University of Alberta

Active women's motivation for exercise at midlife: "*I plan on aging optimally.*"

by

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Abstract

Why do active midlife women exercise regularly? In-depth interviews were conducted with twelve self-selected, physically active women aged 40-52, who lived in or near Calgary, Alberta. Quantitative and qualitative methods provided details about the women's propensity for participation in vigorous activities, like running and weight training, and why they were so highly motivated to exercise. Aspirations to remain physically, emotionally, and cognitively healthy, to "age optimally", and simply to "feel good" were their driving motives. In contrast to the beauty motives of younger exercisers, active older women were motivated by a broader spectrum of life goals like having more energy and strength to do the activities they want, being able to think more clearly, and avoiding chronic health problems. They were convinced that regular exercise was a proactive measure that would enable them to live a vibrant and balanced life, while exerting some control over their health destiny.

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Chapter one

Introduction

Statistically speaking, North America could be called a land of unfit and, potentially, unhealthy people. In Canada, 56% of adults are classified as inactive; that means that on average they accumulate less than a daily 30-minute walk (Canadian Fitness & Lifestyle Research Institute [CFLRI], 2002). And the situation is not much better south of the border: 60% of American adults do not engage in the recommended amount of physical activity, with 25% of adults not active at all (U.S. Department of Health & Human Services, 1996). Physical inactivity tends to be observed more in women, especially as they age; case in point, 59% of all women are currently physically inactive, and that figure is up to 67% among older women (CFLRI, 2001). Indeed, many sedentary North American adults appear to be "aging twice as fast as nature intended" because of their inadequate levels of physical activity (O'Brien Cousins, 2003, p. 82). Further, a staggering 50% of what is accepted as "normal" aging is understood to be related to diseases of "disuse" (O'Brien & Vertinsky, 1991, p. 348).

The aforementioned statistics paint a decidedly bleak picture of the typical North American lifestyle and might lead one to conclude that only a few adults have managed to make a regular, lifelong commitment to exercise and health. And who are these few? What do we know about them? In a random population sample, O'Brien Cousins and Gillis (in revision, 2003) found that baby boomer women (aged 40-55) were the one social group closest to meeting optimal levels of physical activity. Thus, female baby boomers, now in midlife, may represent the first generation of adults to

make active aging a priority. Canadian statistics indicate that 60.6% of women aged 45-54 report exercising three or more times per week (Statistics Canada, 1998/1999) and 30.1% of all women cite "increasing exercise" as a health improvement measure (Statistics Canada, 1996/1997). Moreover, women tend to support the idea that moderate intensity physical activities, if done long enough, will improve health (CFLRI, 1999a). And while it is good to know that many middle-aged women *are* exercising, there is no certainty about their motives. Do they actually invest time and effort simply for health benefits? Or do they have other motives for exercise? Further, we do not know what activities they are choosing, how long they are participating, or other factors that help them succeed in their ongoing commitment to regular exercise. Indeed, researchers know very little about what women think regarding physical activity, health, and aging (O'Brien Cousins & Gillis, in revision, 2003).

Rowe & Kahn (1998) claim that North Americans generally hold positive values for the role of exercise in health and well being, however, the specific motives of aging women are not known. Exercise motivation has received some study among younger adults (Rodgers & Gauvin, 1998) and the elderly (O'Brien Cousins, 2003) but midlife as a life stage is not well understood due to a noticeable gap in lifespan research (Staudinger & Bluck, 2001). However, this paucity of information about midlife women might soon change. According to Marmoreo (2002) boomers are redefining middle age as one turns 50-years-old every second in North America. Projected Canadian population figures estimate that women aged 40-59 will comprise 15.2% of the total population in 2006 and 16.6% in 2026 (Statistics Canada, 2001a). The sheer volume of midlife women warrants serious attention, especially when

considered alongside the paucity of research devoted to this cohort. Moreover, while women can expect to live longer than men, traditional aging suggests those bonus years are likely to be riddled by some form of disability (La Croix, Newton, Leveille, & Wallace, 1997). As the boomer majority, women's beliefs and behaviours will impact significantly on the health of their generations and others to follow.

Greater insight and knowledge about midlife women's motives for exercising could be beneficial on at least three fronts. First, health, fitness, and recreation professionals might gain the added insight they need to help support women's regular exercise programs at midlife by better targeting their creation, marketing, and implementation efforts. Secondly, researchers in the area of exercise motivation and aging will acquire one more piece of a large puzzle that may aid them in their quest to understand what it takes for certain individuals to successfully cultivate and maintain a regular exercise program. And thirdly, other social groups who may be finding the goal of regular exercise to be elusive, may benefit from the knowledge gleaned from this study of midlife women since the latter appear to be succeeding in the area of regular exercise.

The primary objective of this study was to explore the exercise motives of midlife women who were active on a regular basis. The study aimed to discover three things: 1) *what* active midlife women do for exercise, 2) *why* they are physically active, and 3) *what* influences the type and amount of physically activity they do. Hence, these became the three main research questions that guided the study. It is also hoped that the findings of this study will contribute to the building of a better academic understanding of the motives that fuel midlife women's exercise participation.

Chapter two

Review of literature

Exercise motivation

Research specifically dedicated to exploring North American midlife women's motivation for exercise is not plentiful. The barriers to motivation have had much attention; there has been exercise motivation and behaviour research conducted with women of similar ages or older (O'Brien Cousins, 1996a, 1997; O'Brien Cousins & Keating, 1995; Piazza, Conrad, & Wilbur, 2001; Poole, 2001; Resnick, 2000; Resnick & Spellbring, 2000; Verhoef & Love, 1992, 1994; Wen et al., 2002) and with a variety of cultural influences, such as African-American (Rohm Young, Gittelsohn, Charleston, Felix-Aaron, & Appel, 2001), Japanese American (Michaels Miller & Iris, 2002) and Finnish (Hassmen, Koivula, & Uutela, 2000).

The reasons most people mention for engaging in regular exercise are ubiquitous and often interrelated: health, weight control, stress relief, improvement of mood and appearance, to socialize, and to provide themselves with a challenge; in fact, people often use the general terms "to age well", "to feel good", and "to look good" to quickly sum up their motivation (Hassmen et al., 2000; Michaels Miller & Iris, 2002; Poole, 2001; Resnick & Spellbring, 2000; Rodgers & Gauvin, 1998; Rohm Young et al., 2001; Sherwood & Jeffrey, 2000; Steptoe, Kimbell, & Basford, 1998; Wen et al., 2002).

Studies that have focussed on women have found that personal factors like health, body weight, an inner drive to be physically active, and wanting to feel good, both in general and specifically with regard to stress reduction and mental health, are

common motivators for regular exercise (Poole, 2001; Rodgers & Gauvin, 1998; Rohm Young et al., 2001; Wen et al., 2002).

What the literature currently does not provide is a better explanation as to what exactly women, or people in general, mean when they cite relatively generic reasons for exercise, like wanting to age well, feel good, and look good. A more specific exploration of these motives is necessary if we are to untangle the web of generality and get to the core of more specific, and ultimately, more useful depictions of exercise motivation.

Potential reasons for physical activity among midlife women.

So while we do have some idea about why people exercise and how they are able to mobilize themselves into a regular routine, the exact motives of midlife women remain elusive. Both the literature and the popular press have devoted considerable attention to how exercise might play a positive, and potentially, ameliorative role in addressing women's concerns in the three general areas of aging, health, and beauty. Therefore, it seems logical to review those areas; that is, explore what we currently know about the general motives of aging well, feeling good, and looking good, and how they may relate to midlife women's commitment to regular exercise.

Aging well.

Aging is a "hot" topic right now, both in academic research and in the popular press. In the literature, the theme of aging well or "optimal aging" is often linked with personal health issues. Numerous studies have examined how a woman's physical activity participation can affect her overall health, quality of life, and

longevity, as well as interrelated issues like bone health, muscle function, and chronic conditions (Brown & Harrison, 1986; Dembo & McCormick, 2000; Dornemann, McMurray, Renner, & Anderson, 1997; Drinkwater, 1994; Fiatarone et al., 1990; Fletcher et al., 1996; Hu et al., 2001; Kerr, Morton, Dick, & Prince, 1996; Lee, Rexrode, Cook, Manson, & Buring, 2001; Nelson et al., 1994; Pate et al, 1995; Payne, Gledhill, Katzmarzyk, Jamnik, & Ferguson, 2000; Peterson et al., 1991). Indeed a lack of exercise could be the prime culprit when women report their health as "fair" or "poor" and are plagued with emerging chronic health problems that limit their activity levels (Wyn & Solis, 2001).

Regular physical activity appears to be a key variable in creating a positive aging experience, and may hold some promise in making women's quest to "age well" smoother and more satisfying. Recent research has urged baby boomers to adopt a proactive rather than a reactive approach toward a healthy future since both their current and past exercise behavior will offer them a clear advantage in how they feel as they age (Hartman-Stein & Potkanowicz, 2003). Physical activity in all its forms, resistance, endurance, and flexibility training, is the most potent "weapon" baby boomers have to protect themselves against the "onset of age-related disease and disability" and their ability to perform, with ease, activities of daily living (p. 5). This proactive stance is also shared by Michaels Miller and Iris (2002) who write that, "a substantial number of health problems in old age can be prevented, or controlled, by changing health behaviors, especially physical activity" (p. 249). Furthermore, scientists have shown that older people who exercise regularly are more likely to retain their functional ability and enjoy greater independence as they age (American

College of Sports Medicine [ACSM], 1998). Aerobic exercise can substantially reduce the amount of cognitive declines due to age in older adults (Colcombe et al., 2003). And the health benefits of having social connections, such as people one exercises with, have been known for over two decades to reduce mortality (Berkman & Syme, 1979) and more recently, to improve a person's immune system by making it "younger" and by reducing stress (Roizen, 1999, p. 264).

By contrast, the popular press treats aging as an evil process that must be conquered at all cost. The pages of most women's magazines document a relentless search for the best ways to erase all visible signs of age from a woman's face and body. For instance, writers almost exclusively use the term "anti-aging" to refer to how a woman can halt the appearance of aging ("Ageless beauty: 77 no-fail products for silkier hair, smoother skin, whiter teeth", *More*, February 2003). Obviously the human aging experience is more complex and substantial than one might gather from the popular presses' treatment of it and encompasses a variety of processes and dimensions, such as biological, psychological, and social, all of which may be enhanced by regular exercise. Still, as unsavory and one-dimensional as it may seem, the popular press is relevant to this exploration of midlife women's motivation for exercise in at least one significant way: most women are more likely to read a magazine than the latest academic journal.

Of course, none of us ages in isolation; our goals for aging well are shaped not only by our personal circumstances but also by the social environment in which we live. North American middle-aged women's experience of aging is complicated by the difficulties that arise from living in a youth-based culture where they are

essentially deemed, and at times feel, invisible and devalued (Banister, 1999; Marmoreo, 2002; Neering & McCrimmon, 1996) and where they are likely to face the dreaded "double whammy" of discrimination: ageism and sexism (Vertinsky, 2000). The spectrum of aging experiences presented to middle-aged North American women tend to be watered down by the continual cultural emphasis that is placed on cosmetic issues, such as how they look as they age. It is no wonder then that some midlife women share a dismal view of aging and may struggle to maintain a positive self-image (Bannister, 1999; Coney, 1994; Neering & McCrimmon, 1996; Wyn & Solis, 2001).

In academic circles, midlife women are encouraged to view exercise as a "resource" as they are socialized to become "physically more vigorous and self-reliant" in preparation for old age (O'Brien & Vertinsky, 1991, p. 352). Unfortunately, in the popular press exercise is usually presented to older women as a means to control and save their aging bodies from their supposedly inevitable decay and decline. Consider fitness expert Denise Austin's advice from her popular book, Fit and fabulous after forty (2001):

> [E] xercise is without a doubt, the most effective way to battle those extra pounds that sneak up on us as we get older...For any woman over 40, a pouchy tummy and flabby thighs aren't inevitable...With the right exercises, you can tone your hips, thighs, tummy and other areas that have started to sag. A droopy rear end and jiggly upper arms aren't your destiny—they're simply the signs of underdeveloped muscles! (p. 26)

One might expect more helpful words from a so-called expert, but it appears her message simply echoes much of the social discourse surrounding women and aging. For instance, most women's magazines will state in their pages that their main mission is to celebrate women and to help them with important issues in life, like their health, by providing them with relevant, intelligent information. Yet it seems every month there is another exercise headline emblazoned on magazine covers that imply an older woman's body is in need of help to avoid looking older and out of shape ("Fight the flab: The best workouts for your 30's, 40's, 50's, *Living Fit,* Fall 2003).

The power of looking young is not lost on advertisers who often thwart the emergence of positive, attractive role models for midlife women because they prefer to stress more "*youthful* female models (typically depicting the "desired" teens and 20s)" (Barak, 1998, pp.197-98). Signs of age are routinely airbrushed off women's faces so that most magazine readers have no "realistic" comparisons since a sixty-year-old face is made to look 45 (Wolf, 1991, pp. 82-83). In turn, midlife women lament that they are not reflected in magazines as images of beauty (Marston, 2001). According to Hales (2000), standards of female beauty have rarely resembled the biological realities of the female form such that women may feel "the disconcerting gap between the ideal and the real" when they flip through the pages of magazines (p. 315).

It has been suggested, perhaps as some sort of consolation, that as women age the effects of viewing ideal images may intensify, and then within a certain age range, plateau or even decline (Henderson-King & Henderson-King, 1997). Still, even

newspapers, publications apparently more credible and less "fluffy" than magazines, will print bold captions that emphasize the power of looking good, "Sexy over 40: When 50 is the new 40, and 40 looks like 30, who needs to be 25?" (*Globe and Mail*, Style, May 10, 2003). Is it any wonder why many North American women may not be able to completely disconnect themselves from what they look like?

Feeling good.

The perception of "feeling good" appears to be largely synonymous with mood and health indicators, such as being free from disease, pain or reduced mobility. Indeed regular exercise is associated with a general reduction of feelings of depression and with enhancement of positive mood among women (Steptoe et al., 1998). The health and functional benefits of physical activity for aging adults have been convincingly documented and summarized (Bouchard, Shephard, & Stephens, 1994; Pate et al., 1995; Spirduso, 1995; World Health Organization [WHO], 2002). Further, Health Canada, the Canadian Society for Exercise Physiology [CSEP], and the 1996 Surgeon General's Report have all emphasized that physical activity does not have to be strenuous to achieve health benefits (Health Canada, 1998; U.S. Department of Health & Human Services, 1996). Moderate, regular exercise reduces the risk of mortal diseases such as heart disease, cancer and diabetes (Bokovoy & Blair, 1994) and prevents or minimizes high blood pressure, arthritis, osteoporosis, stroke and depression (Elrick, 1996). In terms of functional fitness, better quality of life, and lifelong autonomy, scientists have shown that regular physical activity plays an essential role in healthy aging (Spirduso, 1994). Exercise can also make a positive

contribution to the maintenance of a healthy body weight, self-efficacy and self-esteem, and psychological well being (CSEP, 1996, p. 1-4).

