor

many U.S. citizens have had a difficult time finding ways to fit physical activity into their daily lives.

"Women have very busy lives, and often place the needs of everyone in the family before their own," Minor says. It is difficult to say "I won't be home in time to make dinner because I need to stop at the wellness center on the way home from work and walk on the treadmill," she adds.

Minor says she hopes her study will provide information that the community can use to spur the physical activity levels of the community. "I plan to share the results of study with town officials so that they may consider actions to

enhance opportunities for physical activity within the community," she says. "Many communities across the United States have come together to increase access to public exercise facilities, and work site exercise facilities, build side-walks, walking paths, and parks, and offer activities that encourage families to be active together."

She chose Cromwell because of her desire to make a difference in the community she now calls home.

"My fiancé's family has a long history in Cromwell. ... I hope I am able to make a difference and help to increase opportunities for women in the community to be physically active."

"Maybe one day there will be a new walking path along the river front and a community fitness center around the corner, and I will be able to say that I made a fraction of the contribution that was made by my fiancé's late grandmother, Elizabeth Masselli, a respected resident and long-time historian for the town of Cromwell," Minor says.

The survey is a postage-paid, self-addressed mailer that can be folded and put directly in the mail. The study period is from Feb. 18 to 29 only, so it is important that they be completed and mailed promptly after receipt of the paper.

Appendix B

Human Subjects Review Committee Approval Letter to Conduct Research

TEXAS WOMAN'S
UNIVERSITY

DENTON / DALLAS / HOUSTON

HUMAN SUBJECTS
REVIEW COMMITTEE
P.O. Box 425619
Denton, TX 76204-5619
Phone: 940/898-3377
Fax: 940/898-3416

February 9, 2000

Ms. Sandra Minor
18 Ranney Rd.
Cromwell, CT 06416

Dear Ms. Minor:

Re: *Self-reported Physical Activity Levels Among Women over the Age of 40 Years in a Suburban New England Community*

The above referenced study has been reviewed by a committee of the Human Subjects Review Committee and appears to meet our requirements in regard to protection of individuals' rights.

Be reminded that both the University and the Department of Health and Human Services (HHS) regulations typically require that agency approval letters and signatures indicating informed consent be obtained from all human subjects in your study. As applicable to your study, these consent forms and agency approval letters are to be filed with the Human Subjects Review Committee at the completion of the study. However, because you do not utilize a signed consent form for your study, the filing of signatures of subjects with the HSRC is not required.

Your study was determined to be exempt from further TWU HSRC review. However, another review by the Committee is required if your project changes. If you have any questions, please feel free to call the Human Subjects Review Committee at the phone number listed above.

Sincerely,



Dr. Linda Rubin, Chair
Human Subjects Review Committee - Denton

cc. Dr. Susan Ward, Department of Health Studies
Dr. Eva Doyle, Department of Health Studies
Graduate School

Appendix C

Survey Questionnaire Cover Letter and Participant Consent Form

To All (Name of Town) Women over the age of 40 years

I am a fellow resident of (name of town omitted for publication). I am also a graduate student working toward my Ph.D. in Health Education. The study I am conducting involves research. This is a requirement for my degree program at Texas Woman's University. With your help, I will graduate with my Ph.D. this May.

- Your participation in this research study is completely voluntary.**
- This research study is completely anonymous and confidential.**
- This survey will take approximately 2 minutes to complete.**
- This survey folds into a self addressed mailer. The postage is pre-paid !**
- This research study will end February 29th.**
- I greatly appreciate your help with this project.**

The purpose of this research study is to determine the physical activity levels of women over the age of 40 years in a suburban community. This is an important study because current national statistics indicate that more than 60% of U.S. women do not engage in the recommended amount of physical activity required to improve health status and reduce risk of disease. There are a number of strategies that (name of town) can implement to enhance physical activity levels among women in the community, but first, it is important to determine the levels of physical activity among women in the town. At the conclusion of my study, I will share my final report with town officials so that they may consider actions that can enhance opportunities for physical activity in the community. In addition, I will publish my data in the (name of local newspaper omitted for publication) so that all members of the community can learn about the results of this research study.

If you have further questions about this research study, or you would like additional copies of this questionnaire for other members of your household, you may contact the researcher: **Sandy Minor, (contact information omitted for publication).** If you have additional concerns, the advisor for this study, Eva Doyle, Ph.D. can be reached at (contact information omitted for publication).

I sincerely appreciate your time and assistance,

Sandy Minor, M.S.

Appendix D

Questionnaire Mailing Format

Your Postage Has Been Pre-Paid!
Please Take 2 Minutes to Complete This Survey

FOLD HERE

121

BUSINESS REPLY MAIL

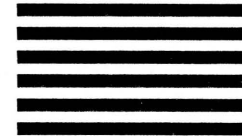
FIRST-CLASS MAIL PERMIT NO. 10 (Name of Town)

POSTAGE WILL BE PAID BY ADDRESSEE

Physical Activity Research Project
Sandy Minor
(Address omitted for publication)



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



Appendix E

Survey Questionnaire

Physical Activity Questionnaire Women Over the Age of 40 Years

Please answer the following questions about yourself. Your answers are completely confidential. Considering a 7-day period (a week), how many times on the average do you do the following kinds of exercise for more than 15 minutes during your free time (write the appropriate number on each line)

	Times per week	Average Minutes per session
STRENUOUS EXERCISE (HEART BEATS RAPIDLY) (e.g. running, jogging, vigorous swimming, vigorous bicycling, roller blading, aerobics, martial arts, kick-boxing, vigorous dancing, vigorous cross-country skiing).	_____	_____
MODERATE EXERCISE (NOT EXHAUSTING) (e.g. fast walking, easy swimming, easy bicycling, tennis, badminton, raking leaves, moderate dancing, moderate skiing).	_____	_____
MILD EXERCISE (MINIMAL EFFORT) (e.g. easy walking, golf, yoga, stretching, easy housework, bowling)	_____	_____
STRENGTHENING ACTIVITIES (e.g. weight training exercises or other activities to increase muscular strength)	_____	_____

Have you participated in any leisure-time
physical activity in the past 4 weeks? Yes _____ No _____

Are you a female, over the age of 40 years? Yes _____ No _____

Do you currently live in (name of town omitted
for publication)? Yes _____ No _____

Do you currently have any health conditions or disabilities that prevent you from
participating in physical activity? Yes _____ No _____

What is your age in years?

- ☐ 41 - 45
- ☐ 46 - 50
- ☐ 51 - 55
- ☐ 56 - 60
- ☐ 61 - 65
- ☐ 66 - 70
- ☐ 71 - 75
- ☐ 76 - 80
- ☐ 81 - 85
- ☐ 86 +

What is your racial background?

- ☐ Caucasian (white)
- ☐ African-American (black)
- ☐ Asian or Pacific Islander
- ☐ Hispanic
- ☐ Native American
- ☐ Other

Which best describes your level of formal education?

- ☐ Less than high school
- ☐ High school / secondary school
- ☐ Some college
- ☐ Completed Bachelor's degree
- ☐ Completed Graduate degree

What is your household income?

- ☐ less than 20,000 / year
- ☐ \$ 20,000 - \$ 39,999 / year
- ☐ \$ 40,000 - \$ 59,999 / year
- ☐ \$ 60,000 - \$ 79,999 / year
- ☐ \$ 80,000 - \$ 99,999 / year
- ☐ more than \$100,000 / year

What is your marital status?

- ☐ Married
- ☐ Living in a marriage-like relationship
- ☐ Widowed
- ☐ Separated / divorced
- ☐ Single / Never Married

Do you have any children under the age of 18 living in your home?

Yes ☐ No ☐

Do you currently work outside of the home?

Yes ☐ No ☐

If you work outside of the home, is your work
part-time or full-time (30+ hours / week)?

Part-time _____ Full-time _____

If you currently work outside of the home, does your employer offer
incentives for you to engage in physical activity (e.g. direct rewards,
employer-provided facility, or employer-supplemented memberships)?

Yes _____ No _____

If you were going to participate in physical activity, what type
of activity would you prefer as your first choice? (choose only one)

_____ walking (outdoors or treadmill)

_____ running (outdoors or treadmill)

_____ bicycling (outdoors or stationary bike)

_____ swimming

_____ outdoor activities (such as
yard work/gardening)

_____ recreational activities (such as
dancing, tennis or golf)

_____ group exercise classes (such as
aerobics, step classes or spinning)

_____ other: _____

Adapted from Godin, G. & Shepard, R. J. (1985).

A simple method to assess exercise behavior in
the community. *Canadian Journal of Applied
Sport Science*, 10,141-146.

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
1	VIGOROUS	4	45	180	7	20
2	SEDENTARY	0	0	0	0	0
3	MODERATE	0	0	0	7	20
4	SEDENTARY	0	0	0	0	0
5	MODERATE	0	0	0	3	30
6	SEDENTARY	0	0	0	0	0
7	SEDENTARY	0	0	0	0	0
8	SEDENTARY	0	0	0	3	40
9	SEDENTARY	0	0	0	0	0
10	SEDENTARY	0	0	0	0	0
11	VIGOROUS	3	20	60	0	0
12	SEDENTARY	0	0	0	0	0
13	MODERATE	0	0	0	2	30
14	MODERATE	1	30	30	2	60
15	SEDENTARY	0	0	0	5	15
16	MODERATE	0	0	0	0	0
17	SEDENTARY	0	0	0	0	0
18	SEDENTARY	0	0	0	0	0
19	VIGOROUS	4	30	120	6	100
20	SEDENTARY	0	0	0	0	0
21	MODERATE	0	0	0	4	120
22	SEDENTARY	0	0	0	0	0
23	MODERATE	0	0	0	5	30
24	SEDENTARY	0	0	0	0	0
25	SEDENTARY	0	0	0	0	0
26	MODERATE	0	0	0	2	30
27	MODERATE	0	0	0	7	35
28	SEDENTARY	0	0	0	0	0
29	SEDENTARY	0	0	0	3	20
30	VIGOROUS	1	60	60	2	75
31	VIGOROUS	2	60	120	0	0
32	SEDENTARY	0	0	0	0	0
33	SEDENTARY	0	0	0	0	0
34	SEDENTARY	0	0	0	0	0
35	MODERATE	3	15	45	3	30
36	MODERATE	0	0	0	0	0
37	SEDENTARY	0	0	0	0	0
38	SEDENTARY	0	0	0	2	30
39	MODERATE	0	0	0	6	55
40	SEDENTARY	0	0	0	0	0
41	SEDENTARY	0	0	0	0	0
42	VIGOROUS	3	20	60	3	45
43	SEDENTARY	0	0	0	3	20
44	VIGOROUS	3	60	180	0	0
45	SEDENTARY	0	0	0	0	0
46	SEDENTARY	0	0	0	0	0
47	MODERATE	0	0	0	3	20
48	SEDENTARY	0	0	0	0	0
49	VIGOROUS	2	60	120	2	30
50	MODERATE	0	0	0	6	45