Physical activity has been actively promoted as "more important than ever" for women when they reach midlife because it can help control various physical and psychological problems and changes associated with menopause and midlife, such as weight gain and loss of muscle mass and bone density (Shanghold & Sherman, 1998a, p. 51). It is important to emphasize here that because midlife women are gynaecologically heterogeneous (Shanghold & Sherman, 1998b) it would be inaccurate and unfair to assume that every midlife woman's world revolves around and is negatively dictated by the effects of menopause. Exercise plays a significant role in every woman's life, regardless of whether or not she is experiencing menopausal symptoms. Indeed, physical activity is promoted as one of the most important things a woman can do as she ages to maintain both her physical and mental health and quality of life (Active Living Coalition for Older Adults [ALCOA], 1999). According to Callahan (2002), women cannot afford NOT to exercise when the health benefits are available to women of all ages, especially those over 30 who "stand to reap some of exercise's greatest rewards" (p. 5).

Looking good.

It has been observed that too many women exercise to change the way they look rather than pursue the health benefits of exercise (Callahan, 2002; Garner, 1997). And with women often citing weight control and wanting to "look good" as reasons for their dedication to regular exercise, it begs the question, "What exactly does it mean to look good?" This question is particularly relevant in the context of North

American society where considerable emphasis is placed on the aesthetics of the human body (Cash & Roy, 1999). Western society's preoccupation with a singular (thin) ideal can strongly influence how women view their bodies (McKinley, 1999; Monteath & McCabe, 1997) such that they might have a "greater motivation for attempting to improve their appearance...to achieve the slender body valued by our society" (Pliner, Chaiken, & Flett, 1990, p. 270).

Indeed, literature devoted to female body image supports the idea that North American women tend to have negative body attitudes (Cash & Henry, 1995; Garner, 1997), that women tend to think their bodies are in constant need of work and repair (Brumberg, 1997; Gimlin, 2002), and that they are more likely than men to equate self-worth with what they think they look like and what they believe other people think they look like (Fallon, 1990). Even older women (aged 61-92 years), whom we might expect to have matured and graduated to a higher level of self-evaluation, view their bodies as unattractive and describe them in pejorative terms like "ugly", "sagging", "yuck" (Hurd, 2000, p. 87). Women's collective negative feelings toward their body are apparently so strong as to have been labelled a "normative discontent" (Rodin, Silberstein, & Striegel-Moore, 1984, p. 267).

Investigations into beauty, and how women feel about how they look as they age, are often discussed in the literature within the context of how exercise may positively affect a woman's perception of her physical appearance (and self) and ease body image concerns (Callahan, 2002; Hurd Clarke, 2002; Tucker & Mortell, 1993). Waaler Loland (2000) found that as one gets older, greater physical activity participation appears to be necessary for satisfaction with one's bodily appearance.

Weight training, specifically, has been found to significantly improve female body image and emotional well being (Tucker & Maxwell, 1992), as well as contribute to midlife women viewing their physical bodies and selves more positively (Brown & Harrison). So, while some midlife women are motivated to exercise by a pressure to be thin and body image concerns (Chambers, 2000, unpublished thesis), there is also some evidence that as women age they gain insight into and appreciation for their bodies' abilities (Garner, 1997) and presumably place less emphasis on what they look like.

The idea of negative body image as the norm for women is further cemented into the female social consciousness with magazine covers that regularly showcase exercise as a tool that all women can, and should, use to manage their appearance-related concerns: "Reshape your body! Slim and sculpted in 1 hour a week" (*Fitness,* November 2001); "2002 makeover special: You can change your body—flat abs, sleek thighs, inches off all over" (*Fitness,* January 2002); "Workout special—Get lean by January 1: Lose a pound of fat every week" (*Shape,* November 2001). The implicit message is that women are not good enough as they are; that their bodies and all their parts require constant repair.

Yet, in an apparent about-face, the mainstream press has been flooded recently with seemingly kinder messages that encourage women to love, accept, and appreciate their bodies: "Learning to love your body! A guide to getting happy in your own skin" (*O Magazine,* August 2002); "Boost your body confidence: How to stop obsessing about your weight" (*Health,* March 2002); "A SELF special report: Your amazing body: Accept it, respect it, love it" (*Self,* January 2002). While this

second wave of messages may appear to be more empowering for women, it is still disconcerting that an entire sex has to be reminded, even placated, that their bodies are good and worthy of care and appreciation even though they may not conform to a socially constructed aesthetic ideal.

Theoretical perspective

According to social cognitive theory (SCT) (Bandura, 1986), people's self-agency is viewed as being reciprocally influenced by three main determinants: internalized beliefs (cognitions), cultural values (culture), and ongoing experiences (experiential). Suggestively, these determinants will influence a woman's future intentions and plans for adjusting her exercise behavior. SCT claims that human activity is guided cognitively by core belief constructs: such as thinking about a want (motive), social influences, outcome expectancies (positive and negative), and self-efficacy (Bandura, 1977a; 1982, 1986, 1997; O'Brien Cousins, 2003). SCT has been deemed the most comprehensive approach to date for trying to explain motivation in exercise (Roberts, 2001) since exercise is a "complex, dynamic behavior subject to the influence of myriad factors related to the person and the environment" (McAuley & Jacobson, 1991, p. 186).

Self-efficacy.

The construct of self-efficacy figures prominently in SCT and may play an important role in understanding midlife women's motivation to exercise. Self-efficacy is the conviction that a person can successfully execute the specific behavior required to produce certain outcomes in a specific situation (Bandura, 1977b). For example, a woman's efficacy expectations will determine her choice of physical activity or

environment, how much effort she will expend, and how long she will persist in the face of obstacles and aversive experiences (Bandura, 1986, 1997). Self-efficacy has been found to be a strong affiliate of physical activity participation (CFLRI, 1998a), such that it has been identified as both a determinant and an outcome of exercise (McAuley, Pena, & Jerome, 2001), as well as a mediator of exercise behavior that affects one's ability to resist relapse and make time for exercise (Sallis, Pinski, Grossman, Patterson, & Nader, 1988).

Outcome expectations.

The driving force behind SCT is the cognitive processing of positive and negative expectancy beliefs regarding future outcomes. An outcome expectancy is a person's estimate that a given behavior will lead to certain outcomes (Bandura, 1977b). It is predicted that a woman will engage in exercise when she possesses: *positive outcome expectations* (she values the activity and therefore wants to do it), *negative outcome expectations* (she believes that harmful outcomes are unlikely), *efficacy* (a conviction in her ability to successfully perform the activity), and *social reinforcement* (she believes that others will support her) (O'Brien Cousins, 1999).

It is important to differentiate between an outcome and an efficacy expectation: the former is a woman's estimate that exercise will produce certain outcomes while the latter is her belief that she can perform the exercise (Bandura, 1977b). A woman's expectancy beliefs about future outcomes can be colored by the perspective and context of her reasons for performing a certain behavior. For instance, participants who placed more emphasis on positive expectations about what exercise could do for their physical health and fitness rather than their appearance, and who gained greater

self-efficacy over time, reduced their social physique anxiety (the feelings a woman has when she perceives others to be negatively evaluating her body) (McAuley, Bane, & Mihalko, 1995).

Cultural influences.

There is a constant and complex interplay between a person and her environment. Bandura (1977a) contends that people are not passive recipients of environmental stimuli, but "active agents" in their own behavior and motivation (p. 165). This view does not mean, however, that cultural influences have no effect on a woman's exercise motivation or behavior. Instead, it reinforces how people are equipped with a self-regulatory capability that enables them to actively consider and process the stimuli they are exposed to and thus have some means of control over their own behavior in the face of powerful cultural influences (Bandura, 1997).

Ongoing experiences.

People form ideas about themselves and the world around them by "observing and extracting the regularities of events in their environment" (Bandura, 1977a, p. 180). A woman's past experience with exercise will create either positive or negative expectations about the effect future exercise participation will have on her and guide her current motivation and behavior accordingly. Further, while some of her exercise behavior will be maintained by what she anticipates as a likely consequence, most of it will be under "self-reinforcement"; that is, she will "enhance and maintain" her regular exercise by rewarding herself whenever she attains self-prescribed standards (Bandura, 1977a, p. 129).

Utility of SCT to this study

Bandura's theoretical perspective highlights how people's lifestyles are reciprocally influenced by their internalized beliefs, cultural values, and ongoing experiences. It brings to the forefront the notion that an individual makes "causal contribution to [her] own motivation and action within a system of triadic reciprocal causation" (Bandura, 1989, p.1175). It is anticipated that this perspective will help place the general reasons for exercising, to age well, feel good, and look good, into a clearer and more meaningful context such that active women's motivation for regular exercise will be better illuminated.

Chapter three

Methodology

Research approach

This research project was a mixed method descriptive and interpretive study that used both qualitative (Miles & Huberman, 1984, 1994; Strauss & Corbin, 1990, 1998) and quantitative (O'Brien Cousins, 1996b, 1998, Appendix A) methods of data collection and analysis to explore active midlife women's level of involvement and motivation for regular exercise. The blending of the two research methods allowed for a more inductive and holistic understanding of the data to emerge (Jick, 1983; Markula, Grant, & Dension, 2001).

Qualitative element

The planned method was to conduct one-on-one, in-depth, semi-structured interviews with regularly physically active midlife women. The number of women to be interviewed was ultimately based on thematic saturation. Saturation was confirmed based on the quality of the data, the nature of the topic, and the amount of useful information obtained from each woman (Morse, 2000). An interview blueprint is provided in Appendix B. According to Morse and Richards (2002), semi-structured interviews are appropriate when:

> the researcher knows enough about the study topic to frame the needed discussion in advance...but not enough to be able to anticipate the answers...Such interviews offer the researcher the organization and comfort of preplanned questions, but also the challenge of presenting them to participants in such a way as to invite detailed, complex answers (p. 94).

Interviews were selected over surveys or focus groups because interviews made it possible for me to grasp with greater depth and breadth what the women thought about how and why they exercised regularly, something a generic questionnaire or group conversation would not have accomplished. In her study of motivating triggers for exercise among older women aged 57-92, O'Brien Cousins (2001), noted the utility of narrative data is how it "vividly exposes some of the knowledge, values, beliefs, and ongoing life experiences that motivate... [women's] participation in physical activity" (p. 350). In-depth interviews were expected to explore the issues that pertained directly to the specifics of the women's regular physical activity participation, any life strategies the they employed, and the role exercise played in their lives.

Quantitative element

An adapted version of the Older Adult-Exercise Status Inventory (OA-ESI, O'Brien Cousins, 1996b, 1998, Appendix A) provided a detailed estimate of each woman's leisure-time physical activity for the past seven days. The OA-ESI has demonstrated satisfactory reliability among older women, as well as construct, predictive, and concurrent validity (O'Brien Cousins, 1996b). The creator described the instrument as follows:

> [It] improves on the designs of previous seven-day recall instruments by being age-relevant and memory enhancing. Taking only a few minutes to complete, the inventory organizes 38 exercise and sport activities along with five indoor and outdoor work categories alphabetically by rows, and the seven days of the week by columns. Subjects fill in the duration of their participation in minutes for

> specific activities for each day. MET units are provided on the form so that researchers can quickly calculate daily and weekly energy spent on exercise in kilocalories. Test-retest reliability in two separate studies for leisure-time physical activity was r = .756 and r = .771 (p. 288).

The advantage to using the revised ESI is twofold: First, it has the ability to capture detailed information regarding the type, frequency (sessions), duration (minutes), and approximate intensity (MET units) of individual weekly physical activity in a brief and simple manner. Second, the ESI is a composite instrument using the same features of previously validated instruments (inventory list, seven-day recall, participation in minutes, and MET calculations). Since the inventory was originally created with more elderly adults in mind, O'Brien Cousins (personal communication) encouraged me to adapt it by adding activities more reflective of midlife such as Pilates and yoga. This process of tailoring the inventory to better suit a younger cohort was therefore done in consultation with the instrument's creator for the purpose of increasing validity (validity is improved when the instrument is more inclusive of activity categories, therefore adding measurement precision).

The quantitative data obtained from this inventory is an estimate of energy expended by the women based on their seven-day recall of minutes spent on each activity. Although subjectivity can add error to any estimate, the inventory still provides a highly detailed account of weekly physical activity that is superior to other activity assessments available. I gained a better sense of how active the women were by using the ESI, certainly more than I would have from the use of a Likert scale ranging from "inactive" to "active". Moreover, the memory cues provided by the

alphabetical list of physical activities were expected to assist the women in being able to quantify details about their weekly exercise more accurately thereby adding to the reliability and validity of their self-reported activity.

Sampling method

My sampling strategy, like most other qualitative projects, was strategic and purposive, that is I sought informants who were "experts" on active living. Elements of both convenience and snowball sampling were included within this purposive framework. I began the sampling process by formulating specific criteria to attract a relatively homogenous group of active midlife women in terms of age, geographic location, and the frequency, duration, and intensity of their exercise. According to Maxwell (1996) this purposeful strategy, in which "particular settings, persons, or events are selected deliberately", was crucial if I hoped to gather the information I needed to answer my research questions (p. 70). Moreover, the aim of purposive sampling is to "illuminate the study question, and the concern is with information richness, not representativeness" (Zyzanski, McWhinney, Blake, Crabtree, & Miller, p. 234).

The issue of convenience was pertinent when I was considering in which locations I would have access to sufficient numbers of the physically active women I most wanted to talk with; that is, those that would meet specific inclusionary criteria. Snowball sampling was deemed an appropriate next step considering the original intent was to use the women found in fitness facilities to lead me toward other women who were also regularly active, but in locations other than fitness facilities, and to

include a variety of active women who happen to exercise in various places.

Inclusionary criteria

All women had to meet five criteria for inclusion into the study. The screening questions as they appeared on the recruitment poster can be found in Appendix C. First, the women had to be physically active for at least 30-minutes on most days of the week during their leisure time. This was to ensure that what they considered to be regular exercise could not be confused with work or incidental activity. Also, it was to make sure that I was talking with women who were sufficiently active, as per Health Canada's Physical Activity Guide (1998).

The second criterion necessitated that women participated in a variety of activities like walking, strength training, or stretching at a moderate to vigorous intensity. Again, this was to make sure they were following guidelines set out in Health Canada's Physical Activity Guide (1998) with regard to recommendations for activity type and intensity.

The third criterion stated that the women had to be 40-60-years-old. The reason for this age range was to capture women that are not well represented in the literature; generally there is greater attention placed on younger women, such as university-aged women, or older adults who are 60-years-old or older.

The fourth criterion made it necessary that the women lived in Calgary, Alberta, or in the surrounding area, since that was where I was based and I did not have the resources to travel outside the city limits.

The fifth criterion made it clear that all women had to agree to participate in up to two, one- to two-hour audio taped interview (s). This was imperative to ensure that

the data was as complete and reliable as possible for effective analysis, as opposed to a shorter interview or more cumbersome method like handwritten notes, for example.

Recruitment strategy

Recruitment for middle-aged active women occurred in two stages in order to increase the chances of capturing a broad range of participant exercise patterns and motives. Women were first recruited from either public or private fitness facilities using posters that were displayed with managerial permission (Appendix C). The remainder of the sample was obtained by snowball sampling (referrals from the first group) and was strategically aimed at locating women who exercised in locations other than fitness clubs. More detail about each stage will be provided in the upcoming two sections.

Fitness facility recruitment.

Fitness facilities were chosen as the recruitment starting points in order to locate optimally active women in an efficient and timely manner (this included the women who used fitness facilities and eventually some "at home" exercisers found by snowball sampling). Support for this recruitment decision was found in a report entitled "Location for physical activity" (CFLRI, 1996a). Report findings indicated that while "home" was the most frequently cited place where women participate in physical activity, women who were active at home only, that is, they were not physically active anywhere else, were found to be less likely to be active than users of public and private facilities.

I began the recruitment process by consulting the local (Calgary) Yellow Pages to compile a list of private and public facilities. I chose two private facilities and three

public facilities based on my peripheral knowledge of the facility and its reputation as a well-run establishment. I contacted each facility manager in order to gain support and approval for the research project and the strategies proposed to recruit participants. Ultimately I acquired the support and approval of two contacts who gave me access to three facilities, two private and one public.

Each facility contact was faxed an information letter to read (Appendix D) and was offered the chance to ask any questions or address any concerns about the letter or the study. Both persons voiced their concern regarding the protection of their members' privacy and thus neither contact would allow me to communicate directly with potential participants, such as a short talk before or after an exercise class. They did, however, both agree to the placement of a recruitment poster (Appendix C) in what they deemed an acceptable location in their facility. In the private facilities, my poster hung in a prominent area of the women's change room. In the public facility, the poster was displayed in the volunteer lounge and the Fitness Director informed me that fitness instructors would show it to their exercise class participants. Information from the recruitment poster was also included in a fitness instructor newsletter. The recruitment poster was displayed from January to mid-March 2003. Women who saw the poster and who were interested in participating in the study contacted me directly at the telephone number provided on the poster.

My first contact with each woman was by telephone. I offered her additional information about the project and the opportunity to ask questions. At this time, I screened each woman to confirm she met the project's inclusionary criteria. If the

woman met the criteria, and was still interested in participating in the study, then a mutually convenient time and place for the interview was arranged.

Snowball sampling.

Women who do not exercise in fitness facilities also were of interest to study, as they may be more independently motivated. Thus, each of the women who were recruited from a fitness facility was asked if she could provide a referral to another woman who also regularly participated in physical activity, but in a location other than a fitness facility. An information sheet describing the research and providing my name and telephone number was given to the original participant to pass on to her friend or colleague, either personally or orally (Appendix E). If the friend or colleague was interested in participating in the study, she was able to contact me directly. Her identity was unknown to me until she telephoned in order to protect her privacy and prevent her from feeling any pressure to participate.

Data collection

Two data sets were collected for this project, one quantitative and the other qualitative, during a single interview and two follow-up telephone calls. First, each woman completed the ESI (Appendix A), a reliable and validated instrument that documented her leisure-time physical activity for the past seven days. Then, a one-on-one, in-depth, semi-structured interview was conducted with each of the 12 women who met the inclusionary criteria. The interview blueprint is provided in Appendix B. Each method of data collection will be described in more detail.

Exercise Status Inventory (ESI)

The ESI (Appendix A) was introduced earlier in the Methodology section, however, the following additional details might prove helpful to clarify how exactly data was collected with this instrument for this study. The ESI lists 25 main categories of physical activity alphabetically down the left side of the page (sub-categories increased the number of activity choices to 34). There are also three spaces labelled as "Other" for respondents to add other activities not listed. Days of the week are arranged across the top of the page. Each activity was assigned an intensity level of light, moderate, or vigorous, based on its MET level, for instance, light (<3.9 METS), moderate (4-5.9 METS), and vigorous (6.0 METS or more). A MET or metabolic equivalent is a way to convey the required energy expenditure for an activity based on a 60 kg person's resting (sitting) metabolic rate, or oxygen uptake in ml/kg/min (Howley & Franks, 1992). Examples of physical activities and their corresponding MET units include: running (12), Pilates (10), and moderately paced walking (4); the higher the MET unit, the more intense the activity and thus the more effort that is required and energy spent from the

person in order to participate. The usefulness of the MET unit is that it also allows kilocalorie estimates to be calculated, by multiplying the reported minutes activity time with the respective metabolic energy expenditure or MET unit for that activity[1]. Thirty minutes of moderate walking, for example, would equate to 30 minutes x 4.0 = 120 kcal of energy spent. A weekly score was calculated by adding all the minutes spent on each specific activity, multiplied by the matching MET unit, and then all activities were summed to provide a grand total for the week.

Pilot interviews

The first two interviews were considered pilot tests of my style and organization in the one-on-one interview. In keeping with the research approach as described by Strauss and Corbin (1990), the two pilot interviews were "entirely transcribed and analyzed before going on to the next interviews" (p. 30) in order to guide the focus of subsequent interviews and to ensure that I did not miss important data. The protocol did not change after these pilot interviews, except for the addition of one question (for more on this please see "Follow-up interviews", p. 29).

This pilot process enabled me to hone my academic interviewing skills while confirming the effectiveness of the proposed interview questions and probes. For instance, I experimented with the overall tone of the interview so to balance two important ingredients: a sense of formality and importance with making the women feel comfortable. I tried to avoid either extreme; that is, I did not want the interview to feel overly serious and stuffy, but I also did not want it to be just a casual chat. I believe I found an appropriate balance after conducting the two pilot interviews,

[1] The kilogram weight of participants was not used in the calculation. Minutes x METS is a simplified equation since the METS are based on a pseudo-individual of average weight of 60 kg. Since 60 minutes divided by 60 kilograms works out to 1.0 g., the calculation is reduced to METS x minutes.

which set the stage for the subsequent interviews. Of course, the women themselves largely determined the overall tone of the interviews. For instance, if a woman was more formal in her demeanor then I followed her lead. On the flipside, if she wanted to approach the interview more informally, then we did that. Ultimately I deemed the two pilot interviews to provide acceptable data based on their content and clarity. These interviews were subsequently transcribed, analyzed, and included as a valuable part of the larger sample.

Main interviews

An additional 10 interviews were conducted and audio taped. Each interview was scheduled for two hours to ensure the following five elements were properly accommodated (as outlined in the interview blueprint, Appendix B):

1) The researcher's reading of the prepared introduction/preamble.
2) The participant's reading of the information letter (Appendix F) and opportunity to ask questions.
3) The participant's signing of the informed consent form (Appendix G).
4) Obtaining participant demographic information.
5) The participant's completion of the ESI (Appendix A).

All interviews took place either at the women's place of business, like a private office, or in public places, such as coffee shops or mall food courts since I was not permitted to interview women on-site in the private facilities (I was allowed access to the public facility's cafeteria). Each woman was interviewed once, for one- to two-hours, using the interview blueprint (Appendix B). At the end of each interview, each woman was asked if she would be willing and able to be available for a telephone

follow-up interview in the coming months in case there were further queries arising from the data. Every woman was agreeable to that arrangement.

Follow-up interviews

All women were contacted by telephone for a brief follow-up interview for two main reasons, which occurred on two separate occasions. First, a question regarding exercise location was added to the interview blueprint later in the process, during interviews eight through 12 (please see Appendix B, question 8a). The rationale for adding this question was that an insufficient number of women recruited at the fitness facilities were able to refer me to women who exercised in locations other than a facility. Thus, the question had to be asked directly of all women to get a sense of how location may have affected their exercise behaviour and motivation. Women who were interviewed earlier, that is, one through seven, were asked the question via a telephone follow-up.

Then, during the second telephone call, I asked the women questions that were necessary to confirm the following three pieces of information that came up casually during several of the interviews (please see Appendix B, question 8b): smoking status (e.g., never, ex-, or current), number and age of any children, and number of any other dependents (e.g., older parents). In this case, all 12 women were contacted for follow-up since this information turned out to be useful in understanding potential barriers and facilitators to the women's physical activity. Further, the follow-up calls were necessary to complete data collection by essentially "filling in the blanks"; that is, asking women about particular items that did not come up during our interview.

Transcription

Transcriptions were completed within 24 to 96 hours of the interviews. Transcription was done on a word processor by listening to small sections of the audio taped interview and then typing it into a computer file (Microsoft Word), single-spaced. Individual transcripts were then simultaneously read and coded. A more detailed explanation of the coding process appears in an upcoming section, "Management of qualitative data", p. 36).

Each transcript represents a verbatim account of the interview. Every word spoken by the women, in addition to all sounds recorded on tape, like coughs, outside noises, or interruptions, were included in the transcript to best reflect the pace and atmosphere of the interview (Seidman, 1998) and to contribute to establishing the trustworthiness of the transcript and the rigor of the research (Poland, 1999). Words that indicated what happened during the interview were bracketed and embedded within the verbatim transcript, for example, (cough), (laugh), (sigh), (pause), outside noises (loud slam), interruptions (we paused the interview to change seats). I also typed certain words in capital letters to denote that the women spoke them with noticeable emphasis, for instance, *"I KNOW there's huge benefits for me staying in shape."; "You CHANGE over the years."*

Researcher's perspective

I am acutely aware of the particular skills and biases I bring to this research process and how they may inform my perspective. A brief biographical sketch will illustrate how ingrained these are in my perspective and how they may influence this research process.

I have a long history of regular physical activity; for as long as I can recall I have reveled in movement. As a child, I spent much of the time outdoors running, jumping, walking, climbing, dancing; basically moving whenever and wherever I had the chance. During my elementary school age years I was active in various sports, most notably track and field. I continued running competitively up to and including much of my high school years. It was during this time when I discovered "exercise"; that formal, planned, and somewhat repetitive pastime. I started using the high school weight room and going to fitness facilities to attend aerobic classes. Fast forward to university, and while I was no longer running competitively, I was walking just about everywhere and still making use of any gyms to which I had access. My major was recreation and leisure studies and I spent much of my time studying how other people are active, and in what ways. I worked as a program supervisor creating, implementing, and supervising recreation programs for all ages, always trying to figure out innovative ways to have fun while moving! In recent years, I started my own personal training and consulting company where I was either designing and monitoring other people's exercise programs or consulting with them about it.

Of course, the fact that I have been so immersed in exercise and its "culture" puts me at some distinct advantages and disadvantages. As Kvale wrote (1996), "The researcher has a perspective on what is investigated and interprets the interviews from this perspective" (p. 201). Certainly I am familiar with and enthusiastic about anything that has to do with exercise and thus discussions around that topic flow easily for me. Still, there is always a risk that my energy could project onto whomever I am speaking with in an interview setting to such a degree that the person

feels compelled to share my enthusiasm and, in effect, tell me what they think I want to hear.

My familiarity with exercise, and all its different components and angles, does bode well for me as a researcher in that I can talk about anything in that topic, with anybody. However, since my familiarity has deep roots in what I know and have experience with, it is possible that my view of exercise is limited; that is, as well-rounded and open-minded as I may perceive myself to be, there may be levels of interpretation I simply do not see. My interpretation of the narratives in this study will be informed by my background; one largely constructed through the social sciences and personal and professional experience with regular physical activity.

An additional point that deserves mention is the fact that both parties will enter the interview process with their own interpretations of their own and other's experience with exercise. So, it is fair to say that not only will I come to the interview process with my biases, the women will also come with theirs. This reality should not hinder, but instead, elucidate the research process and its outcomes. I view the fact that the women and I may come to the interviews with different perspectives as an opportunity to hone my listening and conversational skills so that I might actually hear what they have to say and thus learn from them.

Data conceptualization

Concepts are the basic units of analysis in qualitative research (Strauss & Corbin, 1990). Therefore, conceptualization of the data is a necessary first step in the analytic process and allows the researcher to move forward and ask questions of the data in order to create appropriate categories. For instance, in this study as I read each

transcript I was always mindful of questions like: What is this? What does it represent? These questions enabled me to identify and confirm the importance or relevance of a concept so that similar phenomena could be given the same name (Strauss & Corbin, 1990). Further, the constant comparative method (this will be described further in "Management of qualitative data", p. 36) allowed me to develop my analytic insights based on both what the women told me and from my prior experience, instead of simply dismissing the latter as "mere opinions" and unworthy of consideration in the research setting (Glaser & Strauss, 1967, p. 252). What follows is a section of text from one of the transcribed interviews and my thoughts when analyzing it:

> *[Exercise] becomes a way of life! A part of what you do on a daily basis. And you'll always think about it. But you schedule it like you do anything else. You schedule it like you schedule a meeting. You schedule your workout.*

Two things came to mind as I read and analyzed this passage. First, I was immediately (and perhaps obviously) struck by the frequent use of the word "schedule". I underlined it every time it appeared in a sentence. The use of that particular word suggested a formal, planned, and committed approach to exercise. Exercise was a high priority for her and she made sure that she allotted sufficient time for it. The other message I got from that passage was something I labelled 'holistic integration'. Phrases like *"way of life"* and *"part of what you do"* were underlined and seemed to indicate how ingrained exercise was in her life and the high value she assigned it. Moreover, regular exercise, or this *"way of life"* as she said, was

something she appeared to take great pleasure in versus it being some punishing practice.

Data analysis

There were two main data sets to analyze in this research project: quantitative and qualitative. Both data sets were continuously compared against the backdrop of the project's three main research questions: 1) what do active midlife women do for exercise? 2) why are midlife women physically active? and, 3) what influences the type and amount of physical activity midlife women do? The continual comparison with the research questions helped me to retain my focus during the process of analyzing copious amounts of data. Details of how each data set was managed follows.

Management of quantitative data

Each woman's ESI (Appendix A) was individually assessed to compile numerical data and to keep track of common physical activity patterns. Across all 12 women, the numerical data obtained from the ESI was used to calculate descriptives such as frequencies, means, and medians. Such calculations enabled me to create tables and charts (using pen and paper to organize the data and facilitate easy calculations) that would assist me in creating meaningful visual and textual summaries of the key findings I felt were important to report such as: the activities most commonly and frequently performed across the group of women, the frequency, duration, and approximate intensity of all their activities, and the total number kilocalories expended at each of three levels of intensity. It is important to note that I did not employ probability statistics because my sample was not large enough to fulfill the necessary statistical assumptions.

My process for managing the quantitative data was straightforward. I created simple charts and tables using pen and paper to organize the data and enable quick and easy calculations. For instance, to determine the most commonly performed activities among the women, I made a list of the activities listed on the ESI on a separate piece of paper and proceeded to put a check mark beside each activity as it was reported by each woman. I then simply counted the number of times a given activity was checked off and arranged them in a chart, in order of participation rates.

The process of color-coding particular features of the ESI proved to be another helpful way of visually displaying and organizing my data so that the women's exercise patterns could be illuminated more clearly. For instance, I assigned each level of intensity a different color: light (pink), moderate (light green), and vigorous (teal). Then, I used a highlighter of the corresponding color to mark each woman's inventory. This color-coding process enabled me to view each woman's overall physical activity participation rate, and at the various intensity levels, quickly and effectively; that is, the greater the space covered with a highlighted color, the more she exercised that week. An orange highlighter was used to denote total minutes per day spent exercising, while total weekly values such as minutes per week and total kilocalories expended were marked with a yellow highlighter.