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
1	140	2	60	120	Y	3
2	0	7	15	105	N	0
3	140	4	60	240	N	0
4	0	0	0	0	N	0
5	90	5	45	225	N	0
6	0	3	20	60	N	0
7	0	7	15	105	N	0
8	120	2	30	60	Y	1
9	0	7	15	105	Y	7
10	0	0	0	0	N	0
11	0	5	20	100	N	0
12	0	3	20	60	N	0
13	60	7	30	210	N	0
14	120	6	30	180	Y	3
15	75	5	15	75	N	0
16	0	5	90	450	N	0
17	0	0	0	0	N	0
18	0	0	0	0	N	0
19	600	7	30	210	Y	5
20	0	5	30	150	N	0
21	480	5	120	600	N	0
22	0	0	0	0	N	0
23	150	5	30	150	N	0
24	0	5	30	150	N	0
25	0	5	30	150	N	0
26	60	5	30	150	N	0
27	245	7	15	105	N	0
28	0	3	15	45	N	0
29	60	7	15	105	N	0
30	150	1	45	45	N	0
31	0	7	120	840	N	0
32	0	2	15	30	N	0
33	0	10	20	200	N	0
34	0	0	0	0	N	0
35	90	7	60	420	N	0
36	0	7	60	420	N	0
37	0	7	30	210	Y	7
38	60	2	20	100	N	0
39	330	2	25	50	N	0
40	0	0	0	0	N	0
41	0	0	0	0	N	0
42	135	2	120	240	Y	3
43	60	4	20	80	Y	1
44	0	7	30	210	N	0
45	0	3	30	90	N	0
46	0	2	30	60	N	0
47	60	6	30	180	N	0
48	0	2	15	30	Y	2
49	60	0	0	0	N	0
50	270	1	75	75	Y	3

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
1	45	135	N	41-50	WHITE
2	0	0	N	51-60	WHITE
3	0	0	N	51-60	WHITE
4	0	0	N	41-50	WHITE
5	0	0	N	51-60	WHITE
6	0	0	N	41-50	WHITE
7	0	0	N	71-80	WHITE
8	40	40	Y	71-80	WHITE
9	15	105	N	51-60	WHITE
10	0	0	N	51-60	WHITE
11	0	0	N	51-60	WHITE
12	0	0	Y	71-80	WHITE
13	0	0	Y	71-80	WHITE
14	8	24	Y	41-50	WHITE
15	0	0	Y	71-80	WHITE
16	0	0	Y	51-60	WHITE
17	0	0	N	51-60	WHITE
18	0	0	N	51-60	WHITE
19	20	100	Y	41-50	WHITE
20	0	0	Y	41-50	WHITE
21	0	0	Y	41-50	WHITE
22	0	0	N	71-80	WHITE
23	0	0	N	71-80	WHITE
24	0	0	Y	41-50	WHITE
25	0	0	Y	41-50	BLACK
26	0	0	Y	51-60	ASIAN
27	0	0	N	61-70	WHITE
28	0	0	Y	41-50	WHITE
29	0	0	N	51-60	WHITE
30	0	0	Y	51-60	WHITE
31	0	0	Y	41-50	WHITE
32	0	0	N	41-50	WHITE
33	0	0	N	81+	WHITE
34	0	0	N	41-50	WHITE
35	0	0	Y	71-80	WHITE
36	0	0	N	81+	WHITE
37	15	105	Y	61-70	WHITE
38	0	0	N	41-50	WHITE
39	0	0	N	51-60	WHITE
40	0	0	N	81+	WHITE
41	0	0	Y	81+	WHITE
42	20	60	Y	41-50	WHITE
43	60	60	Y	41-50	WHITE
44	0	0	Y	81+	WHITE
45	0	0	N	41-50	WHITE
46	0	0	N	41-50	WHITE
47	0	0	Y	61-70	WHITE
48	30	60	N	61-70	WHITE
49	0	0	Y	51-60	WHITE
50	10	30	Y	51-60	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
1	NO COLLEGE DEGREE	80+	MARRIED	Y
2	NO COLLEGE DEGREE	80+	MARRIED	N
3	COLLEGE DEGREE	40-79,999	MARRIED	N
4	NO COLLEGE DEGREE	80+	MARRIED	Y
5	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
6	COLLEGE DEGREE	80+	MARRIED	Y
7	NO COLLEGE DEGREE	<40,000	MARRIED	N
8	NO COLLEGE DEGREE	40-79,999	MARRIED	N
9	NO COLLEGE DEGREE	<40,000	MARRIED	Y
10	NO COLLEGE DEGREE	<40,000	MARRIED	N
11	NO COLLEGE DEGREE	80+	MARRIED	N
12	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
13	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
14	COLLEGE DEGREE	80+	MARRIED	Y
15	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
16	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
17	COLLEGE DEGREE	80+	MARRIED	Y
18	NO COLLEGE DEGREE	40-79,999	MARRIED	N
19	NO COLLEGE DEGREE	80+	MARRIED	Y
20	COLLEGE DEGREE	40-79,999	MARRIED	N
21	COLLEGE DEGREE	80+	MARRIED	N
22	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
23	NO COLLEGE DEGREE	<40,000	MARRIED	N
24	COLLEGE DEGREE	80+	MARRIED	Y
25	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
26	NO COLLEGE DEGREE	80+	MARRIED	N
27	NO COLLEGE DEGREE	40-79,999	MARRIED	N
28	COLLEGE DEGREE	80+	MARRIED	Y
29	COLLEGE DEGREE	80+	MARRIED	N
30	COLLEGE DEGREE	80+	MARRIED	N
31	COLLEGE DEGREE	40-79,999	MARRIED	N
32	COLLEGE DEGREE	80+	MARRIED	Y
33	COLLEGE DEGREE	40-79,999	MARRIED	N
34	NO COLLEGE DEGREE	80+	MARRIED	Y
35	NO COLLEGE DEGREE	40-79,999	MARRIED	N
36	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
37	COLLEGE DEGREE	<40,000	MARRIED	N
38	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
39	NO COLLEGE DEGREE	40-79,999	MARRIED	N
40	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
41	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
42	NO COLLEGE DEGREE	80+	MARRIED	N
43	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
44	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
45	COLLEGE DEGREE	80+	MARRIED	N
46	NO COLLEGE DEGREE	40-79,999	MARRIED	N
47	NO COLLEGE DEGREE	<40,000	MARRIED	N
48	COLLEGE DEGREE	80+	MARRIED	N
49	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
50	NO COLLEGE DEGREE	80+	MARRIED	N

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
1	Y	FULL	N	GROUP EXERCISE
2	Y	FULL	N	WALKING
3	N			BICYCLING
4	Y	FULL	N	WALKING
5	Y	PART	N	WALKING
6	Y	FULL	N	RECREATIONAL
7	N			WALKING
8	N			GROUP EXERCISE
9	Y	FULL	N	WALKING
10	Y	FULL	Y	GROUP EXERCISE
11	Y	FULL	Y	BICYCLING
12	N			WALKING
13	N			WALKING
14	Y	PART	N	BICYCLING
15	N			WALKING
16	Y	PART	N	WALKING
17	Y	FULL	N	RECREATIONAL
18	Y	FULL	N	WALKING
19	N			OTHER
20	Y	FULL	N	BICYCLING
21	Y	FULL	Y	OUTDOORS
22	N			WALKING
23	N			OUTDOORS
24	Y	FULL	N	WALKING
25	Y	PART	N	WALKING
26	Y	FULL	N	WALKING
27	Y	PART	N	WALKING
28	Y	FULL	Y	WALKING
29	Y	FULL	Y	RECREATIONAL
30	Y	FULL	N	WALKING
31	Y	FULL	N	GROUP EXERCISE
32	Y	FULL	N	WALKING
33	N			WALKING
34	Y	FULL	Y	GROUP EXERCISE
35	N			GROUP EXERCISE
36	N			WALKING
37	N			WALKING
38	Y	FULL	N	WALKING
39	Y	FULL	Y	WALKING
40	N			WALKING
41	N			WALKING
42	Y	FULL	Y	WALKING
43	Y	FULL	Y	WALKING
44	N			GROUP EXERCISE
45	Y	FULL	Y	SWIMMING
46	Y	FULL	N	WALKING
47	N			WALKING
48	N			WALKING
49	Y	FULL	N	GROUP EXERCISE
50	Y	FULL	N	WALKING

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
51	SEDENTARY	0	0	0	0	0
52	SEDENTARY	0	0	0	0	0
53	VIGOROUS	2	40	80	7	20
54	MODERATE	0	0	0	4	45
55	MODERATE	0	0	0	4	60
56	SEDENTARY	0	0	0	4	10
57	VIGOROUS	4	45	180	7	80
58	SEDENTARY	0	0	0	0	0
59	SEDENTARY	0	0	0	0	0
60	SEDENTARY	0	0	0	1	15
61	MODERATE	0	0	0	3	45
62	SEDENTARY	0	0	0	2	20
63	SEDENTARY	0	0	0	0	0
64	MODERATE	0	0	0	2	30
65	SEDENTARY	0	0	0	2	20
66	SEDENTARY	0	0	0	0	0
67	VIGOROUS	4	30	120	4	30
68	VIGOROUS	3	25	75	0	0
69	SEDENTARY	0	0	0	0	0
70	SEDENTARY	0	0	0	0	0
71	SEDENTARY	0	0	0	0	0
72	SEDENTARY	0	0	0	0	0
73	SEDENTARY	0	0	0	0	0
74	SEDENTARY	0	0	0	3	20
75	SEDENTARY	0	0	0	1	20
76	MODERATE	2	30	60	1	45
77	SEDENTARY	0	0	0	0	0
78	SEDENTARY	0	0	0	0	0
79	VIGOROUS	3	60	180	5	60
80	SEDENTARY	0	0	0	0	0
81	MODERATE	0	0	0	7	30
82	SEDENTARY	0	0	0	0	0
83	SEDENTARY	1	30	30	1	15
84	SEDENTARY	0	0	0	0	0
85	SEDENTARY	0	0	0	0	0
86	MODERATE	0	0	0	5	60
87	SEDENTARY	0	0	0	0	0
88	SEDENTARY	0	0	0	2	15
89	VIGOROUS	3	30	90	3	60
90	SEDENTARY	0	0	0	2	25
91	SEDENTARY	0	0	0	0	0
92	MODERATE	0	0	0	1	30
93	MODERATE	0	0	0	4	45
94	SEDENTARY	0	0	0	0	0
95	SEDENTARY	0	0	0	0	0
96	VIGOROUS	3	30	90	2	45
97	SEDENTARY	0	0	0	0	0
98	MODERATE	0	0	0	5	30
99	MODERATE	0	0	0	3	60
100	SEDENTARY	0	0	0	0	0

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
51	0	0	0	0	N	0
52	0	5	15	80	N	0
53	140	7	70	490	Y	7
54	180	0	0	0	N	0
55	240	0	0	0	N	0
56	40	6	15	90	Y	2
57	560	7	60	420	Y	7
58	0	3	30	90	N	0
59	0	6	25	150	N	0
60	15	2	15	30	N	0
61	135	3	45	135	N	0
62	40	4	20	80	Y	1
63	0	0	0	0	N	0
64	60	4	60	240	Y	2
65	40	1	20	20	N	0
66	0	0	0	0	N	0
67	120	4	15	60	Y	4
68	0	0	0	0	Y	3
69	0	1	10	10	N	0
70	0	2	30	60	N	0
71	0	7	15	105	N	0
72	0	4	15	60	N	0
73	0	5	15	75	N	0
74	60	7	15	105	N	0
75	20	3	30	90	Y	7
76	45	1	60	60	N	0
77	0	5	10	50	N	0
78	0	0	0	0	N	0
79	300	5	30	150	Y	5
80	0	7	30	210	N	0
81	210	6	80	480	N	0
82	0	3	20	60	N	0
83	15	2	60	120	N	0
84	0	5	25	125	N	0
85	0	7	15	105	N	0
86	300	7	30	210	N	0
87	0	7	5	35	N	0
88	30	0	0	0	N	0
89	180	0	0	0	N	0
90	50	5	30	150	N	0
91	0	3	30	90	N	0
92	30	4	45	180	N	0
93	180	0	0	0	N	0
94	0	0	0	0	N	0
95	0	3	30	90	N	0
96	90	1	20	20	Y	3
97	0	2	60	120	N	0
98	150	7	20	140	N	0
99	180	5	120	600	N	0
100	0	5	30	150	N	0

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
51	0	0	N	41-50	WHITE
52	0	0	Y	81+	WHITE
53	10	70	Y	61-70	WHITE
54	0	0	Y	41-50	WHITE
55	0	0	Y	61-70	WHITE
56	10	20	Y	41-50	WHITE
57	40	280	Y	51-60	WHITE
58	0	0	N	41-50	WHITE
59	0	0	Y	41-50	WHITE
60	0	0	N	51-60	WHITE
61	0	0	Y	61-70	WHITE
62	15	15	Y	41-50	WHITE
63	0	0	N	41-50	NATIVE
64	20	40	N	41-50	WHITE
65	0	0	N	41-50	WHITE
66	0	0	N	61-70	WHITE
67	60	240	Y	41-50	WHITE
68	20	60	Y	41-50	WHITE
69	0	0	N	41-50	WHITE
70	0	0	Y	51-60	WHITE
71	0	0	Y	41-50	WHITE
72	0	0	N	51-60	WHITE
73	0	0	N	51-60	WHITE
74	0	0	Y	51-60	WHITE
75	20	140	Y	51-60	WHITE
76	0	0	Y	51-60	WHITE
77	0	0	Y	41-50	WHITE
78	0	0	N	71-80	WHITE
79	30	150	Y	41-50	WHITE
80	0	0	N	41-50	WHITE
81	0	0	Y	81+	WHITE
82	0	0	Y	41-50	WHITE
83	0	0	Y	61-70	WHITE
84	0	0	Y	41-50	WHITE
85	0	0	Y	41-50	WHITE
86	0	0	N	51-60	WHITE
87	0	0	Y	51-60	WHITE
88	0	0	N	41-50	WHITE
89	0	0	Y	41-50	WHITE
90	0	0	Y	61-70	WHITE
91	0	0	N	61-70	WHITE
92	0	0	N	51-60	WHITE
93	0	0	Y	61-70	WHITE
94	0	0	N	41-50	WHITE
95	0	0	N	41-50	WHITE
96	20	60	Y	41-50	OTHER
97	0	0	N	61-70	WHITE
98	0	0	N	51-60	WHITE
99	0	0	Y	71-80	WHITE
100	0	0	N	51-60	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
51	COLLEGE DEGREE	40-79,999	MARRIED	N
52	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
53	COLLEGE DEGREE	<40,000	MARRIED	N
54	COLLEGE DEGREE	80+	MARRIED	Y
55	COLLEGE DEGREE	<40,000	NOT MARRIED	N
56	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
57	COLLEGE DEGREE	<40,000	NOT MARRIED	N
58	COLLEGE DEGREE	80+	MARRIED	Y
59	COLLEGE DEGREE	80+	MARRIED	Y
60	NO COLLEGE DEGREE	40-79,999	MARRIED	N
61	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
62	COLLEGE DEGREE	80+	MARRIED	N
63	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
64	COLLEGE DEGREE	80+	MARRIED	Y
65	COLLEGE DEGREE	80+	MARRIED	Y
66	NO COLLEGE DEGREE	<40,000	MARRIED	N
67	NO COLLEGE DEGREE	80+	NOT MARRIED	N
68	COLLEGE DEGREE	40-79,999	MARRIED	Y
69	COLLEGE DEGREE	80+	MARRIED	N
70	COLLEGE DEGREE	80+	MARRIED	N
71	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
72	NO COLLEGE DEGREE	40-79,999	MARRIED	N
73	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
74	COLLEGE DEGREE	40-79,999	MARRIED	N
75	COLLEGE DEGREE	40-79,999	MARRIED	N
76	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
77	COLLEGE DEGREE	80+	MARRIED	N
78	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
79	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
80	NO COLLEGE DEGREE	80+	MARRIED	Y
81	NO COLLEGE DEGREE	<40,000	MARRIED	N
82	NO COLLEGE DEGREE	40-79,999	MARRIED	N
83	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
84	NO COLLEGE DEGREE	40-79,999	MARRIED	N
85	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
86	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
87	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
88	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
89	NO COLLEGE DEGREE	40-79,999	MARRIED	N
90	NO COLLEGE DEGREE	40-79,999	MARRIED	N
91	NO COLLEGE DEGREE	<40,000	MARRIED	N
92	NO COLLEGE DEGREE	80+	MARRIED	N
93	COLLEGE DEGREE	80+	MARRIED	N
94	COLLEGE DEGREE	40-79,999	MARRIED	Y
95	COLLEGE DEGREE	40-79,999	MARRIED	Y
96	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
97	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
98	COLLEGE DEGREE	80+	MARRIED	N
99	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
100	NO COLLEGE DEGREE	<40,000	MARRIED	N

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
51	Y	FULL	N	WALKING
52	N			SWIMMING
53	N			SWIMMING
54	Y	FULL	N	GROUP EXERCISE
55	N			GROUP EXERCISE
56	Y	FULL	Y	OUTDOORS
57	Y	PART	N	WALKING
58	Y	FULL	N	RECREATIONAL
59	Y	FULL	N	SWIMMING
60	N			WALKING
61	N			WALKING
62	Y	FULL	Y	WALKING
63	Y	FULL	Y	WALKING
64	Y	PART	N	WALKING
65	Y	PART	N	WALKING
66	Y	FULL	N	OUTDOORS
67	Y	FULL	N	WALKING
68	Y	FULL	Y	GROUP EXERCISE
69	Y	FULL	N	WALKING
70	Y	FULL	N	WALKING
71	Y	FULL	N	GROUP EXERCISE
72	Y	FULL	N	GROUP EXERCISE
73	Y	FULL	N	BICYCLING
74	N			WALKING
75	N			WALKING
76	Y	FULL	N	BICYCLING
77	Y	FULL	N	OUTDOORS
78	N			GROUP EXERCISE
79	Y	PART	N	GROUP EXERCISE
80	Y	FULL	N	WALKING
81	N			WALKING
82	Y	FULL	N	WALKING
83	Y	FULL	N	OUTDOORS
84	Y	FULL	N	WALKING
85	Y	FULL	Y	RECREATIONAL
86	Y	FULL	N	WALKING
87	Y	FULL	Y	WALKING
88	Y	FULL	Y	WALKING
89	N			WALKING
90	N			WALKING
91	Y	FULL	N	WALKING
92	Y	FULL	Y	RECREATIONAL
93	Y	FULL	N	WALKING
94	N			OUTDOORS
95	Y	PART	N	WALKING
96	Y	FULL	N	WALKING
97	N			GROUP EXERCISE
98	Y	FULL	N	WALKING
99	Y	PART	N	OTHER
100	N			WALKING

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
101	MODERATE	0	0	0	0	0
102	SEDENTARY	0	0	0	0	0
103	SEDENTARY	0	0	0	0	0
104	SEDENTARY	0	0	0	0	0
105	MODERATE	1	5	5	7	20
106	VIGOROUS	3	20	60	5	60
107	SEDENTARY	0	0	0	1	45
108	VIGOROUS	2	45	90	2	30
109	MODERATE	0	0	0	0	0
110	SEDENTARY	0	0	0	0	0
111	MODERATE	1	60	60	2	15
112	VIGOROUS	6	45	270	0	0
113	MODERATE	0	0	0	0	0
114	SEDENTARY	0	0	0	3	30
115	SEDENTARY	0	0	0	3	30
116	MODERATE	0	0	0	9	20
117	MODERATE	0	0	0	0	0
118	SEDENTARY	1	40	40	0	0
119	SEDENTARY	0	0	0	0	0
120	MODERATE	0	0	0	5	40
121	MODERATE	0	0	0	0	0
122	MODERATE	0	0	0	2	30
123	MODERATE	0	0	0	3	40
124	SEDENTARY	0	0	0	0	0
125	SEDENTARY	0	0	0	0	0
126	MODERATE	0	0	0	0	0
127	SEDENTARY	0	0	0	0	0
128	SEDENTARY	0	0	0	0	0
129	MODERATE	0	0	0	7	30
130	MODERATE	3	15	45	3	45
131	MODERATE	0	0	0	5	35
132	SEDENTARY	0	0	0	0	0
133	MODERATE	0	0	0	3	60
134	SEDENTARY	0	0	0	0	0
135	SEDENTARY	0	0	0	0	0
136	MODERATE	2	30	60	1	45
137	MODERATE	0	0	0	7	30
138	SEDENTARY	0	0	0	3	10
139	SEDENTARY	0	0	0	3	20
140	SEDENTARY	0	0	0	0	0
141	SEDENTARY	0	0	0	1	15
142	SEDENTARY	0	0	0	2	10
143	SEDENTARY	0	0	0	0	0
144	VIGOROUS	3	50	150	2	40
145	SEDENTARY	0	0	0	0	0
146	MODERATE	0	0	0	3	30
147	SEDENTARY	1	20	20	0	0
148	MODERATE	0	0	0	3	60
149	VIGOROUS	2	30	60	5	30
150	SEDENTARY	0	0	0	0	0

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
101	0	7	40	280	N	0
102	0	4	30	120	N	0
103	0	3	15	45	Y	3
104	0	3	15	45	N	0
105	140	7	20	140	Y	7
106	300	7	120	840	Y	3
107	45	0	0	0	N	0
108	60	0	0	0	Y	2
109	0	7	60	420	N	0
110	0	7	15	105	N	0
111	30	2	120	240	Y	1
112	0	0	0	0	Y	3
113	0	5	45	225	N	0
114	90	0	0	0	Y	3
115	90	0	0	0	N	0
116	180	2	60	120	N	0
117	0	4	180	720	N	0
118	0	7	15	105	N	0
119	0	3	60	180	N	0
120	200	7	15	105	N	0
121	0	7	140	980	N	0
122	60	7	20	140	N	0
123	120	4	45	180	Y	1
124	0	2	15	30	N	0
125	0	1	30	30	N	0
126	0	7	60	420	N	0
127	0	0	0	0	N	0
128	0	2	25	50	N	0
129	210	7	30	210	N	0
130	135	5	15	75	Y	3
131	175	7	120	840	N	0
132	0	2	15	30	Y	2
133	180	5	30	150	N	0
134	0	0	0	0	N	0
135	0	3	30	90	N	0
136	45	3	20	60	N	0
137	210	7	20	140	N	0
138	30	7	25	175	N	0
139	60	0	0	0	N	0
140	0	0	0	0	Y	3
141	15	2	15	30	N	0
142	20	3	15	45	Y	3
143	0	0	0	0	N	0
144	80	2	15	30	Y	2
145	0	7	20	140	Y	5
146	90	5	60	300	N	0
147	0	3	40	120	N	0
148	180	7	30	210	N	0
149	300	1	60	60	Y	2
150	0	2	180	360	N	0