Management of qualitative data

The constant comparison technique, as described by Miles and Huberman (1984) and Strauss and Corbin (1990), was used to conduct a content analysis of the interview data (an inductive approach). It is important to clarify here that while the concept and method of constant comparison has its roots in Glaser and Strauss'

grounded theory (1967), this study did not employ their precise method since it was not the goal of this exploratory research to arrive at or cultivate a theory about why active midlife women exercise regularly. Key study findings were inductively derived from my careful consideration of the 12 midlife women's narratives.

During constant comparison, all items (codes) or concepts were continually and systematically compared with each other to arrive at commonalities that aid in developing broader categories and allow strong themes to emerge. According to Strauss and Corbin (1990) the coding process is comprised of two simultaneous analytic procedures: the making of comparisons and the asking of questions. Coding represents the operations by which "data are broken down, conceptualized, and put back together in new ways" (p. 57). The original questions and statements are constantly compared with the data in order to locate evidence of support for emerging ideas and themes, as well as difference and variation in the relationships. Handwritten summary tables were created during this process to visually arrange participant responses into the themed categories that were emerging.

My research process was not a classical content analysis; that is, the text was not reduced to a unit-by-variable matrix nor was it analyzed quantitatively to test hypotheses (Ryan & Bernard, 2000). No advance hypothesis was formed about what midlife women would say about their reasons for being physically active. Moreover, as the researcher, I did not simply "establish a set of categories and then count the number of instances that fell into each category" (Silverman, 2000, p. 826). A more interpretive approach was used by formulating general, overarching categories using the women's words, not mine. Wherever possible, their verbatim statements were

used in my handwritten summary tables to preserve the authenticity of their meaning and to expose distinct, though sometimes, interrelated themes (Miles & Huberman, 1994). For example, descriptive statements such as: *"I need to be healthy for my family", "I want to feel good", "I want to get stronger"* were grouped initially under the general category of "health", and then later reviewed and analyzed in more detail. Labelling the category of health seemed natural and logical since the women would frequently use the words "health" and "healthy" and would inevitably would return to that topic as a frame of reference for their exercise motivation.

Portions of the women's narratives are used in the Results section of this document to fortify the findings and highlight what the women were saying with regard to their physical activity behaviour and their reasons for doing it (Strauss & Corbin, 1990). Additionally, key data are visually displayed within a context chart (Figure 1, p. 91), a method that helps the researcher see "what's there" in the data and to validate the analysis (Miles & Huberman, 1994, p. 245).

Coding.

Coding is the process of analyzing data in qualitative research. Put more directly, "Coding is analysis" (Miles & Huberman, 1994, p. 56) and to that end, it is understood that "a lot of interpretive analysis has already been done" by the time themes have been identified and refined (Ryan & Bernard, 2000, p. 781). The inductive approach of this research necessitated that codes were generated from the data itself, similar to the grounded theory method formulated by Glaser and Strauss (1967). Codes are "tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study" (p. 56). Therefore, in order to best

glean meaning from the women's narratives I looked for "recurring phrases or common threads" in the women's narratives that suggested patterns (p. 70) and then proceeded to compile the information into a handwritten table that was able to highlight visually what the data was telling me.

According to Strauss and Corbin (1990) three main steps are involved in the constant comparison method: 1) open coding, 2) axial coding, and 3) selective coding. It is important to keep in mind that "the lines between each type of coding are artificial. The different types of coding do not necessarily take place in stages" (p. 58). This is especially true between open and axial coding. Indeed, I went back and forth between these two types of coding in the beginning stage of analysis when I was trying to ascertain the most relevant categories and assign them appropriate names. So, despite the overlap among the three types of coding, I will address each type separately for the purpose of this discussion in an aim to better elucidate the analytic process of this study with respect to coding.

Open coding.

Open coding requires careful examination of the data so to appropriately name and categorize phenomena. I began the coding process for each interview by printing the transcribed interview and then simultaneously reading and coding it. Open coding was performed using a combination of three types of analyses: line-by-line, sentence or paragraph, and analysis of the entire document, as described by Strauss and Corbin (1990).

As I was both the interviewer and transcriber, and transcriptions were typed immediately, I had already heard the women's words before I actually read the

document. Thus, at the outset, I was already mindful of what themes I would encounter. However, I endeavored NOT to allow my memory be my guide during my first read-through of a transcript, such that I might "skip over" parts. Instead, I strived to read each transcript much like I might read a book, obviously line-by-line, but with attention on the overall gist as identified by focussing more on sentences or paragraphs. Then, during the same, or subsequent readings, my eye focussed more on specific words or phrases in order to locate where certain themes originated. It was in these words or phrases where I would find the direction and support for my coding decisions; that is, what themes warranted category names and further examination.

I identified potential themes two ways, either by using a highlighter to draw attention to the women's prominent statements and ideas, or by underlining the text and making pertinent notations on the page, as suggested by Strauss and Corbin (1990). My handwritten notes pertained to the women's verbatim statements on the transcription page, and my impressions of them. These notations were important since they drew my attention to specific sections of the transcripts that I thought were important to note in case certain patterns were to repeat themselves in other transcripts.

Axial coding.

After breaking down the data in open coding, the data is put back together in new ways during axial coding by "making connections between a category and its subcategories" (Strauss & Corbin, 1990, p. 97). For example, I used a pen and paper to create a chart that organized visually what the women were saying to me about exercise, health, and, aging. In this form, the women's collective words allowed me to

see clearly what appeared to be the surfacing of the most frequent, prominent, and passionate themes and their respective categories.

In axial coding, it was critical at this point to carefully distinguish between what the women actually said versus what I may have thought they said. My observations were only valuable to this point to assist and guide in creating approximate categories in which to house the various ideas the women expressed. Once I confirmed what the women said, several strong, recurrent themes emerged clearly. This confirmation was a relatively simple process of going back to the transcripts to read what the women actually said to ensure that it was their words, versus my recollection of what they said, that were directing the coding process

Selective coding.

The identified themes, concepts and categories from the open and axial coding were further refined during this process where I did my best to strip away any peripheral information to reveal the essence of what the women were telling me. The core category emerged clearly here; that is, the "central phenomenon around which all the other categories are integrated" (Strauss & Corbin, 1990, p. 116). Selective coding proceeded with "systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development" (p. 116). For instance, I returned to the transcripts to establish the core category's significance across the sample of women and to ensure that there was indeed a clear and robust relationship between the core category and the other categories.

Interview analysis

The amount of overall contact I had with the women and the data of this study was plentiful and ensured that every interview was analyzed frequently and thoroughly. First, I spoke with each woman over the telephone when screening her into the study. Second, I conducted the one-on-one interview with each woman over a period of one- to two-hours. Then, I transcribed each interview. Each transcript was read in its entirety a minimum of three times and was consulted numerous times throughout the analysis and during the writing of this thesis. Finally, telephone contact was made again with each woman, twice, during the follow-up interview.

Ensuring trustworthiness

Qualitative researchers have long found themselves up against a linguistic wall whenever the issue of credibility, trustworthiness, and the overall goodness of their research findings arose. Janesick (2000) proposed that the trinity of validity, generalizability, and reliability, the bible of sorts for the quantitative paradigm, be replaced with language, such as trustworthiness, that "more accurately captures the complexity and texture of qualitative research" (p. 393). This notion of creating a new language that befits qualitative research and contributes to the enhancement of the quality of study conclusions has been echoed by other prominent authors in the field (Lincoln & Guba, 1999; Miles & Huberman, 1994).

Various strategies were undertaken during this research process to enhance the trustworthiness of the research methods and thus provide confidence that my results are credible and confirmable. According to Lincoln and Guba (1999) it is important to be able to persuade one's audience (self included) that "the findings of an inquiry

are worth paying attention to, worth taking account of" (p. 398). They maintain that four criteria must be met before that confidence can be generated: credibility, transferability, dependability, and confirmability. They also, however, stress that these criteria are open-ended and that they can "never be satisfied to such an extent that the trustworthiness of the inquiry could be labeled as unassailable" (p. 430). Thus, it is a predicament for the qualitative researcher when there are no criteria for the criteria; that is, no definitive means for operationalizing them. The following section will address each criterion, as it was applied to this research study.

Credibility.

Two activities were performed during this study that heightened the likelihood that credible findings would be produced and accurately described: prolonged engagement with the data and a form of triangulation. There was a significant, and I believe ample, investment of time put toward getting to know these women at every stage of the research process. I spent an average of 15-minutes talking with each woman during the initial screening telephone call. Every face-to-face interview lasted between one- and two-hours. And each of the two follow-up telephone calls had an average duration of 10-15 minutes. Therefore, I was privy to some conversation with each woman both before and after the more formal interview. This enabled me to ask specific questions of the women and probe accordingly. My engagement with the data also included the transcription of the interview and numerous readings of each transcript.

Lincoln and Guba (1999) suggest that triangulation can imply different data collection modes. In this study, triangulation included my use of both the physical

activity inventory (a type of questionnaire) and the interviews to collect the women's self-reported exercise behavior. The combination of these two methods fortified the findings in that they provided me with two sets of data to weight against each other to ensure the content was consistent; that is, there were no major discrepancies between what the women reported on the inventory and what they told me during the interview. Thus, the trustworthiness of what they were telling me was deemed more credible and subsequently my findings can be regarded as more dependable.

Peer-debriefing was done with my thesis supervisor on a semi-regular basis throughout the study. At various points during my analysis I would contact her either by telephone or e-mail (personal contact was unfortunately not possible on a regular basis since we live in different cities). I would communicate to her what I was finding and in what direction I was going. She would offer feedback or ask questions of me that would force me to explore numerous avenues or lines of questioning to ensure I was being as thorough as possible.

Negative case analysis was conducted when I considered it necessary. For instance, there were occasions when the women said certain words or made statements that would provoke a reaction in me so powerful as to send up a mental "red flag". I would follow-up with these women during the interview by asking them what exactly they meant by a particular word or statement. I continued to probe until I was satisfied that what they said was not something contrary to what other women were saying about why they exercise, or even contradicting something they themselves said earlier.

According to Lincoln and Guba (1999) informal member-checks may have some value in that they provide participants with the opportunity to "hear" what another person said, and then comment on whether or not it rings true for her. These checks were performed during the telephone follow-up interviews. Most of the women were eager to know what others were telling me about their reasons for exercise. They were also interested in my interpretation of the interviews.

I would relate the general study findings to the women, who would then have the chance to react and tell me what they thought. None of the women objected to my interpretation of the major themes; it "rang true" for all of them and they told me how they felt pleased that they were being described accurately. These informal member-checks had favorable outcomes since they followed interviews where I probed frequently and adequately enough to be accurately representing the women's thoughts about exercise. Further, I often paraphrased what the women said during the interviews to ensure that I understood immediately what they meant; if I got it wrong they would quickly correct me!

Transferability.

If I was asked, "Can your study findings be applied to anybody else?", the short answer would be "yes", but I would have to provide the interested party with sufficient thick description, both from the data itself and from the time and context the data was drawn, so to allow him or her to "reach a conclusion about whether a transfer can be contemplated as a possibility" (Lincoln & Guba, 1999, p. 420). It is important to note that there is currently no standard or criteria for what constitutes "proper" thick description (p. 420). In this case, an interested party could obtain

copies of my interview transcripts (and possibly the audio tapes, but that might be a privacy issue) and read for herself what transpired during the interviews. Additionally, information regarding when, where, and how the interviews were conducted could be provided, specifically, what month of the year, which day of the week, the time of day, the geographic location, the interview environment, the length of the interview, the noise level, and individual moods could all be considered to provide any interested party with the necessary "inside" information that would help her determine how well the findings of this study would transfer to other people or groups and be considered applicable to them.

Dependability.

No formal dependability audit of this research process was conducted. However, a computer-based audit trail was created and maintained throughout the course of the research process. This trail includes my comments and explanations regarding important decisions I made to ensure that the planned method was followed throughout the project and that any changes or unexpected occurrences were duly acknowledged, dealt with, and recorded. Further, it allows my thinking and interpretations to be chronologically traced such that another person could essentially re-trace my steps in a logical fashion and follow how my decisions were arrived at.

One prime example of an unexpected occurrence can be found in the inability of snowball sampling to locate sufficient women who exercise regularly in places <u>other than</u> fitness facilities. The audit trail documents how I decided to deal with this "bump in the road". Essentially, I felt I had two choices: I could have either gone and sought out additional participants in alternate venues, like neighborhood grocery

stores and libraries, to try and attract "non-fitness club" women or I would have to modify the process already in motion so that information about the women's exercise location was consistently represented and considered. I chose the latter by adding a question about exercise location to the interview blueprint (Appendix B, question 8a) and by conducting brief follow-up interviews over the telephone to the women who were interviewed before the change was made (interviews one through seven). I believe I made the correct decision since the main purpose of this project was not to discern where midlife women exercise, but why they exercise.

The audit trail can also be considered my reflexive journal, something that is encouraged by Lincoln and Guba (1999) for each criterion. Indeed this was a diary in which I recorded "a variety of information about self... and *method*" (p. 429). Any methodological decisions, and my reasons for making them, are contained in the journal.

Confirmability.

No confirmability audit was conducted, however, both the audit trail and reflexive journal were useful tools for helping to ensure trustworthiness. My biases were managed by constantly referring to these documents so to ensure that my focus was as open and objective as possible. For instance, if I found myself following only one line of thinking or questioning when analyzing the data, I referred to past comments I made in my journal to help me gain a wider perspective to ensure I explored as many different avenues as possible.

Chapter four

Results

The purpose of this study was to explore active women's reasons for exercising at midlife and to build a better academic understanding of their specific motives for exercise. The study was guided by three main research questions: 1) what do active midlife women do for exercise? 2) why are midlife women physically active? and 3) what influences the type and amount of physical activity midlife women do? The response rate, as well as a demographic profile (Table 1), will precede the presentation of the study results.

Descriptive findings

In total, 16 responses were received: 10 women called me directly from the information on the poster while six were referrals from the first group (snowball sample). Ultimately, 12 women were interviewed: eight women from the fitness facilities and four from the snowball sample. The number of interviews was deemed satisfactory since thematic saturation was reached on important themes such that each successive interview added mounting support to the same strong themes as the ones that preceded it. Of the non-interviewed group of four women: one woman did not show up for our scheduled interview, one woman cancelled our meeting and was unable to re-schedule due to her hectic schedule, and two women did not return my phone messages (I was returning their initial call).

A demographic profile of the sample is provided in Table 1. The 12 women ranged in age from 40-52 years, with the average age just shy of 46 years (45.83). All the women lived in Calgary, Alberta or in the surrounding area. All the women had post-

secondary education ranging from Bachelor to PhD level (one women was working toward completing her BA). Seven women worked outside the home on a full-time basis, two worked part-time, two had variable schedules because they were self-employed, and one woman was not employed. Three of the women were volunteer fitness instructors.