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
101	0	0	N	61-70	WHITE
102	0	0	Y	71-80	WHITE
103	15	45	Y	51-60	WHITE
104	0	0	N	71-80	WHITE
105	20	140	Y	61-70	WHITE
106	30	90	Y	51-60	WHITE
107	0	0	Y	51-60	WHITE
108	15	30	Y	41-50	WHITE
109	0	0	N	51-60	WHITE
110	0	0	N	41-50	WHITE
111	15	15	Y	41-50	WHITE
112	75	225	Y	41-50	WHITE
113	0	0	Y	71-80	WHITE
114	5	15	Y	51-60	WHITE
115	0	0	Y	61-70	WHITE
116	0	0	Y	41-50	WHITE
117	0	0	N	51-60	WHITE
118	0	0	N	41-50	WHITE
119	0	0	Y	41-50	WHITE
120	0	0	Y	41-50	WHITE
121	0	0	N	51-60	WHITE
122	0	0	Y	41-50	WHITE
123	10	10	Y	41-50	WHITE
124	0	0	N	81+	WHITE
125	0	0	N	41-50	WHITE
126	0	0	Y	51-60	WHITE
127	0	0	N	41-50	WHITE
128	0	0	N	81+	WHITE
129	0	0	Y	51-60	WHITE
130	15	45	N	51-60	WHITE
131	0	0	N	71-80	WHITE
132	15	30	Y	41-50	WHITE
133	0	0	Y	41-50	WHITE
134	0	0	N	71-80	WHITE
135	0	0	N	51-60	WHITE
136	0	0	N	41-50	WHITE
137	0	0	N	41-50	WHITE
138	0	0	N	41-50	WHITE
139	0	0	N	41-50	WHITE
140	60	180	N	51-60	WHITE
141	0	0	Y	51-60	WHITE
142	10	30	N	41-50	WHITE
143	0	0	N	61-70	WHITE
144	20	40	Y	61-70	WHITE
145	20	100	Y	41-50	WHITE
146	0	0	Y	81+	WHITE
147	0	0	Y	41-50	WHITE
148	0	0	Y	51-60	WHITE
149	30	60	Y	51-60	WHITE
150	0	0	N	41-50	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
101	NO COLLEGE DEGREE	40-79,999	MARRIED	N
102	NO COLLEGE DEGREE	<40,000	MARRIED	N
103	COLLEGE DEGREE	80+	MARRIED	N
104	NO COLLEGE DEGREE	40-79,999	MARRIED	N
105	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
106	COLLEGE DEGREE	40-79,999	MARRIED	N
107	NO COLLEGE DEGREE	80+	MARRIED	N
108	NO COLLEGE DEGREE	80+	MARRIED	Y
109	COLLEGE DEGREE	80+	MARRIED	Y
110	NO COLLEGE DEGREE	80+	MARRIED	N
111	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
112	COLLEGE DEGREE	80+	MARRIED	Y
113	COLLEGE DEGREE	<40,000	NOT MARRIED	N
114	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
115	COLLEGE DEGREE	<40,000	NOT MARRIED	N
116	NO COLLEGE DEGREE	80+	MARRIED	Y
117	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
118	COLLEGE DEGREE	40-79,999	NOT MARRIED	Y
119	COLLEGE DEGREE	40-79,999	MARRIED	Y
120	COLLEGE DEGREE	40-79,999	MARRIED	Y
121	NO COLLEGE DEGREE	80+	MARRIED	N
122	COLLEGE DEGREE	40-79,999	MARRIED	N
123	COLLEGE DEGREE	80+	MARRIED	Y
124	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
125	COLLEGE DEGREE	40-79,999	MARRIED	N
126	COLLEGE DEGREE	80+	MARRIED	N
127	COLLEGE DEGREE	80+	MARRIED	N
128	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
129	NO COLLEGE DEGREE	80+	MARRIED	N
130	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
131	NO COLLEGE DEGREE	<40,000	MARRIED	N
132	COLLEGE DEGREE	80+	MARRIED	N
133	COLLEGE DEGREE	40-79,999	MARRIED	Y
134	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
135	NO COLLEGE DEGREE	40-79,999	MARRIED	N
136	NO COLLEGE DEGREE	80+	MARRIED	Y
137	COLLEGE DEGREE	80+	MARRIED	N
138	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
139	COLLEGE DEGREE	80+	MARRIED	Y
140	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
141	COLLEGE DEGREE	80+	MARRIED	N
142	COLLEGE DEGREE	80+	MARRIED	Y
143	NO COLLEGE DEGREE	<40,000	MARRIED	N
144	NO COLLEGE DEGREE	<40,000	MARRIED	N
145	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	Y
146	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
147	NO COLLEGE DEGREE	80+	MARRIED	Y
148	COLLEGE DEGREE	40-79,999	MARRIED	N
149	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
150	NO COLLEGE DEGREE	80+	MARRIED	Y

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
101	Y	PART	N	WALKING
102	N			WALKING
103	Y	FULL	N	GROUP EXERCISE
104	Y	FULL	N	WALKING
105	Y	FULL	N	WALKING
106	N			WALKING
107	N			WALKING
108	N			GROUP EXERCISE
109	Y	FULL	N	WALKING
110	Y	FULL	Y	WALKING
111	Y	FULL	Y	GROUP EXERCISE
112	Y	PART	N	RUNNING
113	N			WALKING
114	Y	FULL	Y	RECREATIONAL
115	N			RECREATIONAL
116	Y	FULL	N	RECREATIONAL
117	N			SWIMMING
118	Y	FULL	Y	WALKING
119	Y	PART	N	WALKING
120	Y	PART	N	WALKING
121	Y	PART	N	WALKING
122	Y	FULL	N	WALKING
123	Y	PART	N	WALKING
124	N			SWIMMING
125	Y	FULL	N	GROUP EXERCISE
126	N			WALKING
127	Y	FULL	N	RECREATIONAL
128	N			WALKING
129	Y	FULL	N	WALKING
130	N			WALKING
131	N			WALKING
132	Y	FULL	N	WALKING
133	N			OUTDOORS
134	N			WALKING
135	N			WALKING
136	Y	FULL	N	WALKING
137	Y	FULL	N	OUTDOORS
138	Y	FULL	N	SWIMMING
139	Y	FULL	N	BICYCLING
140	Y	FULL	N	WALKING
141	Y	FULL	N	WALKING
142	Y	FULL	N	WALKING
143	N			WALKING
144	Y	FULL	Y	GROUP EXERCISE
145	Y	FULL	Y	SWIMMING
146	N			OUTDOORS
147	Y	PART	N	WALKING
148	Y	FULL	N	RECREATIONAL
149	Y	FULL	N	WALKING
150	Y	FULL	N	WALKING

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
151	MODERATE	0	0	0	5	15
152	SEDENTARY	0	0	0	2	35
153	SEDENTARY	0	0	0	3	30
154	SEDENTARY	0	0	0	0	0
155	VIGOROUS	3	20	60	0	0
156	VIGOROUS	5	24	120	0	0
157	MODERATE	1	20	20	1	30
158	MODERATE	0	0	0	7	30
159	VIGOROUS	3	90	270	3	30
160	SEDENTARY	0	0	0	2	15
161	SEDENTARY	0	0	0	0	0
162	VIGOROUS	6	60	360	0	0
163	VIGOROUS	6	45	270	0	0
164	SEDENTARY	0	0	0	3	20
165	MODERATE	0	0	0	5	25
166	MODERATE	0	0	0	3	60
167	VIGOROUS	3	30	90	1	20
168	SEDENTARY	0	0	0	3	15
169	MODERATE	1	50	50	4	30
170	MODERATE	2	30	60	2	20
171	SEDENTARY	0	0	0	0	0
172	SEDENTARY	0	0	0	0	0
173	SEDENTARY	0	0	0	1	20
174	MODERATE	0	0	0	5	40
175	VIGOROUS	5	45	225	4	60
176	MODERATE	2	15	30	10	15
177	SEDENTARY	0	0	0	0	0
178	SEDENTARY	0	0	0	0	0
179	MODERATE	0	0	0	4	45
180	SEDENTARY	0	0	0	0	0
181	SEDENTARY	0	0	0	0	0
182	SEDENTARY	0	0	0	0	0
183	SEDENTARY	0	0	0	0	0
184	SEDENTARY	0	0	0	0	0
185	SEDENTARY	0	0	0	0	0
186	SEDENTARY	0	0	0	3	20
187	VIGOROUS	2	30	60	4	30
188	MODERATE	0	0	0	0	0
189	MODERATE	0	0	0	1	50
190	SEDENTARY	0	0	0	0	0
191	SEDENTARY	0	0	0	2	45
192	SEDENTARY	0	0	0	0	0
193	SEDENTARY	0	0	0	0	0
194	MODERATE	0	0	0	0	0
195	SEDENTARY	0	0	0	1	30
196	SEDENTARY	1	60	60	1	45
197	VIGOROUS	2	30	60	2	30
198	MODERATE	0	0	0	2	30
199	MODERATE	0	0	0	5	30
200	SEDENTARY	0	0	0	1	60

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
151	75	7	30	210	Y	5
152	70	2	30	60	N	0
153	90	2	30	60	N	0
154	0	1	10	10	N	0
155	0	2	60	120	N	0
156	0	1	60	60	Y	3
157	30	3	120	360	N	0
158	210	5	60	300	N	0
159	90	7	120	840	N	0
160	30	5	30	150	N	0
161	0	0	0	0	N	0
162	0	8	15	120	Y	2
163	0	5	60	300	Y	2
164	60	0	0	0	N	0
165	125	6	60	360	N	0
166	180	5	30	150	N	0
167	20	7	120	840	Y	2
168	45	7	15	105	N	0
169	120	7	30	210	N	0
170	40	2	20	40	Y	2
171	0	0	0	0	N	0
172	0	0	0	0	N	0
173	20	5	10	50	N	0
174	200	0	0	0	N	0
175	240	5	20	100	Y	4
176	150	1	120	120	N	0
177	0	7	15	105	N	0
178	0	0	0	0	N	0
179	180	0	0	0	N	0
180	0	7	5	35	N	0
181	0	5	25	125	N	0
182	0	0	0	0	N	0
183	0	7	15	105	N	0
184	0	0	0	0	N	0
185	0	3	30	90	Y	3
186	60	3	15	45	Y	4
187	120	1	120	120	N	0
188	0	9	60	540	N	0
189	50	7	30	210	Y	2
190	0	7	30	210	N	0
191	90	2	30	60	N	0
192	0	0	0	0	Y	7
193	0	2	15	30	N	0
194	0	7	45	315	N	0
195	30	3	60	180	Y	2
196	45	1	20	20	N	0
197	60	2	30	60	N	0
198	60	7	120	840	N	0
199	150	7	30	210	N	0
200	60	1	60	60	Y	5

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
151	10	50	Y	71-80	NATIVE
152	0	0	Y	41-50	WHITE
153	0	0	N	41-50	WHITE
154	0	0	N	61-70	WHITE
155	0	0	Y	41-50	WHITE
156	20	60	N	41-50	WHITE
157	0	0	N	41-50	BLACK
158	0	0	Y	71-80	NATIVE
159	0	0	Y	51-60	WHITE
160	0	0	N	71-80	WHITE
161	0	0	N	51-60	WHITE
162	15	30	N	41-50	WHITE
163	20	40	Y	51-60	WHITE
164	0	0	Y	41-50	WHITE
165	0	0	Y	41-50	WHITE
166	0	0	Y	41-50	WHITE
167	60	120	Y	41-50	WHITE
168	0	0	N	71-80	WHITE
169	0	0	N	41-50	WHITE
170	20	40	Y	41-50	WHITE
171	0	0	N	41-50	WHITE
172	0	0	N	81+	WHITE
173	0	0	Y	41-50	WHITE
174	0	0	Y	41-50	WHITE
175	30	120	Y	41-50	WHITE
176	0	0	Y	41-50	WHITE
177	0	0	N	51-60	OTHER
178	0	0	N	71-80	WHITE
179	0	0	Y	41-50	WHITE
180	0	0	N	81+	WHITE
181	0	0	Y	41-50	WHITE
182	0	0	N	61-70	WHITE
183	0	0	N	41-50	WHITE
184	0	0	N	41-50	WHITE
185	20	60	Y	51-60	WHITE
186	10	40	N	61-70	WHITE
187	0	0	Y	51-60	WHITE
188	0	0	N	51-60	WHITE
189	15	30	N	51-60	WHITE
190	0	0	Y	61-70	WHITE
191	0	0	N	51-60	WHITE
192	30	210	N	51-60	WHITE
193	0	0	N	71-80	WHITE
194	0	0	N	41-50	WHITE
195	60	120	Y	61-70	WHITE
196	0	0	Y	41-50	WHITE
197	0	0	Y	41-50	WHITE
198	0	0	Y	51-60	WHITE
199	0	0	Y	81+	WHITE
200	20	100	N	71-80	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
151	NO COLLEGE DEGREE	<40,000	MARRIED	N
152	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
153	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
154	NO COLLEGE DEGREE	<40,000	MARRIED	N
155	COLLEGE DEGREE	80+	MARRIED	Y
156	NO COLLEGE DEGREE	80+	MARRIED	Y
157	COLLEGE DEGREE	80+	MARRIED	Y
158	NO COLLEGE DEGREE	<40,000	MARRIED	N
159	NO COLLEGE DEGREE	80+	MARRIED	N
160	NO COLLEGE DEGREE	<40,000	MARRIED	N
161	COLLEGE DEGREE	40-79,999	MARRIED	N
162	COLLEGE DEGREE	80+	MARRIED	N
163	COLLEGE DEGREE	80+	MARRIED	Y
164	COLLEGE DEGREE	80+	MARRIED	Y
165	COLLEGE DEGREE	80+	MARRIED	Y
166	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
167	COLLEGE DEGREE	80+	MARRIED	Y
168	NO COLLEGE DEGREE	<40,000	MARRIED	N
169	COLLEGE DEGREE	40-79,999	NOT MARRIED	Y
170	COLLEGE DEGREE	40-79,999	MARRIED	N
171	NO COLLEGE DEGREE	40-79,999	MARRIED	N
172	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
173	COLLEGE DEGREE	40-79,999	MARRIED	Y
174	NO COLLEGE DEGREE	40-79,999	MARRIED	N
175	COLLEGE DEGREE	40-79,999	MARRIED	Y
176	COLLEGE DEGREE	40-79,999	MARRIED	Y
177	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
178	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
179	NO COLLEGE DEGREE	80+	MARRIED	N
180	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
181	NO COLLEGE DEGREE	40-79,999	MARRIED	N
182	NO COLLEGE DEGREE	<40,000	MARRIED	N
183	COLLEGE DEGREE	40-79,999	MARRIED	Y
184	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
185	COLLEGE DEGREE	80+	MARRIED	N
186	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
187	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
188	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
189	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
190	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
191	NO COLLEGE DEGREE	80+	MARRIED	Y
192	COLLEGE DEGREE	<40,000	MARRIED	N
193	COLLEGE DEGREE	<40,000	NOT MARRIED	N
194	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
195	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
196	COLLEGE DEGREE	80+	MARRIED	Y
197	COLLEGE DEGREE	80+	MARRIED	Y
198	NO COLLEGE DEGREE	40-79,999	MARRIED	N
199	NO COLLEGE DEGREE	40-79,999	MARRIED	N
200	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
151	N			WALKING
152	Y	PART	Y	WALKING
153	Y	FULL	N	WALKING
154	N			WALKING
155	Y	FULL	Y	RUNNING
156	Y	FULL	Y	BICYCLING
157	Y	FULL	N	WALKING
158	N			WALKING
159	N			BICYCLING
160	N			WALKING
161	Y	FULL	N	WALKING
162	Y	FULL	N	WALKING
163	N			WALKING
164	Y	FULL	Y	WALKING
165	Y	FULL	N	WALKING
166	Y	FULL	N	WALKING
167	N			OUTDOORS
168	N			BICYCLING
169	Y	FULL	Y	OUTDOORS
170	Y	FULL	Y	GROUP EXERCISE
171	Y	FULL	N	WALKING
172	N			OUTDOORS
173	Y	PART	Y	WALKING
174	Y	PART	N	WALKING
175	Y	PART	N	GROUP EXERCISE
176	Y	FULL	Y	WALKING
177	Y	FULL	N	WALKING
178	N			WALKING
179	Y	FULL	N	WALKING
180	N			OUTDOORS
181	N			BICYCLING
182	N			WALKING
183	Y	FULL	N	WALKING
184	Y	FULL	N	OUTDOORS
185	Y	FULL	Y	WALKING
186	Y	PART	N	WALKING
187	Y	FULL	Y	WALKING
188	N			WALKING
189	Y	FULL	N	WALKING
190	N			WALKING
191	Y	FULL	Y	RECREATIONAL
192	N			RECREATIONAL
193	N			WALKING
194	Y	PART	N	WALKING
195	N			WALKING
196	Y	FULL	N	BICYCLING
197	Y	FULL	Y	WALKING
198	Y	FULL	N	WALKING
199	N			SWIMMING
200	N			SWIMMING

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
201	MODERATE	0	0	0	6	45
202	SEDENTARY	0	0	0	1	30
203	MODERATE	0	0	0	7	60
204	SEDENTARY	0	0	0	0	0
205	MODERATE	0	0	0	3	45
206	MODERATE	0	0	0	0	0
207	SEDENTARY	0	0	0	1	60
208	VIGOROUS	7	30	210	7	30
209	VIGOROUS	3	60	180	0	0
210	SEDENTARY	0	0	0	0	0
211	MODERATE	0	0	0	0	0
212	VIGOROUS	3	30	90	0	0
213	SEDENTARY	0	0	0	0	0
214	MODERATE	0	0	0	4	40
215	MODERATE	0	0	0	3	20
216	VIGOROUS	4	25	100	0	0
217	VIGOROUS	5	30	150	3	60
218	SEDENTARY	0	0	0	0	0
219	SEDENTARY	0	0	0	0	0
220	SEDENTARY	0	0	0	0	0
221	MODERATE	1	60	60	0	0
222	MODERATE	0	0	0	0	0
223	VIGOROUS	3	30	90	4	30
224	MODERATE	0	0	0	0	0
225	SEDENTARY	0	0	0	0	0
226	SEDENTARY	0	0	0	2	20
227	MODERATE	0	0	0	4	45
228	SEDENTARY	0	0	0	0	0
229	SEDENTARY	0	0	0	3	30
230	MODERATE	0	0	0	4	30
231	SEDENTARY	0	0	0	0	0
232	MODERATE	0	0	0	5	30
233	SEDENTARY	0	0	0	0	0
234	MODERATE	0	0	0	4	90
235	VIGOROUS	3	25	75	0	0
236	VIGOROUS	2	30	60	5	40
237	MODERATE	0	0	0	3	30
238	MODERATE	0	0	0	2	30
239	SEDENTARY	2	30	60	0	0
240	MODERATE	0	0	0	5	40
241	SEDENTARY	0	0	0	0	0
242	MODERATE	0	0	0	5	30
243	SEDENTARY	0	0	0	0	0
244	SEDENTARY	0	0	0	0	0
245	SEDENTARY	0	0	0	1	60
246	MODERATE	0	0	0	2	160
247	SEDENTARY	0	0	0	0	0
248	MODERATE	0	0	0	5	30
249	SEDENTARY	0	0	0	0	0
250	MODERATE	0	0	0	2	30

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
201	270	0	0	0	Y	3
202	30	0	0	0	N	0
203	420	0	0	0	N	0
204	0	4	30	120	N	0
205	135	7	120	840	N	0
206	0	6	165	990	Y	6
207	60	5	20	100	N	0
208	210	2	60	120	Y	7
209	0	1	60	60	Y	3
210	0	1	30	30	Y	2
211	0	4	120	480	N	0
212	0	0	0	0	Y	3
213	0	1	60	60	N	0
214	160	1	90	90	N	0
215	60	2	120	240	N	0
216	0	2	60	120	Y	1
217	180	5	15	90	Y	5
218	0	0	0	0	N	0
219	0	2	60	120	Y	3
220	0	0	0	0	N	0
221	0	7	30	210	Y	1
222	0	6	50	300	N	0
223	120	0	0	0	Y	3
224	0	5	60	300	N	0
225	0	5	15	80	N	0
226	40	0	0	0	N	0
227	180	2	60	120	N	0
228	0	0	0	0	N	0
229	90	0	0	0	N	0
230	120	5	60	300	Y	4
231	0	3	30	90	N	0
232	150	0	0	0	Y	0
233	0	4	30	120	Y	5
234	360	3	45	135	N	0
235	0	0	0	0	Y	3
236	200	7	30	210	Y	5
237	90	5	20	100	N	0
238	60	7	60	420	N	0
239	0	0	0	0	Y	2
240	200	3	30	90	N	0
241	0	3	10	30	N	0
242	150	4	15	60	Y	1
243	0	0	0	0	N	0
244	0	0	0	0	Y	4
245	60	2	30	60	Y	0
246	360	7	60	420	N	0
247	0	0	0	0	N	0
248	150	7	120	840	N	0
249	0	2	60	120	N	0
250	60	3	60	180	Y	1