Eight women were married, two were divorced and now single, and two women were living common-law with their partners. Seven out of the twelve women had no children. This fact may seem atypical but there has been a noticeable decline in the birth rate in the last five years (Statistics Canada, 2003). Five years is a relevant time-span to consider for this sample since eight of the women are now in their early and late forties and could have conceivably had children, if they chose to, in their late thirties and early forties. There is also the opinion that it is common for boomer women to devote more of their time to meeting personal and career objectives, rather than the family objectives of past generations (Fugate Woods & Sullivan Mitchell, 1997). In the end, I do not know the precise reasons why some of the women in this sample did not have children. The women did not volunteer that information and thus I did not think it had any significant bearing on our discussion. Still, this issue will be addressed more thoroughly in the section entitled, "It's my time", p.113.

Three women had older children, that is, teenagers or those in their early twenties, and two women had younger children, ranging in age from two to five years. None of the women had any other dependents, such as older parents who needed care. All the women rated their health between good and excellent. All the women had a long history of physical activity, however, there were some interruptions over the years,

like pregnancy or career shifts. Every woman reported being regularly active for at least 10 years. The majority of women had a history of smoking; nine classified themselves as ex-smokers and one still smokes (the remaining two had never smoked). With the exception of the one woman who still smokes, the women were so far removed from the smoking habit, both chronologically and intellectually, that it was deemed inconsequential to our conversation; the only reason they mentioned it was because it was an element of their past they remembered when they were having to recall their physical activity history.

Menopause was not talked about during the interviews, neither in the form of an interview question nor as a response from the women. I did not want to assume that it was something they were experiencing simply by virtue of their age. I felt that if menopause was an issue of importance in their lives, and in why they exercised, they would volunteer that information to me.

Table 1: Sample demographic profile

Code	Age	Education	Marital status	Work status	Work type	Children (age)	Self-rated health
1	45	BA	common-law	full-time	oil & gas accountant	0	good
2	40	BA	married	part-time	executive	2 (4 & 5)	good
3	50	MA	married	variable (self-employed)	translator	2 (24-twins)	good
4	41	B. Sci	married	full-time	management-engineering	0	good
5	41	B. Sci	married	not working	n/a	0	excellent
6	52	MA	married	full-time	social service	0	excellent
7	50	Nursing school	divorced, now single	full-time	marketing -oil patch	0	excellent
8	50	BA	common-law	full-time	real estate executive	0	good
9	42	B. Sci	married	part-time	project management -engineering	3 (4, 2, 2)	good
10	46	PhD	married	full-time	university professor	3 (13, 15, 17)	excellent
11	46	near BA	married	full-time	university administration	4 (15, 18, 20, 22)	very good
12	47	Specialty diploma	divorced, now single	variable (self-employed)	printing/ graphic project manager	0	excellent

Fitness facility use.

Although only eight women were recruited directly from fitness facilities, the number of women who reported exercising regularly at a facility (at least half the time) was actually nine since one of the women from the snowball sample also regularly used a facility. The reason for this discrepancy goes back to the problem encountered in the recruitment stage when most women in the first group were unable to refer me to women who did not use a fitness facility. Only one woman in this group of nine exercised solely at her facility, while the other eight women used a combination of a fitness facility and home. Six of these "combination" women

usually spent more time exercising at their facility (they call it their base), but they also liked to exercise at home occasionally by using exercise videos, or by running or bicycling from home. The remaining two women said that their time is split in half between home and a facility, but that the facility is still generally where they spend more time. The women cited the following reasons for their fitness facility preference: convenience, opportunity for socializing, professional instruction, the variety of activities and equipment, and the sense of belonging and accountability that comes with exercising in public places.

Home exercise.

Home was the fitness base for only three women. Two women reported exercising solely at home, while the other woman reported spending more time at home and using a facility about half the time. The women who preferred to exercise at home also cited convenience as an asset, as well as time-efficiency, minimal cost, no need to pre-book equipment, and privacy. The home exercisers in this sample provided a stark contrast with the CFLRI (1996a) report findings that indicated that women who are active at home only, that is they are not physically active anywhere else, were found to be less likely to be active than users of fitness facilities (public or private). Indeed, these women did meet or exceed professional exercise recommendations for time, frequency, duration, and intensity. Table 2 highlights **(in bold)** how the three women who exercised mostly or solely at home expended comparable kilocalories per week as those women who exercised mostly or solely at a facility.

Table 2: Comparison of weekly kilocalorie expenditure between home and facility exercisers.

Code	Location for exercise	
	home total kcal	**facility total kcal**
1	**4590**	
2		1780
3		3120
4		2670
5		2370
6		1230
7		3360
8		4285
9		2160
10	**2880**	
11		2520
12	**2390**	

Interpretive study findings

All the women in this sample generally reported a long history of physical activity; many of them told me that their current commitment to regular exercise began in their 20's and 30's. For 10 out of 12 women, regular physical activity had been a vital and distinct part of their lives since childhood. They recalled physical activity memories fondly and enthusiastically, *"My parents very much encouraged us to be physically active...there was track and field...baseball. We swam. We didn't play tennis WELL but we tried...lots of bicycling"* (50-year-old). Only two women reported that their experience with physical activity did not occur until later, in elementary and high

school. For this 47-year-old woman there was little physical activity in her childhood *"basically until high school, except for the regular gym classes."* Schoolwork was the priority in high school for this 41-year-old woman, *"I've always been very academic-oriented, so that was the first thing I dropped in high school, phys. ed."*

Interestingly, when first asked to recall their physical activity history, several women did not equate themselves with being physically active as children unless they participated in a formal, structured activity, like dance class or a team sport. For example, when first asked if she was active as a child this 46-year-old replied, *"Not really...No big sports activities or anything like that."* Later in the interview she clarified that she indeed was physically active as a child by participating in physical activities like swimming and bicycling.

For the most part, the trend of consistent physical activity continued throughout adolescence and into each decade until the present. Some women reported occasional lapses in regular physical activity participation during adolescence and their early 20's; an often hectic time of life when they were embarking on education, careers, getting married, starting a family, or some combination of all four:

> *I went through a lazy stage where I didn't do very much at all by way of physical activity...and it continued into my early twenties* (45-year-old).

> *I would say that those early years of marriage were the least physically fit. And I think it's mostly because you're* [so] *busy and working and working*...(50-year-old).

I had twins when I was 26 and I didn't do much for a few years because I was just so busy (50-year-old).

I had kids [and] *everything changed!...I was taking them to their activities! While they were swimming, I was doing my reading* [graduate work], *try*[ing] *to juggle all these things* (46-year-old).

As mentioned earlier, three general motives for women's exercise have received a lot of attention in the literature and in the popular press: anti-aging, health, and beauty. Indeed, the women's reasons for regular exercise in this sample did tend to fit generally into those three categories, but in their words were: "to age well" (anti-aging), "to feel good" (health) and "to look good" (beauty). It was difficult to separate these ideas into distinct motives for exercise because they were all bound tightly by the women's more specific goal of wanting to maintain or improve their physical, emotional, and cognitive health, both now and in the future. For them, health encompassed all aspects of their well being, physical, emotional, cognitive, and as such, they expressed their goal of wanting to be healthy in those three general, yet highly interconnected ways:

I know I am healthy because when I go for [annual] *check-ups, you know, everything's good. My cholesterol's good. My blood pressure's fine. So, I know I am healthy, but I do feel healthier when I'm exercising. Definitely* (46-year-old).

> *If I feel healthy and active and involved in physical activity, I also feel it transpires in my work and at home too. It affects your attitude. You feel good in all respects...Physical activity has an impact on your emotional, your physical, and your mental outlook on life* (52-year-old).

> *I want to be thin, look good. But now in my 40's it's definitely more about being in shape for the reason of being able to do things. I want to feel healthy. I want to feel that I can do anything I want to do without having my physical conditioning impede me from doing something* (41-year-old).

The type and amount of physical activity the women did on a regular basis was also impacted by other factors such as time, convenience, their knowledge and inner motivation, and to a lesser degree cultural influences. Details of these findings will be expanded in the following sections as they relate to the three main research questions.

Question one: What do active midlife women do for exercise?

To promote healthy aging, health agencies recommend that midlife women should adhere to Health Canada's Physical Activity Guide (1998) which advocates an accumulation of 30- to 60-minutes of a variety of physical activity most days of the week to maintain or improve health, or 30-minutes on four days of the week if the activities are of a higher intensity (CFLRI, 1998b). Three different types of exercise, and the number of days per week adults should strive for are outlined; that is, the ideal mix for health and physical fitness: endurance (four to seven days), activities like running and biking fit into this category; flexibility (four to seven days),

stretching is a good example; and strength (two to four days), weight training and yoga both fit into this classification.

The data sets from the ESI (Appendix A) and the interviews were combined to form a clearer and more substantial picture of the women's regular exercise. It was reassuring to note that there were no significant discrepancies between what the women did in the most recent week (measured by the ESI) and what they told me during the interviews they do regularly. Still, in some cases, seasonal variation did paint a slightly different picture of their regular physical activity participation since most of the women were interviewed in the depths of a Canadian winter. For example, I would have concluded from analyzing the ESI data that just over half the sample (seven out of 12) regularly ran or jogged for exercise. However, the interviews revealed that, in fact, the number of women who ran or jogged regularly was actually higher, 10 out of 12. As it turned out, the three women who did not report running or jogging for the past week tended to run regularly in warmer weather, which still constituted a large part of the year.

So, what are these physically active midlife women doing?

Most of the women were aware, to some extent, of Health Canada's Physical Activity Guide (1998) and its main messages and components; which contrasts favourably with the only 46% of Canadian women overall, and 50% of people aged 45-64 who are even aware to some degree of the guidelines contained in that document (CFLRI, 2000). However, few women followed it exactly, probably because few of them could cite specific recommendations. Still, all the women met the criteria for strength, the majority of women met the criteria for endurance (nine

out of 12), and only four out of the 12 women met the flexibility criteria. Further, the women in this sample met or exceeded most of the recommendations for type, frequency, duration, and intensity set out in Health Canada's Physical Activity Guide (1998). This is especially good news since only 29% of Canadians aged 45-55 meet the guidelines for sufficient frequency, duration, and intensity (CFLRI, 1998b). However, this is only good news in that it is reassuring to note that some midlife women are, in fact, not as physically inactive as they are represented statistically. The women in this sample self-selected into this study and the inclusionary criteria they had to meet in order to participate mirror the recommendations set out in Health Canada's Physical Activity Guide (1998).

Specific information regarding the type, frequency, duration, intensity of physical activity, as well as the total amount of energy expended performing it over a seven-day period, was analyzed from the data obtained from the ESI (Appendix A). The women's self-reported figures were then compared and contrasted with the specific recommendations set out by Health Canada's Physical Activity Guide (1998), both individually and as a group. Specific details regarding this sample of midlife women's exercise follow.

Type of physical activity.

The merged data from the ESI and the interviews indicated that the most frequently reported physical activities performed by the women were: some form of weight training, either individually or in a class setting (11 out of 12), running (10 out of 12), fitness classes, including both land and water (eight out of 12), walking at a

moderate to brisk pace (seven out of 12), and skiing, cross-country, downhill, or backcountry (six out of 12).

The women also appreciated the recent attention and acceptance of more holistic exercise options, such as yoga and Pilates. They enjoyed greater integration of their mind, body, and spirit and appreciated the wider range of activity type and challenge this category of exercise provided. They also enjoyed active pursuits that challenged and improved their functional ability, like the recent trend of on-the-ball training (a variety of exercises that are performed while sitting or lying on a large ball, with or without hand weights, that recruit the body's smaller stabilizer muscles and thus require a certain degree of integrated balance, coordination, and muscular strength and endurance), "*Core strengthening is really why I started the fit ball...I've had this 'sitting' issue* [she used to be in pain if she sat for long periods of time] *and I've been through years of physio and injections* [to no avail]" (47-year-old). The women were generally enthusiastic about such new trends and willing to experiment, but only to the extent that they found the activities "worked" for them, "*Trends come and go. On-the-ball is obviously a trend now. I think it'll last because it certainly makes sense...It works for me*" (50-year-old).

Frequency and duration of exercise sessions.

All 12 women exercised for a minimum of 30-minutes a day (a median of about 45-50 minutes) at least four days a week, as per the study's inclusionary criteria (Table 3). However, the women told me they usually exercise more often than that since it was such an integral part of their life, *"I always go to the gym. I GET up. GO to the gym. And whatever happens in the day happens"* (50-year-old). For instance,

half of the women reported physical activity every day of the week, even if some sessions were only 10 or 20 minutes. I chose to express the duration of the women's exercise using calculations for both the mean and the median. The necessity for this distinction became apparent when many of the averages were totalling more than most individual days.

Table 3: Frequency and duration of regular exercise, expressed in means and medians

Code	Age	Active days/wk*	Average minutes per day**	Median minutes per day	Total hours per week**
1	45	7	99	105	12
2	40	5	51	50	6
3	50	4	98	60	6.5
4	41	4	70	45	6
5	41	7	71	45	8
6	52	4	49	45	3
7	50	7	65	50	8
8	50	6	76	65	9
9	42	6	63	30	6.5
10	46	7	43	45	5
11	46	6	50	45	5
12	47	4	110	60	7.5

Intensity of physical activity.

Every woman in the sample performed activities of vigorous intensity (6.0 METS or higher) such as weight lifting (6 METS) and running (12 METS) on a regular basis:

I LOVE to run fast. I love to run hard. And I love to sweat. I love to push the limits...I LIKE to get up to 170 heart rate! You know? Really feel like you've DONE something! (50-year-old)

I do the strength training and I do that INTENSELY. I do the strength training to FULL FAILURE, once a week (41-year-old).

Nine of the women reported exercise at a moderate intensity (4-5.9 METS) like walking (4 METS) and light indoor cycling (5.5 METS). And only three women reported to doing any light intensity activity (<3.9 METS) like stretching or strolling (3).

As evidenced by Table 4, the women in this sample tended to participate in more intense, physically demanding activities than cited by the average Canadian adult (CFLRI, 2001). For example, weight training topped the list in this sample, with 11 out of 12 women participating, while only 11% of Canadians report doing any weight training (not even enough to be included in the top five). Also, while only 12% of Canadian adults report running, it was the second most reported activity for these active women (10 out of 12). Likewise, only seven percent of Canadians reported doing any exercise classes, yet fitness classes were a favourite in the sample, with the majority of women regularly participating.

Table 4: Comparison of research sample of middle-aged active women and average Canadian adult's (men and women; 20 years and over) physical activity pursuits.

Sample's most commonly performed activities*	**Average Canadian's most commonly performed activities (CFLRI, 2001)**
weight training	walking
running/jogging	gardening, yard work
fitness classes	home exercise
Walking	swimming
Skiing	bicycling

*Based on both ESI and interview data

Total number kilocalories expended at each level of intensity, per week.