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
201	20	60	Y	61-70	WHITE
202	0	0	Y	71-80	WHITE
203	0	0	Y	51-60	WHITE
204	0	0	Y	71-80	WHITE
205	0	0	Y	41-50	WHITE
206	30	180	Y	81+	WHITE
207	0	0	Y	41-50	WHITE
208	30	210	Y	41-50	WHITE
209	20	60	Y	61-70	WHITE
210	10	20	N	51-60	WHITE
211	0	0	N	61-70	WHITE
212	30	90	Y	41-50	WHITE
213	0	0	Y	41-50	WHITE
214	0	0	Y	41-50	WHITE
215	0	0	Y	51-60	WHITE
216	10	10	Y	51-60	WHITE
217	20	100	Y	41-50	WHITE
218	0	0	N	81+	WHITE
219	20	60	Y	51-60	WHITE
220	0	0	N	61-70	WHITE
221	10	10	Y	41-50	WHITE
222	0	0	Y	51-60	WHITE
223	20	60	N	51-60	WHITE
224	0	0	N	61-70	WHITE
225	0	0	N	51-60	WHITE
226	0	0	N	51-60	WHITE
227	0	0	Y	41-50	WHITE
228	0	0	N	41-50	WHITE
229	0	0	N	41-50	WHITE
230	20	80	Y	41-50	WHITE
231	0	0	Y	71-80	WHITE
232	0	0	Y	41-50	WHITE
233	20	100	N	61-70	WHITE
234	0	0	Y	41-50	WHITE
235	20	60	N	41-50	WHITE
236	10	50	Y	41-50	WHITE
237	0	0	N	51-60	WHITE
238	0	0	Y	41-50	WHITE
239	30	60	Y	51-60	WHITE
240	0	0	Y	41-50	WHITE
241	0	0	N	41-50	WHITE
242	15	15	N	51-60	WHITE
243	0	0	N	51-60	WHITE
244	30	120	Y	41-50	WHITE
245	0	0	Y	41-50	WHITE
246	0	0	Y	61-70	WHITE
247	0	0	N	61-70	WHITE
248	0	0	N	71-80	NATIVE
249	0	0	N	41-50	WHITE
250	10	10	Y	41-50	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
201	COLLEGE DEGREE	40-79,999	MARRIED	N
202	NO COLLEGE DEGREE	<40,000	MARRIED	N
203	NO COLLEGE DEGREE	40-79,999	MARRIED	N
204	COLLEGE DEGREE	<40,000	NOT MARRIED	N
205	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
206	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
207	COLLEGE DEGREE	80+	NOT MARRIED	N
208	COLLEGE DEGREE	80+	MARRIED	Y
209	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
210	COLLEGE DEGREE	80+	MARRIED	N
211	NO COLLEGE DEGREE	<40,000	MARRIED	N
212	COLLEGE DEGREE	80+	MARRIED	N
213	COLLEGE DEGREE	80+	MARRIED	N
214	NO COLLEGE DEGREE	40-79,999	MARRIED	N
215	COLLEGE DEGREE	40-79,999	MARRIED	N
216	COLLEGE DEGREE	80+	MARRIED	N
217	COLLEGE DEGREE	80+	NOT MARRIED	N
218	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
219	NO COLLEGE DEGREE	40-79,999	MARRIED	N
220	COLLEGE DEGREE	40-79,999	MARRIED	N
221	COLLEGE DEGREE	80+	MARRIED	Y
222	NO COLLEGE DEGREE	<40,000	MARRIED	N
223	COLLEGE DEGREE	40-79,999	MARRIED	N
224	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
225	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
226	COLLEGE DEGREE	80+	MARRIED	N
227	COLLEGE DEGREE	80+	MARRIED	N
228	COLLEGE DEGREE	40-79,999	NOT MARRIED	Y
229	COLLEGE DEGREE	80+	MARRIED	Y
230	NO COLLEGE DEGREE	40-79,999	MARRIED	N
231	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
232	COLLEGE DEGREE	80+	MARRIED	Y
233	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
234	COLLEGE DEGREE	80+	NOT MARRIED	N
235	COLLEGE DEGREE	80+	MARRIED	N
236	NO COLLEGE DEGREE	80+	MARRIED	Y
237	COLLEGE DEGREE	80+	MARRIED	N
238	NO COLLEGE DEGREE	80+	MARRIED	N
239	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
240	COLLEGE DEGREE	<40,000	NOT MARRIED	N
241	COLLEGE DEGREE	80+	MARRIED	Y
242	NO COLLEGE DEGREE	80+	MARRIED	N
243	COLLEGE DEGREE	<40,000	NOT MARRIED	N
244	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
245	NO COLLEGE DEGREE	40-79,999	MARRIED	N
246	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
247	COLLEGE DEGREE	40-79,999	MARRIED	N
248	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
249	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
250	NO COLLEGE DEGREE	40-79,999	MARRIED	N

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
201	Y	FULL	N	WALKING
202	N			OTHER
203	Y	FULL	N	OUTDOORS
204	N			WALKING
205	Y	PART	N	WALKING
206	N			OUTDOORS
207	Y	FULL	N	WALKING
208	Y	FULL	Y	WALKING
209	N			RECREATIONAL
210	Y	PART	Y	WALKING
211	N			WALKING
212	Y	FULL	N	WALKING
213	Y	FULL	Y	WALKING
214	Y	FULL	Y	WALKING
215	Y	FULL	N	WALKING
216	Y	FULL	Y	GROUP EXERCISE
217	Y	FULL	N	WALKING
218	N			OUTDOORS
219	Y	FULL	Y	OTHER
220	N			WALKING
221	Y	PART	N	GROUP EXERCISE
222	N			WALKING
223	Y	FULL	N	OTHER
224	N			OTHER
225	N			WALKING
226	Y	FULL	N	WALKING
227	Y	FULL	Y	WALKING
228	Y	FULL	Y	WALKING
229	Y	FULL	Y	WALKING
230	Y	FULL	N	WALKING
231	N			WALKING
232	Y	PART	N	WALKING
233	Y	FULL	N	WALKING
234	N			RECREATIONAL
235	Y	FULL	N	OUTDOORS
236	Y	PART	Y	WALKING
237	Y	FULL	N	WALKING
238	Y	FULL	Y	WALKING
239	Y	FULL	Y	GROUP EXERCISE
240	Y	PART	N	WALKING
241	N			WALKING
242	Y	FULL	Y	WALKING
243	Y	FULL	N	WALKING
244	Y	PART	N	RUNNING
245	Y	FULL	N	WALKING
246	Y	FULL	N	OUTDOORS
247	N			WALKING
248	Y	PART	N	OUTDOORS
249	Y	FULL	N	BICYCLING
250	Y	FULL	Y	WALKING

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
251	MODERATE	0	0	0	4	60
252	MODERATE	0	0	0	5	45
253	SEDENTARY	0	0	0	0	0
254	SEDENTARY	0	0	0	0	0
255	MODERATE	0	0	0	5	30
256	SEDENTARY	0	0	0	0	0
257	SEDENTARY	0	0	0	3	15
258	SEDENTARY	0	0	0	0	0
259	SEDENTARY	0	0	0	0	0
260	SEDENTARY	2	20	40	0	0
261	SEDENTARY	0	0	0	0	0
262	MODERATE	0	0	0	3	45
263	VIGOROUS	4	40	160	0	0
264	MODERATE	0	0	0	0	0
265	VIGOROUS	3	25	75	3	30
266	VIGOROUS	4	30	120	4	45
267	MODERATE	0	0	0	5	50
268	SEDENTARY	0	0	0	2	20
269	SEDENTARY	0	0	0	1	15
270	SEDENTARY	0	0	0	2	30
271	MODERATE	0	0	0	6	30
272	SEDENTARY	0	0	0	0	0
273	MODERATE	0	0	0	5	35
274	MODERATE	1	60	60	1	30
275	VIGOROUS	6	45	270	2	60
276	SEDENTARY	0	0	0	3	20
277	MODERATE	0	0	0	4	60
278	MODERATE	0	0	0	4	30
279	VIGOROUS	3	30	90	0	0
280	MODERATE	0	0	0	5	40
281	SEDENTARY	0	0	0	0	0
282	SEDENTARY	0	0	0	0	0
283	SEDENTARY	0	0	0	0	0
284	MODERATE	0	0	0	6	20
285	MODERATE	2	50	100	1	30
286	VIGOROUS	6	30	180	0	0
287	VIGOROUS	3	45	135	3	30
288	SEDENTARY	0	0	0	0	0
289	VIGOROUS	3	30	90	2	30
290	SEDENTARY	0	0	0	0	0
291	SEDENTARY	0	0	0	0	0
292	VIGOROUS	3	30	90	0	0
293	VIGOROUS	3	30	90	0	0
294	SEDENTARY	0	0	0	0	0
295	SEDENTARY	0	0	0	0	0
296	VIGOROUS	4	45	180	0	0
297	VIGOROUS	2	35	70	3	40
298	VIGOROUS	4	45	180	2	90
299	SEDENTARY	0	0	0	0	0
300	SEDENTARY	0	0	0	0	0

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
251	240	0	0	0	Y	4
252	225	1	20	20	Y	1
253	0	7	15	105	N	0
254	0	4	20	80	N	0
255	150	5	30	150	N	0
256	0	3	30	90	N	0
257	45	7	20	140	N	0
258	0	2	20	40	N	0
259	0	6	15	90	N	0
260	0	0	0	0	N	0
261	0	0	0	0	N	0
262	135	4	60	240	N	0
263	0	2	30	60	N	0
264	0	5	40	200	N	0
265	90	2	45	90	Y	1
266	180	5	60	300	N	0
267	250	0	0	0	N	0
268	40	2	20	40	N	0
269	15	6	30	180	N	0
270	60	5	15	75	N	0
271	180	0	0	0	N	0
272	0	0	0	0	N	0
273	175	7	30	210	N	0
274	30	7	30	210	Y	1
275	120	3	30	90	Y	3
276	60	0	0	0	Y	3
277	240	0	0	0	N	0
278	120	7	15	105	N	0
279	0	0	0	0	Y	3
280	200	2	30	60	N	0
281	2	30		60	N	0
282	0	0	0	0	N	0
283	0	5	20	100	Y	3
284	120	7	60	420	N	0
285	30	1	40	40	N	0
286	0	7	15	105	Y	2
287	90	7	60	420	Y	3
288	0	7	30	210	N	0
289	60	4	30	120	Y	1
290	0	7	15	105	Y	7
291	0	2	20	40	Y	1
292	0	2	30	60	Y	3
293	0	0	0	0	Y	2
294	0	1	30	30	N	0
295	0	3	60	180	N	0
296	0	5	60	300	Y	3
297	120	0	0	0	Y	2
298	180	0	0	0	Y	2
299	0	1	30	30	N	0
300	0	1	20	20	N	0