Health Canada's Physical Activity Guide (1998) does not provide any recommendations for specific kilocalorie output. However, there are two available sources for comparison by which to approximate how the women in this sample were faring in that regard. First, the optimal energy expenditure for adult men has been identified at 2000 kcal per week in order to reduce their risk of premature death associated with sedentary living (Paffenbarger, Hyde Jr., Wing, Lee, & Kampert, 1994). The women in this sample exceeded that figure by 40%, with the average total kilocalories expended per week on all leisure-time physical activity coming to nearly 2780 (2779.58). To my knowledge, there is no such kilocalorie standard available for women. The second group to compare this sample with is a group of boomer women (aged 40-55) who were considered to be doing well in their leisure-time pursuits, averaging 1631 kilocalories per week (O'Brien Cousins & Gillis, in revision, 2003). The women in that sample only met health definitions for frequency and duration, while there was a desperate lack of participation in vigorous activity: eight out of 10 women reported NONE. Therefore, it was all the more striking that most of the energy

expenditure in this sample was spent performing physical activities of moderate to vigorous intensity since women, in general, tend to sway toward less intense exercise (McKinney, 2003; O'Brien Cousins & Gillis, in revision, 2003).

With regards to specific intensity levels: the three women who reported light intensity activities averaged 365 kilocalories that week doing such activities. The average number of kilocalories spent doing moderate activities per week, among the nine women who reported it, was 553 kilocalories. Finally, all women performed vigorous activities and their average weekly kilocalorie expenditure engaged in such activities was 2273 kilocalories. In fact, three women reported ONLY vigorous exercise, and their average was higher than the entire sample at 3530 kilocalories (Table 5).

Table 5: Weekly total leisure-time physical activity (LTPA) kilocalorie expenditure, by intensity level

Code	Total LTPA kilocalories expended per week	Total kilocalories expended by intensity level		
		light	moderate	vigorous
1	4590	0	0	4590
2	1780	480	330	970
3	3120	0	0	3120
4	2670	0	330	2340
5	2370	0	1200	1170
6	1230	0	330	900
7	3360	0	960	2400
8	4285	435	40	3810
9	2160	0	780	1380
10	2880	0	0	2880
11	2520	0	240	2280
12	2390	180	770	1440
	TOTALS	**1095**	**4980**	**27 280**
	AVERAGES	**365**	**553**	**2273**

* Based on a minimum of 30-minutes per day
**Figures have been rounded to the nearest tenth

Question two: Why are midlife women physically active?

The most frequently cited motivations in this sample for regular exercise were expectations for: improved overall health and mood, social interaction, the ability to control weight, reduced stress, and to minimize genetic predispositions to disease, like diabetes, osteoporosis, arthritis, depression, and to maintain or improve their functional ability so to be able to do the things they want, when they wanted, for as

many years as possible. Interestingly, the women framed all their motives for exercise around health. For instance, when asked to define what she meant by "health" and how she knew when she was "healthy", this 45-year-old woman replied, *"I wake up in the morning feeling happy. Generally I feel good. I don't hurt anywhere, unduly anyway. Everything works!"*

The women in this sample were committed to regular exercise because they saw it as a way to maintain or improve both their current and future health, something they thought a lot about. They equated their health to a valuable resource they needed to protect; when their health was good, it acted as an armor of sorts, protecting to a large degree their interrelated goals of aging well, feeling good, and looking good. It was only through my thorough probing that I was able tease out what exactly they meant when they said, for example, "I want to age well", or what it meant for them feel good and look good. The women's reasons for physical activity will be discussed in greater detail as they relate to these three general motives and their main goal of health.

Anti-aging as a reason for physical activity.

"I plan on aging optimally."

The women in this sample made a distinction between "anti-aging" and "aging well"; the latter was the driving force behind their current commitment to regular exercise whereas the former only applied to them in terms of wanting to avoid the so-called normal process of aging which included physical deterioration and disease. Optimum aging was a significant objective for them since they were acutely mindful of their genetic predispositions to particular diseases and conditions. They wanted to avoid or minimize their risk of disease or impaired mobility, especially

after witnessing the experiences of parents or other family members who were afflicted. Further, they believed they could control their health as they aged by continuing to exercise regularly. In their minds, aging well and being healthy were one in the same; they could not have one without the other.

Optimal aging or "aging well" was defined predominantly in this sample by the retention, and ideally improvement, of their overall health and functional performance in order to avoid impaired mobility or disability as they age; they wanted to be able to perform various movements and activities, without undo stress, pain, or chance of injury:

> *I do everything because I plan on aging optimally. I want to enjoy the rest of my life...I don't want to be in pain and incapable of living!...I don't want to go through that whole process of deterioration. I want to die of a heart attack on a ski slope, or something* [like that] *when I'm 90* (45-year-old).

> *It's definitely* [about] *functional ability. Of being able to move and feel like I can go out and mow the lawn and plant flowers or go for a walk with my husband and not say, 'Well, I can't get up that mountain' or 'I can't walk because I'm too tired' or 'my muscles won't let me'* (41-year-old).

Moreover, the women referred to their strong sense of perceived control as a way for them to fortify their commitment to exercise and their confidence in being able to do it. They believed that regular exercise was largely responsible for their current glowing health and were determined to retain their "healthy" status well into the future:

> [Exercise] *is a wonderful way to keep everything strong and pain-free. So, if you work out, you'll get to the same age as people who don't work out...But you get older much nicer. You feel so much better* (50-year-old).

Exercise was their preferred strategy when attempting to exert a certain amount of control in their busy lives. They likened their commitment to regular physical activity as a prudent, nearly risk-free investment that posted a guaranteed return. Their long-term vision was to build a better future for themselves, especially one in which they felt they had some degree of control over their physical health. Their optimistic attitude toward the future could be due to the feeling of control and self-sufficiency they felt in their lives, which was manifested, at least partly, by their regular exercise participation:

> *My mother has, and my grandmother had, severe osteoporosis. So, in terms of muscle building and strength, that is my motivation to do that...I want to remain o.k. because I have no intentions of having* [a] *hunch back...because it is now in my control. I can avoid that* (50-year-old).

> [I'm going] *to take better care of myself. And yeah, buy the wrinkle cream and take some vitamins, and keep that energy up. And, you know, not buckle over from osteo* [porosis] *and some of those sorts of things...That means I have to take care of myself now so that I don't have those problems as I get older* (47-year-old).

> *For me the number one reason is mental health. I mean, the fear of going back there is enough to keep me going to the gym every morning! That was not a happy place to be* [referring to her bouts with depression] (50-year-old).

Perhaps because of their apparent yen for control, the women seemed to readily adapt themselves to the changes they were experiencing as they got older. When this extremely active 41-year-old was asked if she would accept any type of physical decline, she responded quickly:

> *Oh absolutely! You have to. And I think that's when you hit your 40's. You certainly can't pretend you're 20 anymore! It's a recognition of your human frailty, and your mortality, and that you do have limits and you have to work within those limits...Yeah, by the time you're in you're 40's you SHOULD know that.*

This 52-year-old woman stressed the inevitability of change and the futility of trying to exert total control over the natural aging process:

> *I mean there's a point where you CAN'T move forward anymore. And, I'll have to deal with that; accepting the fact that I've reached my peak...Biologically your body ages and you lose some of your physical abilities. Your heart rate won't be able to cope with this high aerobic stuff. It's just* [the] *natural aging process...I think that's a given. But, the rate of the decrease of ability will be affected by what you've done, of course, and by your health...it's a part of living. It's to be accepted!*

"I can't imagine that we're 50!": The new face of aging.

Since our experiences with aging, like the one toward the supposed "midlife decline", are learned through age socialization (Gullette, 1998), what it means to "age well" could vary considerably among a group of North American midlife women and thus needs to be articulated carefully to ensure their intent is understood clearly. This is especially true when the traditional study of aging tends to paint the "natural" life course as a portrait of inevitable "decline, degeneration, and decrepitude" (Gergen & Gergen, 2001/2002, p. 3). Aging women have typically been described in both popular and medical discourses by ageist and sexist stereotypes (Vertinsky, 2000). The women in this sample had overwhelmingly positive and hopeful attitudes about themselves and their experiences with and expectations of aging:

> *It doesn't bother me, aging. I don't think I'm as stuck on it as some extreme women I know who are getting all the plastic surgeries and everything...I won't do that. But I have to just come to the next point in my life where I think, 'Now that I've got the physical health, now what's the emotional health?' Now it's like, 'Who really am I and what do I want?'... This is the second half of my life. I'm coming to the end of my life!...and I want to live that second half of my life happy and joyful. I'm starting to explore inside...I want to* [be] *more authentic,* [be] *more honest about how I want to live life* (41-year-old).

Some of the women were experiencing a paradigm shift as they were becoming the ages they once believed were "old." They had come to realize that getting older was not something to despair, but instead a lifelong process of continued learning and reflection. They celebrated their lives instead of dreading the passing of years:

When I was growing up I used to think that at a certain age you put on support hose and those ugly lace up shoes. When asked what that "certain" age was she replied, *"I thought it was 40! I thought that life was pretty much over at that point...and then it was, kind of, a slide into old age. I find that the women around me, and myself, we're not sliding into old age."* She now thinks "old" might be 70, but she says, *"Old age is an individual thing"* (45-year-old).

I look at what we have at our disposal!...I look at my friends, I can't imagine that we're 50! Like, when I think back to when I was, say, 25, and I would have imagined the way 50-year olds are...I don't see myself as [that]*...I don't think I'm 25 by any means. But I don't think I feel like I'm 50! What does 50 feel like, we don't know. But, I think it's changed! I don't think we need to worry about that so much. Because we've got all this information at our fingertips if we need it, and we know what we have to do!...We're pretty bright. We know what we have to do* (50-year-old).

This vital 52-year-old woman vividly captured the entire sample's feelings about the social pressures to constantly maintain or chase after "youth":

Why waste your time? You know, you have genetics. I have wrinkles under my eyes 'cause it's a trait, a family trait! Whether I like it or not, it doesn't matter, it won't change! And there's no amount of cream that will eliminate that trait! You're given a body and whether you like it or not, it's the one you've got! And you just need to take care of it! That's all you can do! You

can't change it. It's unnatural [to mess with nature] *and why mess around with that? It's a waste! I don't have that kind of time!*

"You've got to do something."

Perhaps not surprisingly, there was a flipside to the women's seemingly complete acceptance and appreciation of aging. Amid their optimism and pride regarding their personal experiences of aging, there was still a discernable inkling that certain pitfalls were associated with getting older. Their experiences and feelings related to aging were something of a trigger for them to do something proactive to preserve their current and future investment in their health and well being. Still, instead of allowing negative thoughts and perceptions of aging to consume them, these women took action:

> *Once you get to this age you realize you've got to do something! You know you'll be in big trouble in, 10 years, if you can already feel this bad in your 40's.* When asked if or how she was feeling "bad", she replied, *No, but if I miss exercising, I don't feel well. I look at people that are really overweight and that are my age and I hear the things they're saying. I mean, I realize that you have to take care of yourself or you'll pay for it later* (46-year-old).

> *I'm getting of "that" age where I need to be doing weight training, you know, to make sure my bones stay healthy* (50-year-old).

> *When you get into your mid-30's you start to feel the difference in your body...and I started to realize that I needed to have some more exercise!* (46-year-old).

At 38, this now 41-year-old woman was, in her words, "overweight" and "overfat". She said it was the first time she worried that she might actually hurt herself skiing because she felt *"WEAKER muscularly"*. It was also the first time she felt the *"aging process"*. So, she decided to take action by learning how to strength train:

> *I still wanted to have functional ability. I wanted to be able to ski when I wanted to ski, walk without falling, still be strong, to lift things. So, I wanted that. I wanted to be in good physical condition.*

And even though this 52-year-old woman accepted a certain amount of decline in her physical abilities, she wanted to postpone the "natural" aging process for "*as long as possible"* and believed that exercise was the best way to accomplish that: *"If you don't use your body then you become very sedentary and there's all kinds of problems that come around with that...I want to be fit...You go through life with ease."*

Health as a reason for physical activity.

"Your body is working with you."

The happy marriage of exercise and health was evident as health reigned the highest on every woman's list of priorities and it encompassed her other goals: to age well, to feel good, and to look good. The women used exercise as a way to fortify their physical, emotional, and cognitive health in order to exert control over their overall quality of life. They talked about how they wanted to stay or get physically stronger as they got older so to avoid pain and illness, remain independent, and to be

able to do what they want, when they wanted. After reflecting on a recent physically demanding snow-shoeing trip with other women, this 45-year-old woman commented, *"I loved being one of the ones who felt strong and powerful and able to keep going."*

Their emotional health was enhanced by exercise's ability to reduce stress, improve their mood, and by allowing them the opportunity to have fun and socialize with other people and also to have a certain amount of "me" time. This 52-year-old woman enjoyed the social component of going to the gym because she believed her membership provided her with *"a little bit of a social network, of like-minded people"*. She continued:

> *There's a lot of humor going on! And that's SO important...You know, it sort of gives you energy again. There's a LOT of information being passed on from recipes to legal problems or marital problems or issues with grandchildren. So you can have some REALLY GOOD discussions as well!*

The cognitive benefits of exercise were also not lost on them. Several women told me that they "*felt smarter*" after exercise. Overall, this is how two women explained how they knew they were "healthy":

> *Just by the way I feel... not being too tired, feeling good when I wake up in the morning. Just being able to keep going...the general well-being, the way I feel, I guess* (46-year-old).

> *The feeling that I <u>can</u> do things... Physical activity has an impact on your emotional, your physical, and your mental outlook on life...Healthy means*

that your body doesn't interfere or cause problems in your day-to-day activities. Your body is working with you all the time. And you listen to your body too!...So you look after yourself and then your body is healthy...you know, some health issues are not controlled by you, they might be genetic issues. But overall, a person is healthy when a person takes care of him or her self (52-year-old).

Among these women, thinking one is healthy and feeling in control of one's life was linked to their actual health. In normative population studies, perceived good health has been found to be significantly and positively related to physical activity participation. Specifically, Canadians who are physically active on a regular basis are more likely to rate their health as "good" or "very good" (CFLRI, 1997). After each of the 12 women in this sample was asked an open-ended item on health, five of them exclaimed their health as *"excellent"*, one woman reported *"very good"* health, and the remaining six thought their health was *"good"*. No choices were offered to the women about what they could say; that is, the women were not given a choice of "good", "very good" or "excellent", instead they offered these open responses after simply being asked "health"?

The sense of control a woman feels over her life can also be a powerful predictor of her current and future health and how she will deal with acute or chronic stress. Persons who possess a greater sense of perceived control in their lives, such as the women in this sample, suffer little or no adverse physical effects when exposed to stressors compared to the suffering felt by people who feel no control in their lives (Bandura, 1997). Further, one's perception of stress "appears to play a more

important role in health outcomes than does simple exposure to life events" (Adler & Matthews, 1994, p. 251).

"Just do it because it feels good."

The midlife women in this sample talked about "feeling good" as another product of being healthy, which for them encompassed stress relief, greater energy, a better mood, and satisfying social opportunities. All 12 women loved how exercise made them feel and they wanted to ensure they were "feeling good" on a regular basis, *"Oh, I love the feeling afterwards! The feeling of going, 'Yes! I ran 2 ½ miles.' It's really a good feeling"* (45-year-old). She exercised for the *"sense of health and vigour"* that is exuded when she is healthy and working out. She went on to observe,

> *I see a lot of unhappy people and a lot of unfit people. And I've found there's correlation!...People seem to forget sometimes what life is all about, I think. And when you work out and exercise and focus on your health and your wellness and your strength, it gets you back in touch with what it's all about. Well, for me that's what it's all about. Living optimally.*

Even after completing a brief 17-minute circuit training session, this 41-year-old felt like she had *"done something good for* [her] *body...I'll count anything. Show up and do a bit of activity."*

Still, even these highly motivated women had days when they did not feel like exercising. Their strategy on those days was to remember how exercise makes them feel, *"If I'm maybe a bit blue, or if I'm feeling stressed out or my nerves are bad that day, I GO do a workout. It gets me out of the house and puts me in an area where it lifts me out of that"* (41-year-old). The women expected that they would derive

positive physical and emotional benefits from their workout, *"When I'm done I'll be happy"* (50-year-old). As one woman put it, *"There's that feeling. The knowing in advance that you're going to feel better...So that's the motivation. I KNOW the end result!"* (52-year-old). This 47-year-old woman talked about the benefits of exercise this way, "*When you work out you get this boost of energy and your feel GOOD, your brain feels good!* And when they did not exercise, the women talked about how they felt "*sluggish*" and how they needed exercise to *"clear*" their head and allow them to think and work better:

> *There's definitely a relationship between how well I think and how long I can sustain other kinds of activities* [at work] *during the day that require attention with how good my workout has been in the morning, or whether or not I work out* (46-year-old).

"I'll do anything social."

In keeping with the theme of "feeling good", many women expressed a genuine need and desire for sharing their exercise experience with other people, most often other women, "*They're all pretty much strong, mentally strong women... We balance each other and help each other out...I do a lot of exercise with my friends"* (45-year-old). Indeed, the social aspect of the exercise experience, sometimes more than the activity itself, seemed to make it more inviting and gratifying for them:

> *It would definitely inspire me to go do something if somebody said, 'Let's go try this' or 'Let's go wall climbing!' It's maybe not my favourite sport, but hey, 'Who's all going? I'll do it that way...I'll do anything social and*

> *physical... We just finished belly dancing, my girlfriend and I. That was a fun thing, and a heavy workout* (40-year-old).

This woman recalled exercising with her neighbours when her children were younger, "*You know, we'd go out and do our little run, or whatever* [power walking or weights] *and we'd lunch together afterwards. So it was a social activity"* (46-year-old). The women firmly believed the time they spent socializing during exercise was crucial to their health and happiness, especially since that is how many of them met some of their closest, long-time friends:

> *I always liked running. And I met these nice girls and* [we] *just kept up. We called ourselves the 'running girls'. And we'd run for breast cancer... We've just become very good friends, close friends. We've helped each other through life's turmoils, changes, and tragedies* (42-year-old).

"I want to really work hard."

An increase in exercise intensity often added to the challenge, enjoyment, and variety most women said they needed to continue and thrive in their routines. Many of these women described themselves as somewhat intense in their attitude toward achieving their exercise goals and performance:

> *I usually push QUITE a bit* [when weight training]. *Unless I'm tired or I'm planning on an intense run, or working out for a race or something, then I'll back off the weights a little bit. But I usually push PRETTY hard so that I'm often going to failure* (50-year old).

The women seemed to understand the importance of constantly upping their challenge quotient within parameters that were still attainable and enjoyable. They

realized that to achieve one goal meant that eventually they had to set their sights higher:

> *Once you reach a certain peak, you increase the challenge again!...You have to challenge yourself or else you stagnate. But you have to always be realistic in what you can do!...So challenge yourself in a measured approach and have fun!... I set myself these challenges...no rhyme or reason for it.* When asked how she knows she's met the challenge she replied, *The fact that I DID IT! It doesn't matter how fast...I DID it!* (52-year-old).

During particularly challenging exercise sessions, like long distance running, the women used positive, upbeat self-talk, like this 42-year-old woman, *"Hey, I can handle this! You know, yeah, it's stressful, but I can handle this."* This woman thrived in a challenging exercise scenario and bristled at the thought of participating in so-called "age-appropriate" exercise programs:

> *I don't want to have a half-assed workout. I want to REALLY work hard and I want to be able to continue to develop physically...I don't want something that's geared specifically toward middle-aged women because a lot of people underestimate middle-aged women* (45-year-old).

"Variety is very important to me."

As much as the women enjoyed how regular exercise made them feel, few of them were content to do exactly the same thing everyday. While it's true that many women liked and required a certain sense of routine, they also recognized the physical and mental benefits they could accrue by incorporating a variety of exercise activities into their routines. Essentially they believed that a certain degree of variety in their

exercise repertoire contributed to the longevity of their "feeling good", physically, emotionally, and cognitively. As this 50-year-old woman said, *"I didn't discover this, but, to do the same thing everyday is not great because you're setting yourself up for injury."* This 52-year-old woman described her need for variety this way:

> *I want to be stimulated. I choose different exercises, over the decades...I want to feel like I'm learning something new, and feel challenged in new ways...Variety is very important for me. I don't want it to be drudgery... I don't want to get bored with what I'm doing...And to me that's important, NOT to be in a rut...I've changed over the years. I don't do an aerobic class anymore...I have nothing against it, but I'm just bored with it. I've done one too many grapevines.*

Appearance concerns as a reason for physical activity.

"I like to look good."

Beauty issues, or looking good, for this group of women was secondary to their overall health and how they felt. For the women in this sample, "looking good" was more a manifestation of enjoyable self-care practices, like exercise, as opposed to the result of adhering to overly regimented and punishing criteria:

> *You have to accept that you age. But I think if you feel good, you look better. The way you feel affects a lot the way you look.* [Exercise] *is important to me not for just physical looks,* [but] *physical well-being is important and mental well-being too* (46-year-old).

So, while all the women enjoyed the process of exercise and appreciated its ability to control body weight, they maintained that beauty was <u>not</u> the driving force behind

their commitment to regular exercise. Many women referred to changes in their bodily appearance as a bonus, rather than the immediate and necessary goal of their exercise regime, "[Exercise] *makes me feel good...if it changes my appearance in any way, that's a bonus"* (50-year-old). Moreover, none of the women were so preoccupied with their appearance that they were willing to sacrifice their health for looking better, *"If I had a choice to be very physically strong and active and had to give up the beauty, I would do that"* (41-year-old). For this 40-year-old woman the issue of weight control took on a slightly different spin in that she was concerned that she did not want to lose too much weight, "*I know that at 122* [pounds] *I'm not in good health. I know if I stay at 125 it's a good weight for me. It's good on my joints.*"

These midlife women derived pleasure in seeing themselves in a positive and accepting light. However, this did not mean they were not aware of the potentially judging eyes of others, it was just at this point in their lives they felt they had matured to a point where they were comfortable setting their own criteria for looking good.

"Do you just love me because I'm beautiful?"

Still, as well adjusted and mature as these women were, a few of them appeared to be heavily influenced by other people when it came to their appearance and body attitude. According to Gergen and Gergen (2001/2002), "family and friends often call attention to one's bodily condition (e.g., weight gain)" (p. 9). In these cases the people in question were their husbands and mothers. A 42-year-old married woman told me how she got "*mad*" when her husband would mention that she was gaining weight, but she maintained that, "*he's keeping me in check*". Two other women's experience was more intense:

My mother put a premium on physical appearance...I think that was put on me without even being realized...EVEN MORE THAN HEALTH! It didn't matter if you smoked to lose the weight. It's just that you looked good...So for me, I guess that's something that's a psychological issue with me that I still have to overcome...I think I just have to get to that next step of not putting such a premium on appearances, especially as I age as a woman (41-year-old).

[My husband] *really likes how I look and he compliments me all the time....*[It] *makes me doubt why he cares about me, you know?...There is a new pressure in my life from how he compliments me and how he looks at me...every morning he gets up and says, 'You're beautiful'. I'm like, 'Well, that's nice'...it made me think, 'Do you just love me because I'm beautiful?'...I'd say maybe 20% of it* [his love] *has to do with physical attraction* [for me]*'...It's not a problem...it's just there...It does bother me because it's not part of my value system. I don't value good looks...there definitely is a negative emotion that I have with my body image that I didn't have before...*[but] *I think I've developed more pride in my appearance than I did before 'cause I always thought I was pretty normal, and I guess I'm not!* (41-year-old).

Clearly beauty was at the forefront of these three women's minds. They were not representative of the entire sample because their focus on their looks tended to be fraught with a detectable degree of stress and anxiety, whereas the majority of the

women maintained a more light-hearted and satisfied tone when talking about their appearance.

Summary

Ultimately, the women's motivation for exercise in this sample was to preserve or improve their overall health. Everything the women talked about had a health reference. Their overarching definition of health and "being healthy" encapsulated everything in life that was important to them, namely aging well, feeling good, and looking good. They possessed a strong desire to protect and take care of themselves, as well as to exert control over their health and how they aged, felt, and looked. They perceived themselves as healthy and capable of regular and vigorous physical activity; thus they felt a responsibility to take advantage of the proactive tool of exercise. The women's confidence regarding the benefits they would incur from exercise coupled with their ability to perform it successfully appeared to stem from a strong sense of perceived control and self-efficacy. Indeed, their commitment to regular exercise was a reflection of how they saw themselves: efficacious architects designing their own destinies, particularly where their health was concerned.

Question three: What influences the type and amount of physical activity midlife women do?

"It's my time."

Time is the most common barrier to physical activity among Canadian adults in three different age groups: 18-24, 25-44, and 45-64 (CFLRI, 1996b). Add to that, once a pocket of time is found, it has to be convenient. All but one of the women in this study had a job that required them to work on either a full or part-time basis,

and most often out of the house. Many of the women had already divided their days into the requisite segments of responsibility, for instance, work, child care, chores, before they even considered what time was left for themselves to devote to exercise. However, once work and family responsibilities have been fulfilled, they were adamant that they must have time for themselves; time to devote to their health and well being. Indeed, the women's love for their personal time was one of the most powerfully delivered messages from the women to me during the interviews: the precious need to *"take time for myself"*. This 45-year-old felt that *"selfishness"* or the *"thinking of one's self as a priority* [is a] *one of the benefits of growing older."*

This sample of midlife women considered regular exercise a vital part of their lives; indeed a fundamental act of self-preservation versus a luxury, *"I allow very, very few things to interfere with my workout. VERY FEW...I work out in the morning and NOTHING interferes with that...It's more than a preference....It's quite rigid"* (50-year-old). Every morning, before going to work, this 52-year-old married woman with no children enjoyed time to do what she wanted, *"I like the mornings because that's MY time. As soon as I get up, it's my time, ...If I want to run for an hour, I'll run for an hour. If I want to run for an hour and a half, I can do that!* However, this 46-year-old mother of four children, aged 15-22 years, acknowledged that making the time for herself can be difficult, but maintained that it was necessary:

> *I'm taking time for myself, to concentrate on myself instead of always worrying about other people... I was actually taking one Pilates class before, a week, and I just decided, you know, if you can't fit in 60 extra minutes a*

> *week, something's wrong!...So I just decided to go for it* [to add a second class] *and it worked out fine.*

Still, some women were acutely aware that the time they had might not always be the most convenient, and that they had to be satisfied with whatever time was available like this 41-year-old married manager, *"I can't be picky and choosy. My schedule is not my own now. I'm married."* Similarly, this 42-year-old mother of three young children under the age of four, leaves her house just after six o'clock every weekday morning in an attempt to fit in her exercise:

> *I only get that half hour of the class* [a one-hour class]*...it's less than I would like, but I will take whatever I can* [get]*...I think it's a balancing act for females...I have to pick up my husband, and be back here at work at 8, so I can only do so much!...And on some days all the kids are up, and it just doesn't work out. And I get disappointed when that happens...It's just that time doesn't afford me much more time than that. So, I try to maximize what I can do, in that period. And I know that makes me feel better to do it.*

The fact that seven out of the 12 women in this sample did not have children warrants further consideration. It is possible that this outcome was simply a coincidence and it is not indicative of any deeper issue. However, the mostly childless reality of this sample of women could be considered atypical when approximately 63% of Canadian families have children at home (Statistics Canada, 2001b). This issue of time and how it relates to this sample of mostly childless women will be revisited in more detail in the Discussion section (p. 113).

"I know what works for me": The role of knowledge and inner motivation.

While the women fared quite well in meeting the exercise guidelines set out by Health Canada's Physical Activity Guide (1998), a strong theme kept emerging throughout many of the interviews: the women's near denouncement of expert opinion and more emphasis on defining what's important to them. In this sense, they acted as their own experts, *"I've defined what's good for me"* (45-year-old). They claimed to pay little attention to the specific guidelines outlined in the document and instead just did what they wanted and what felt "right". When asked if she consulted Health Canada's Physical Activity Guide (1998) this woman replied, *"Why should I?...I don't follow any guides. I just do what feels right for me"* (52-year-old).

They maintained that their exercise activities were guided by an intuitive sense, or some type of internal compass, directing them toward what they believed they needed versus meticulously constructing their regimes to mirror the specific advice from health and exercise experts:

> *Well, I know that they're* [exercise guidelines] *out there. But I don't pay much attention to them...I think what I do works for me. And so, I think that I've got most of that stuff covered. So I don't really worry about them...I guess it's like everything else. Once you've been doing it for a while, and you know YOURSELF, I know what works for me...I certainly don't take my direction from anyone else at this stage* (50-year-old).

> *I am aware of them* [exercise guidelines]*...I pick something that's good for me. I don't go by the guidelines...I've just found something that I enjoy. So, I go by that* (46-year-old).

She did concede that she might increase her weight training if she went for a bone density test and was told she should be doing more, but had no plans to do anything more now.

The women did not believe that their current or future health relied on strict compliance with the specific guidelines put fourth in Health Canada's Physical Activity Guide (1998). They were confident that their overall awareness and inclusion of the important elements in their regular regimes was enough to ensure that they would remain healthy and age optimally. For example, they knew that ideally they should participate in a variety of physical activities, like endurance, strength, and flexibility, but they admitted that they tended to stick with what they enjoyed most. As a result, stretching and other flexibility activities fell to the wayside, "*Yes, I'm aware of those guidelines. I think where I fail, and where most people fail, is on the stretching aspect of it.* [It's] *that part, end of the class*, [where you say to yourself], *Don't have time for this. Gotta go!"* (42-year-old).

The women generally seemed to derive great pleasure in asserting their personal power when it came to making decisions regarding the details of their exercise program. It is important to point out that this was not necessarily a case of the women distrusting experts; obviously they had taken some advice over the years and been exposed to exercise messages that emphasize what is recommended. However, they truly seemed to believe that despite any deficiencies in their programs, they still were

the best experts when it came to knowing what they needed to meet their goals of aging well, feeling good, and looking good. Indeed, these midlife women claimed to be highly self-motivated to exercise, something which has been deemed to be "one of the best predictors of persistence in exercise programs" (CFLRI, 1995):

> *In terms of motivation I guess I'm grateful that I don't need anybody outside to motivate me* (50-year-old).