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
251	20	80	Y	51-60	WHITE
252	20	20	N	41-50	WHITE
253	0	0	N	51-60	WHITE
254	0	0	Y	61-70	WHITE
255	0	0	Y	41-50	WHITE
256	0	0	N	51-60	WHITE
257	0	0	N	41-50	WHITE
258	0	0	N	51-60	WHITE
259	0	0	N	71-80	WHITE
260	0	0	N	51-60	ASIAN
261	0	0	N	51-60	WHITE
262	0	0	Y	41-50	WHITE
263	0	0	Y	41-50	WHITE
264	0	0	Y	41-50	WHITE
265	60	60	Y	41-50	WHITE
266	0	0	Y	41-50	WHITE
267	0	0	Y	41-50	WHITE
268	0	0	Y	41-50	WHITE
269	0	0	Y	41-50	WHITE
270	0	0	Y	41-50	WHITE
271	0	0	N	51-60	WHITE
272	0	0	N	41-50	WHITE
273	0	0	Y	41-50	WHITE
274	60	60	Y	51-60	WHITE
275	30	90	Y	41-50	WHITE
276	5	15	N	41-50	WHITE
277	0	0	Y	51-60	WHITE
278	0	0	Y	41-50	WHITE
279	30	90	N	61-70	WHITE
280	0	0	Y	41-50	WHITE
281	0	0	N	51-60	WHITE
282	0	0	N	41-50	WHITE
283	20	90	N	61-70	WHITE
284	0	0	Y	61-70	WHITE
285	0	0	N	41-50	WHITE
286	20	40	Y	41-50	WHITE
287	30	120	Y	41-50	WHITE
288	0	0	N	41-50	WHITE
289	30	30	Y	41-50	WHITE
290	10	70	Y	71-80	WHITE
291	15	15	Y	51-60	WHITE
292	30	90	Y	41-50	WHITE
293	30	60	Y	51-60	WHITE
294	0	0	N	41-50	WHITE
295	0	0	Y	41-50	HISPANIC
296	45	135	Y	41-50	WHITE
297	35	709	Y	41-50	WHITE
298	15	30	Y	51-60	WHITE
299	0	0	Y	51-60	WHITE
300	0	0	N	61-70	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
251	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
252	COLLEGE DEGREE	80+	MARRIED	Y
253	COLLEGE DEGREE	80+	MARRIED	N
254	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
255	COLLEGE DEGREE	80+	MARRIED	Y
256	COLLEGE DEGREE	80+	MARRIED	N
257	COLLEGE DEGREE	40-79,999	NOT MARRIED	Y
258	COLLEGE DEGREE	<40,000	NOT MARRIED	N
259	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
260	COLLEGE DEGREE	80+	MARRIED	N
261	NO COLLEGE DEGREE	<40,000	MARRIED	N
262	NO COLLEGE DEGREE	80+	MARRIED	Y
263	NO COLLEGE DEGREE	80+	MARRIED	N
264	NO COLLEGE DEGREE	80+	MARRIED	N
265	COLLEGE DEGREE	<40,000	NOT MARRIED	N
266	COLLEGE DEGREE	80+	MARRIED	N
267	COLLEGE DEGREE	80+	MARRIED	N
268	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
269	COLLEGE DEGREE	40-79,999	MARRIED	Y
270	COLLEGE DEGREE	80+	MARRIED	Y
271	COLLEGE DEGREE	80+	NOT MARRIED	N
272	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
273	COLLEGE DEGREE	80+	MARRIED	Y
274	NO COLLEGE DEGREE	40-79,999	MARRIED	N
275	COLLEGE DEGREE	80+	MARRIED	N
276	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
277	NO COLLEGE DEGREE	40-79,999	MARRIED	N
278	COLLEGE DEGREE	80+	MARRIED	Y
279	NO COLLEGE DEGREE	40-79,999	MARRIED	N
280	COLLEGE DEGREE	40-79,999	MARRIED	Y
281	COLLEGE DEGREE	80+	MARRIED	N
282	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
283	COLLEGE DEGREE	80+	MARRIED	N
284	NO COLLEGE DEGREE	<40,000	MARRIED	N
285	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
286	COLLEGE DEGREE	40-79,999	MARRIED	Y
287	NO COLLEGE DEGREE	80+	MARRIED	Y
288	COLLEGE DEGREE	80+	MARRIED	Y
289	COLLEGE DEGREE	80+	MARRIED	Y
290	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
291	COLLEGE DEGREE	80+	MARRIED	N
292	COLLEGE DEGREE	40-79,999	NOT MARRIED	Y
293	NO COLLEGE DEGREE	40-79,999	MARRIED	N
294	COLLEGE DEGREE	80+	MARRIED	Y
295	COLLEGE DEGREE	40-79,999	MARRIED	Y
296	COLLEGE DEGREE	80+	MARRIED	Y
297	NO COLLEGE DEGREE	80+	MARRIED	N
298	COLLEGE DEGREE	80+	MARRIED	N
299	NO COLLEGE DEGREE	80+	MARRIED	N
300	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
251	N			WALKING
252	Y	FULL	N	WALKING
253	Y	FULL	N	WALKING
254	N			WALKING
255	Y	FULL	N	WALKING
256	Y	FULL	N	WALKING
257	Y	FULL	N	RECREATIONAL
258	N			SWIMMING
259	N			WALKING
260	Y	FULL	N	WALKING
261	Y	FULL	N	WALKING
262	Y	PART	Y	WALKING
263	Y	FULL	Y	RUNNING
264	Y	FULL	N	GROUP EXERCISE
265	Y	FULL	N	RECREATIONAL
266	Y	FULL	N	WALKING
267	Y	FULL	N	GROUP EXERCISE
268	Y	FULL	N	WALKING
269	Y	FULL	N	OUTDOORS
270	Y	FULL	N	OUTDOORS
271	Y	FULL	Y	WALKING
272	Y	FULL	Y	SWIMMING
273	Y	FULL	N	BICYCLING
274	Y	FULL	N	GROUP EXERCISE
275	Y	FULL	Y	GROUP EXERCISE
276	Y	PART	N	WALKING
277	Y	FULL	N	WALKING
278	Y	PART	Y	WALKING
279	Y	FULL	N	RECREATIONAL
280	Y	PART	N	WALKING
281	Y	FULL	N	OUTDOORS
282	Y	FULL	N	SWIMMING
283	N			WALKING
284	N			OUTDOORS
285	Y	FULL	N	WALKING
286	Y	FULL	N	GROUP EXERCISE
287	Y	FULL	Y	WALKING
288	Y	FULL	Y	SWIMMING
289	Y	FULL	N	GROUP EXERCISE
290	N			BICYCLING
291	N			GROUP EXERCISE
292	Y	FULL	N	GROUP EXERCISE
293	Y	PART	N	WALKING
294	Y	FULL	Y	WALKING
295	N			GROUP EXERCISE
296	Y	PART	N	GROUP EXERCISE
297	Y	FULL	N	GROUP EXERCISE
298	Y	FULL	N	GROUP EXERCISE
299	Y	FULL	N	GROUP EXERCISE
300	N			OTHER

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
301	SEDENTARY	0	0	0	0	0
302	SEDENTARY	0	0	0	1	30
303	SEDENTARY	0	0	0	0	0
304	SEDENTARY	0	0	0	3	30
305	SEDENTARY	0	0	0	0	0
306	VIGOROUS	3	20	120	0	0
307	SEDENTARY	1	6	6	1	40
308	SEDENTARY	0	0	0	0	0
309	SEDENTARY	0	0	0	0	0
310	MODERATE	2	20	40	2	20
311	SEDENTARY	0	0	0	0	0
312	SEDENTARY	2	6	12	3	45
313	SEDENTARY	0	0	0	2	30
314	MODERATE	0	0	0	0	0
315	SEDENTARY	0	0	0	0	0
316	SEDENTARY	0	0	0	0	0
317	SEDENTARY	0	0	0	6	15
318	SEDENTARY	0	0	0	0	0
319	SEDENTARY	0	0	0	0	0
320	SEDENTARY	0	0	0	0	0
321	VIGOROUS	5	60	300	0	0
322	SEDENTARY	0	0	0	0	0
323	SEDENTARY	0	0	0	0	0
324	SEDENTARY	0	0	0	0	0
325	MODERATE	0	0	0	5	30
326	SEDENTARY	0	0	0	2	10
327	MODERATE	2	15	30	0	0
328	VIGOROUS	2	60	120	4	30
329	SEDENTARY	0	0	0	0	0
330	SEDENTARY	0	0	0	0	0
331	SEDENTARY	0	0	0	0	0
332	MODERATE	0	0	0	0	0
333	MODERATE	0	0	0	7	20
334	SEDENTARY	0	0	0	3	20
335	SEDENTARY	0	0	0	0	0
336	SEDENTARY	0	0	0	1	60
337	MODERATE	0	0	0	0	0
338	SEDENTARY	0	0	0	0	0
339	SEDENTARY	0	0	0	0	0
340	MODERATE	1	60	60	2	40
341	MODERATE	0	0	0	3	30
342	SEDENTARY	0	0	0	0	0
343	SEDENTARY	0	0	0	0	0
344	SEDENTARY	0	0	0	6	15
345	SEDENTARY	0	0	0	0	0
346	MODERATE	0	0	0	0	0
347	SEDENTARY	0	0	0	2	15
348	MODERATE	5	10	50	5	10
349	SEDENTARY	0	0	0	0	0
350	SEDENTARY	0	0	0	4	15

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
301	0	3	60	180	Y	3
302	30	1	120	120	N	0
303	0	7	30	210	N	0
304	90	0	0	0	Y	1
305	0	6	20	120	N	0
306	0	5	15	75	N	0
307	40	1	10	10	Y	1
308	0	0	0	0	Y	2
309	0	0	0	0	Y	7
310	40	5	30	150	N	0
311	0	5	15	75	N	0
312	90	0	0	0	Y	2
313	60	0	0	0	Y	2
314	0	6	30	180	N	0
315	0	5	20	100	Y	5
316	0	1	60	60	N	0
317	90	7	10	70	N	0
318	0	0	0	0	N	0
319	3	15		45	Y	3
320	0	3	15	45	N	0
321	0	0	0	0	N	0
322	0	5	30	150	N	0
323	0	5	30	150	N	0
324	0	14	10	140	N	0
325	150	1	60	60	N	0
326	20	6	20	60	N	0
327	0	5	30	150	Y	2
328	120	0	0	0	Y	2
329	0	3	15	45	N	0
330	0	5	30	150	N	0
331	0	3	20	60	N	0
332	0	5	35	165	N	0
333	140	0	0	0	N	0
334	90	0	0	0	N	0
335	0	0	0	0	N	0
336	60	0	0	0	N	0
337	0	6	30	180	Y	6
338	0	1	45	45	Y	7
339	0	2	15	30	N	0
340	80	7	15	105	N	0
341	90	4	40	160	Y	2
342	0	2	45	90	Y	2
343	0	1	15	15	N	0
344	90	0	0	0	N	0
345	0	0	0	0	N	0
346	0	6	30	180	N	0
347	30	2	15	30	Y	2
348	50	5	10	50	Y	5
349	0	5	15	75	N	0
350	60	7	15	105	N	0

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
301	10	30	Y	71-80	WHITE
302	0	0	N	41-50	WHITE
303	0	0	N	71-80	WHITE
304	15	15	Y	51-60	WHITE
305	0	0	N	41-50	WHITE
306	0	0	Y	81+	WHITE
307	50	50	Y	71-80	WHITE
308	15	30	Y	71-80	WHITE
309	10	70	N	71-80	WHITE
310	0	0	Y	61-70	WHITE
311	0	0	Y	71-80	WHITE
312	50	100	Y	71-80	WHITE
313	60	120	N	81+	WHITE
314	0	0	N	61-70	WHITE
315	20	100	Y	71-80	WHITE
316	0	0	N	81+	WHITE
317	0	0	N	81+	WHITE
318	0	0	N	81+	WHITE
319	10	30	N	81+	WHITE
320	0	0	N	81+	WHITE
321	0	0	Y	71-80	WHITE
322	0	0	Y	81+	WHITE
323	0	0	N	81+	WHITE
324	0	0	N	71-80	WHITE
325	0	0	Y	71-80	WHITE
326	0	0	Y	81+	WHITE
327	45	90	Y	81+	WHITE
328	30	60	Y	81+	WHITE
329	0	0	Y	81+	WHITE
330	0	0	Y	71-80	WHITE
331	0	0	N	71-80	WHITE
332	0	0	Y	71-80	WHITE
333	0	0	N	71-80	WHITE
334	0	0	Y	71-80	WHITE
335	0	0	N	81+	WHITE
336	0	0	Y	81+	WHITE
337	30	180	N	81+	WHITE
338	15	105	Y	81+	WHITE
339	0	0	Y	71-80	WHITE
340	0	0	Y	81+	WHITE
341	15	30	Y	71-80	WHITE
342	15	30	N	71-80	WHITE
343	0	0	Y	81+	WHITE
344	0	0	Y	71-80	WHITE
345	0	0	N	41-50	WHITE
346	0	0	Y	71-80	WHITE
347	15	30	Y	71-80	WHITE
348	10	50	Y	81+	WHITE
349	0	0	N	81+	WHITE
350	0	0	Y	71-80	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
301	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
302	NO COLLEGE DEGREE	80+	MARRIED	N
303	NO COLLEGE DEGREE	40-79,999	MARRIED	N
304	COLLEGE DEGREE	<40,000	NOT MARRIED	N
305	COLLEGE DEGREE	80+	MARRIED	N
306	COLLEGE DEGREE	<40,000	NOT MARRIED	N
307	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
308	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
309	NO COLLEGE DEGREE	<40,000	MARRIED	N
310	COLLEGE DEGREE	40-79,999	MARRIED	N
311	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
312	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
313	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
314	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
315	COLLEGE DEGREE	40-79,999	MARRIED	N
316	COLLEGE DEGREE	<40,000	NOT MARRIED	N
317	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
318	NO COLLEGE DEGREE	40-79,999	NOT MARRIED	N
319	COLLEGE DEGREE	<40,000	NOT MARRIED	N
320	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
321	NO COLLEGE DEGREE	80+	MARRIED	N
322	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
323	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
324	NO COLLEGE DEGREE	<40,000	MARRIED	N
325	NO COLLEGE DEGREE	<40,000	MARRIED	N
326	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
327	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
328	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
329	NO COLLEGE DEGREE	<40,000	MARRIED	N
330	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
331	COLLEGE DEGREE	<40,000	NOT MARRIED	N
332	COLLEGE DEGREE	40-79,999	MARRIED	N
333	NO COLLEGE DEGREE	<40,000	MARRIED	N
334	COLLEGE DEGREE	40-79,999	MARRIED	N
335	COLLEGE DEGREE	<40,000	NOT MARRIED	N
336	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
337	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
338	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
339	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
340	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
341	NO COLLEGE DEGREE	40-79,999	MARRIED	N
342	COLLEGE DEGREE	40-79,999	MARRIED	N
343	NO COLLEGE DEGREE	<40,000	MARRIED	N
344	COLLEGE DEGREE	<40,000	NOT MARRIED	N
345	COLLEGE DEGREE	80+	MARRIED	N
346	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
347	COLLEGE DEGREE	<40,000	NOT MARRIED	N
348	COLLEGE DEGREE	<40,000	NOT MARRIED	N
349	COLLEGE DEGREE	<40,000	MARRIED	N
350	COLLEGE DEGREE	<40,000	MARRIED	N

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
301	N			WALKING
302	Y	FULL	N	WALKING
303	N			WALKING
304	N			OUTDOORS
305	Y	FULL	N	SWIMMING
306	N			GROUP EXERCISE
307	N			WALKING
308	N			GROUP EXERCISE
309	N			WALKING
310	N			WALKING
311	N			WALKING
312	N			GROUP EXERCISE
313	N			RECREATIONAL
314	Y	PART	N	WALKING
315	N			WALKING
316	N			OUTDOORS
317	N			BICYCLING
318	N			GROUP EXERCISE
319	N			WALKING
320	N			WALKING
321	N			GROUP EXERCISE
322	N			WALKING
323	N			RECREATIONAL
324	N			WALKING
325	N			WALKING
326	N			WALKING
327	N			WALKING
328	N			WALKING
329	N			RECREATIONAL
330	N			WALKING
331	N			WALKING
332	N			WALKING
333	N			BICYCLING
334	N			WALKING
335	N			WALKING
336	N			WALKING
337	N			WALKING
338	N			WALKING
339	N			GROUP EXERCISE
340	N			WALKING
341	N			WALKING
342	N			WALKING
343	N			WALKING
344	N			WALKING
345	Y	FULL	N	GROUP EXERCISE
346	N			WALKING
347	N			RECREATIONAL
348	N			OTHER
349	Y	PART	Y	WALKING
350	N			WALKING

Record Number	Exercise Category	Vig. Freq.	Vig. Minutes	Vig. Total	Mod. Freq.	Mod. Minutes
351	SEDENTARY	0	0	0	0	0
352	SEDENTARY	0	0	0	0	0
353	MODERATE	0	0	0	0	0
354	MODERATE	0	0	0	3	30
355	SEDENTARY	0	0	0	3	30
356	SEDENTARY	0	0	0	0	0
357	VIGOROUS	3	30	90	2	60
358	VIGOROUS	3	60	180	3	30
359	VIGOROUS	4	45	180	5	30
360	VIGOROUS	2	90	180	0	0
361	SEDENTARY	0	0	0	2	30
362	SEDENTARY	0	0	0	0	0
363	SEDENTARY	2	12	24	0	0
364	SEDENTARY	0	0	0	0	0
365	MODERATE	0	0	0	3	15
366	SEDENTARY	0	0	0	0	0
367	SEDENTARY	0	0	0	0	0
368	VIGOROUS	3	50	150	0	0
369	MODERATE	0	0	0	6	40
370	SEDENTARY	0	0	0	3	20
371	MODERATE	0	0	0	0	0
372	MODERATE	0	0	0	4	30
373	MODERATE	0	0	0	2	40
374	SEDENTARY	0	0	0	4	20
375	MODERATE	1	20	20	3	75
376	VIGOROUS	3	30	90	2	30
377	MODERATE	2	30	60	2	30

Rec. #	Mod. Total	Mild Freq.	Mild Minutes	Mild Total	Str. Trn. Yes/No	Str. Trn. Freq.
351	0	0	0	0	N	0
352	0	7	15	105	N	0
353	0	6	30	180	N	0
354	90	3	30	90	N	0
355	90	0	0	0	N	0
356	0	0	0	0	N	0
357	120	5	30	150	N	0
358	90	50	60	300	Y	2
359	150	0	0	0	N	0
360	50	5	90	450	Y	3
361	60	5	20	100	N	0
362	0	6	20	120	Y	6
363	0	7	15	105	Y	2
364	0	3	20	60	N	0
365	45	7	30	210	Y	5
366	0	6	20	120	N	0
367	0	0	0	0	Y	14
368	0	1	120	120	Y	3
369	240	4	40	160	N	0
370	60	2	30	60	N	0
371	0	5	60	300	N	0
372	120	6	50	300	Y	2
373	80	5	30	150	N	0
374	80	7	15	105	Y	4
375	225	3	75	225	N	0
376	60	0	0	0	Y	3
377	60	5	20	100	N	0

Rec. #	Str. Trn. Minutes	Str. Trn. Total	Current Exercise	Age	Ethnicity
351	0	0	N	81+	WHITE
352	0	0	Y	81+	WHITE
353	0	0	N	71-80	WHITE
354	0	0	Y	71-80	WHITE
355	0	0	Y	81+	WHITE
356	0	0	N	81+	WHITE
357	0	0	Y	41-50	WHITE
358	20	40	Y	41-50	WHITE
359	0	0	Y	41-50	WHITE
360	60	180	Y	51-60	WHITE
361	0	0	Y	81+	WHITE
362	20	120	N	71-80	WHITE
363	15	30	Y	61-70	WHITE
364	0	0	Y	41-50	WHITE
365	10	50	Y	51-60	WHITE
366	0	0	Y	51-60	WHITE
367		10	N	51-60	WHITE
368	10	30	Y	41-50	WHITE
369	0	0	N	61-70	WHITE
370	0	0	N	51-60	WHITE
371	0	0	N	61-70	BLACK
372	60	120	Y	71-80	WHITE
373	0	0	Y	41-50	WHITE
374	30	120	Y	41-50	WHITE
375	0	0	Y	41-50	WHITE
376	10	30	Y	61-70	WHITE
377	0	0	N	41-50	WHITE

Rec. #	Educational Level	Annual Income	Marital Status	Child Status
351	COLLEGE DEGREE	<40,000	NOT MARRIED	N
352	COLLEGE DEGREE	<40,000	NOT MARRIED	N
353	COLLEGE DEGREE	<40,000	NOT MARRIED	N
354	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
355	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
356	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
357	COLLEGE DEGREE	80+	MARRIED	Y
358	COLLEGE DEGREE	80+	MARRIED	N
359	COLLEGE DEGREE	80+	MARRIED	N
360	NO COLLEGE DEGREE	<40,000	MARRIED	N
361	COLLEGE DEGREE	<40,000	NOT MARRIED	N
362	COLLEGE DEGREE	<40,000	MARRIED	N
363	COLLEGE DEGREE	<40,000	NOT MARRIED	N
364	NO COLLEGE DEGREE	40-79,999	MARRIED	N
365	NO COLLEGE DEGREE	80+	MARRIED	N
366	NO COLLEGE DEGREE	40-79,999	MARRIED	Y
367	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
368	COLLEGE DEGREE	80+	MARRIED	Y
369	NO COLLEGE DEGREE	40-79,999	MARRIED	N
370	COLLEGE DEGREE	80+	MARRIED	N
371	COLLEGE DEGREE	40-79,999	NOT MARRIED	N
372	NO COLLEGE DEGREE	<40,000	NOT MARRIED	N
373	COLLEGE DEGREE	80+	NOT MARRIED	N
374	COLLEGE DEGREE	80+	NOT MARRIED	N
375	NO COLLEGE DEGREE	40-79,999	MARRIED	N
376	NO COLLEGE DEGREE	40-79,999	MARRIED	N
377	NO COLLEGE DEGREE	80+	MARRIED	N

Rec. #	Work Status	Part or Full	Employer Incentives	Exercise Choice
351	N			WALKING
352	Y	PART	N	WALKING
353	N			SWIMMING
354	N			WALKING
355	N			WALKING
356	N			WALKING
357	N			GROUP EXERCISE
358	Y	FULL	N	GROUP EXERCISE
359	Y	FULL	N	RUNNING
360	Y	PART	N	WALKING
361	N			WALKING
362	N			WALKING
363	Y	PART	N	WALKING
364	Y	FULL	N	BICYCLING
365	Y	FULL	N	WALKING
366	Y	PART	N	WALKING
367	Y	FULL	N	WALKING
368	N			RECREATIONAL
369	N			WALKING
370	Y	PART	N	WALKING
371	Y	FULL	N	BICYCLING
372	N			WALKING
373	Y	FULL	Y	WALKING
374	Y	FULL	Y	RECREATIONAL
375	N			WALKING
376	N			WALKING
377	Y	FULL	Y	OTHER