> *I truly feel that I need, from the inside, I need to move. There's an inner drive with my exercise* (40-year-old).

They referred to exercise as a *"way of life"* that was akin to a habit that they did not want to break. Still, they acknowledged that as strong as their inner drive was, and as powerfully as the habit and value of exercise was ingrained in them, it was not always easy to mobilize themselves to exercise:

> *There's that feeling, the knowing in advance that you're going to feel better when you exercise. You may not want to do it. You ALWAYS have to do that self-talk, 'Well* [saying her own name], *how are you going to feel later this morning if you didn't work out? Well, I guess I won't feel too good.' So, get out of bed, just do it. You know you're going to feel good. So that's the motivation. I KNOW the end result! I just have to get myself there* (52-year-old).

Cultural influences: "Keep[ing] up on things."

Women's attitudes, beliefs and perceptions about health and health issues, as well as their behaviour, can be influenced by representations in the media (Lyons,

2000). Of course, not all health messages in the media are sound. For instance, there appears to be a proliferation of advertisements for diet pills, with images of so-called success weight loss stories, that puts into question the seller's definition of health. However, the women in this sample did not appear to be pulled into those types of schemes since they were able to articulate specific ideas about what health and what being healthy meant to them by citing markers like functional ability, sleep quality, and improved mood. Collectively, these opinions seemed to suggest that their comprehension of and desire for health and being healthy goes deeper than most commercial depictions. And while cultural influences did not rigidly dictate what they would do for exercise, or how they would do it, they could not ignore certain sources.

The majority of Canadians (57%) receive information on physical activity through the media, including newspapers, television, and radio, and to a smaller extent, the Internet (10%) (CFLRI, 1999b). While this sample of midlife women was certainly aware of cultural influences and images, (*"I suppose we're all impacted by that to some degree. I mean, it's in our face no matter what"* [47-year-old]), they did not allow images or messages rule how they lived their lives. Here is what two of the women in this sample said after they were asked if any cultural mediums influenced their exercise behaviour or motivation:

> This 46-year-old woman replied bluntly, *No. It would influence how I do my hair or what I wear, but not my physical activity.* She went on to explain that she does not *read those kind of things* [and that] *probably, if I did read them, pick up a magazine or watch a show on fitness, probably it would influence me.*

> *I don't get influenced by magazines or pictures of models! They're all, you know, not many of them are very healthy! Really! And they starve themselves and then they have bone problems* (52-year-old).

This 46-year-old woman had a different, more accommodating outlook on the role of cultural influences in her life:

> *I do read magazines,* [to] *keep up on things...I mean, I enjoy reading about women in their 40's and 50's, and their keeping fit and how it affects them. And ESPECIALLY women that may have had health problems and have overcome them, or, you know, dealt with them through exercising. I like reading those sorts of things.*

This newcomer to Canada, a 50-year-old European woman, believed many of the so-called challenges with aging were rooted in the North American culture, "[North Americans] *are more frenetical in staying young, having plastic surgery, and Botox injections and things like that."* This 41-year-old woman thought that *"society definitely has preconceived notions about an aging woman"* regarding how they should somehow still look young. She admitted to occasionally thinking that way herself and then scolded herself by saying, *"Now why am I thinking that? What a terrible way to think, that if I don't look a certain way, you know, what's the use?"*

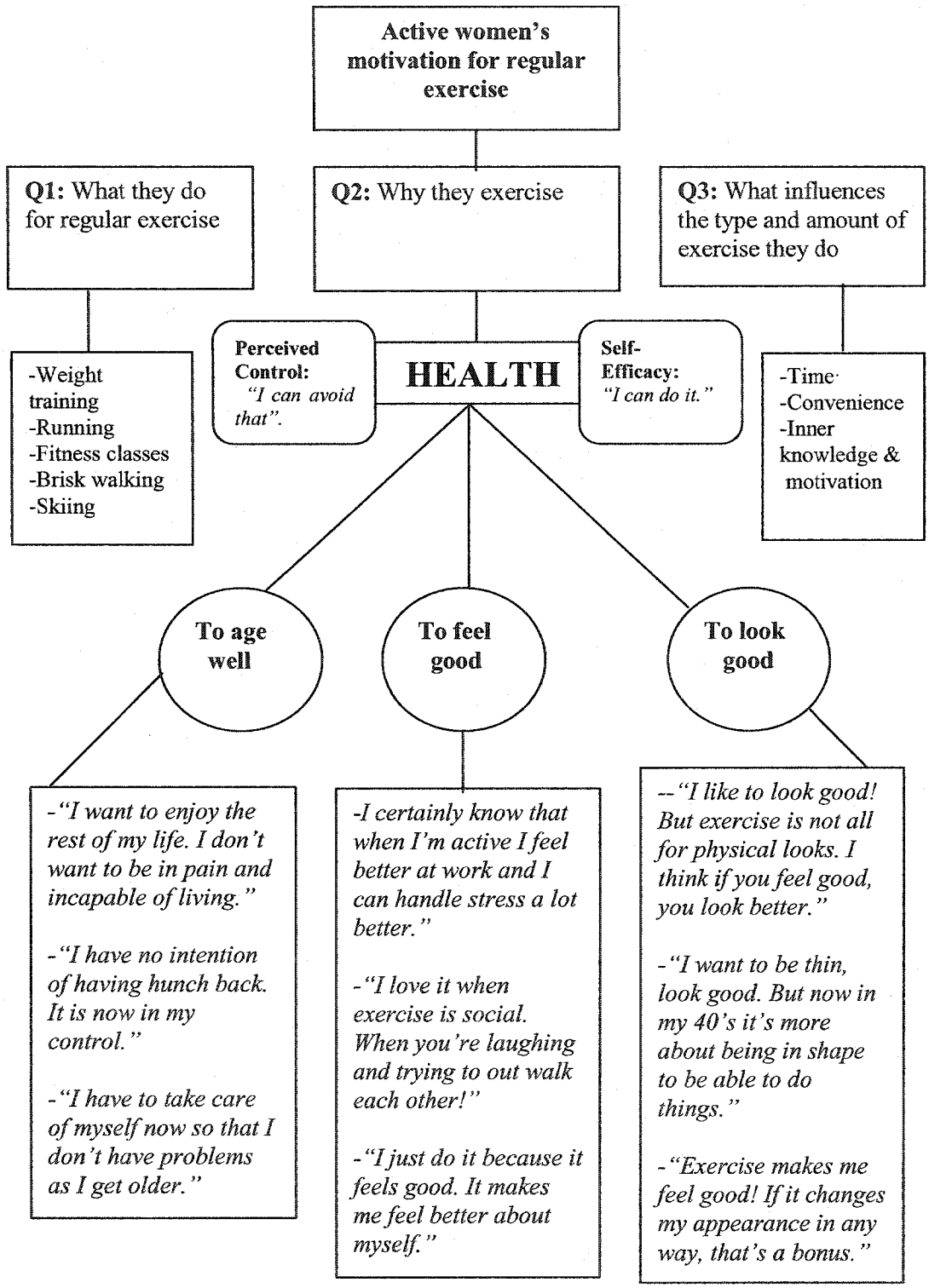
The women appreciated the huge influx of information they had access to, but were selective about what they read and what impact they let it have on their exercise behaviour. They talked about reading health and exercise articles in magazines for enjoyment or interest-sake, and only applying it to their regimes if they felt it was appropriate:

> *When I look through a magazine and go, 'Oh, isn't this great! This supports what I'm doing.' It makes me feel good. But I'm not about to go, 'Because that woman in the magazine has those beautiful biceps, that's what I want to have.' Well, no. Not at all* (47-year-old).

Putting it all together

The main findings of this study are presented within the following context chart (Miles & Huberman, 1994) (Figure 1). The chart visually captures a lot of relevant information and important findings from this study. First, each of the three main research questions is stated and the women's predominant responses are linked to them directly below. For example, question two was essentially the core of this project, "Why are midlife women physically active?" and thus the elements that follow below are more involved than questions one or three. The chart clearly shows "health" as the main reason for the women's exercise and it is flanked on either side by the two variables that I interpreted were shared by all the women after analyzing the interview transcripts: perceived control and self-efficacy. The three subsections that flow from health are the reasons the women gave for wanting to exercise regularly: to age well, to feel good, and to look good. Each of these three reasons is then connected with a selection of the women's quotes that best capture that goal.

Figure 1: Study findings context chart



Chapter five

Discussion

Study strengths and limitations

The main power and value of the study findings lie in the fact that they had their genesis in the women's own words. The women spoke with passion that greatly enhanced the content and clarity of the interviews, and ultimately the overall quality of the data. The interviews reflect conversations that were based on mutual interest, honesty, and respect. A solid, good-natured rapport was developed with each woman that I believe enabled her to speak freely about things she may have not considered before regarding her commitment to exercise. My feeling about this was confirmed after many of the women commented to me just after the interview, or during follow-up telephone interviews, about how much they enjoyed the process and how it got them thinking more deeply about their experience and relationship with exercise. Thus, I am confident that the data obtained during the interviews, and my subsequent interpretation of that data, is sound.

This study adds to a small, but growing, body of literature that focuses on midlife women and exercise; an area that currently is in need of some attention, especially considering the growing proportion of midlife women in North American society and the importance of exercise to a woman's overall health, well being, and quality of life. This study is unique in its qualitative focus on already active middle-aged women and thus offers insights from a relatively homogeneous sample comprised of individuals who have been successfully engaged in regular physical activity for at least 10 years. The fact that these women were firmly planted in the maintenance

stage may be particularly valuable since exercise maintenance is "a noteworthy endeavor given that individuals must continue to be physically active to sustain its full health benefits" (Marcus et al., 2000, p. 32).

Ultimately, this study was a case of quality over quantity. So even though only a relatively small group of midlife women are represented in this study, they are portrayed in a more compelling and meaningful light than if I had collected and reported large sets of generic information garnered from hundreds of women. This sample of women is not representative of all midlife women, nor can I make sweeping generalizations about the exercise motivation of all North American midlife women based on the findings of this study. However, these 12 active women's ideas and opinions about exercise, health, and aging showed common themes that suggestively may resonate with other active midlife women, especially since their life experience may be similar based on their age range and the North American culture.

The use of an interview blueprint was particularly important to this study in that it provided a common compass by which to navigate through the often highly energetic interviews. It is true that another researcher could use the interview template rather reliably in a one-on-one interview setting with similarly active midlife women and gain comparable findings about the women's exercise motivation. However, replicating the exact findings of this qualitative study would be difficult, and potentially impossible, because the rich data is deeply embedded in the specific context of these 12 individuals (Morse & Richards, 2002). Still, because the main themes of this study were expressed in the evocative words and tones of the women, the likelihood of the main findings emerging in other research is heightened.

The trustworthiness of this qualitative project was also enhanced by adhering to, as best as possible, the four criteria suggested by Lincoln and Guba (1999) and the methods relevant to each criterion, such as keeping a reflexive journal, maintaining an audit trail, peer-debriefing, informal member-checks, and prolonged engagement with the data. Additionally, rigor was promoted by the creation of a positive atmosphere in each interview, building a solid rapport with each woman, and the commitment to preparing trustworthy transcripts (Poland, 1999). The use of tables and the context chart (Figure 1) strengthened the validity of the study's analysis. According to Miles and Huberman (1994), the presentation of a condensed version of the qualitative data in one location permits "careful comparisons, detection of differences, noting of patterns and themes, seeing trends, and so on"(p. 92).

According to Strauss and Corbin (1990), two elements are crucial to the qualitative research process: theoretical sensitivity and creativity. Theoretical sensitivity refers to the researcher's ability to "recognize what is important in data and to give it meaning" (p. 46). Sources of theoretical sensitivity include: technical literature, professional and personal experience, and the researcher's "continual interaction with the data" (p. 47). Theoretical sensitivity was enhanced in this study by my acquaintance with all three sources. Technical literature, as well as popular literature, was reviewed over a period of three years. I had worked as a personal trainer and exercise leader for several years beforehand and was familiar with the exercise experiences of women of various ages. My interaction with the data was most definitely "continual" since I was the sole investigator in every phase of this project. Creativity allows the researcher to ask important questions of the data, often resulting

in insightful comparisons and possibly "novel theoretical formulations" (p. 31). I believe my familiarity with the three sources of theoretical sensitivity heightened my ability and willingness to be creative in this research process.

Several delimitations and potential limitations of this study should be considered. The higher socioeconomic status of the women in this sample likely played a significant role in enhancing both their feelings of perceived control over exercise and their lives, as well as their outcome and efficacy expectations regarding exercise by providing them with ample, supportive environments and resources (Clark, 1996).

Another delimitation of this study was the location in Calgary, Alberta. It is difficult to say how, or even if, the main findings of this study would have varied if I had interviewed 12 women living in another Canadian city, for example Toronto, Ontario. It is possible that there may be particular city and provincial characteristics that influence exercise participation and motivation.

Several potential limitations of this study should also be noted. The study relied on the women's self-reporting of their physical activity, both on the ESI (Appendix A) and during the interviews. However, the validity of their self-referent beliefs and perceptions should not be at issue since their perceptions are what their behavior is based on (O'Brien Cousins, 1997); since the cornerstone of this study was to better understand active midlife women's behaviour surrounding exercise, who better to ask than them? Still, there was one notable discrepancy between what the women reported on the ESI for the most seven-day period and what they told me during the interviews, and that was due to the weather. Seasonal variation dictated how much time they spent in their outdoor pursuits of running or biking, for example; when it was cold outside

they did not do those activities, but would substitute those activities with other, indoor ones. The inability of the ESI to capture that seasonal variation could have been a more serious limitation if it were not for the information obtained during the interviews that clarified what exactly they did do on a regular basis.

There was definite bias toward facility exercisers; only three women exercised solely or mostly at home. The inability of the snowball sample in this study to capture more home exercisers might suggest a few things. First, it is important to note that it was a logistical challenge to find women who were home exercisers, which of course severely lessened the ability to understand this group. Secondly, home exercise may no longer be as prevalent as was once suggested in a report that looked at location for physical activity (CFLRI, 1996a). Or, perhaps it has to do with the social circle in which a woman who exercises mostly or solely at a fitness facility moves in, and how it may be limited to the women she meets there. There is also the possibility that since home exercise is such a private experience, people do not report it as often and thus others do not know about it. It also may have just been a coincidence, in terms of the women who I happened to talk to, that they did not know anybody who exercised at home. Nevertheless, it was interesting to experience how difficult it was to find women who exercised at home when "home" has been found to be the place where most women reported exercising (CFLRI, 1996a).

The fact that there was no second in-depth interview conducted with any of the women is not, in my mind, a limitation of this study. However, I am addressing it since some readers might raise it as a concern. The data obtained from the single interview with each woman was high quality, substantial, and without serious

impediment or omission that would warrant a second full interview. Additionally, my interviews were supplemented by two other occasions where I spoke with each woman: our first phone contact and our telephone follow-up interviews. So, the fact that the findings of this study surfaced after a single, one point in time interview, is not viewed as a limitation since even a "one-time, brief event... of only five minutes" constitutes an interview (Fontana & Frey, 2000, p. 646).

There was a "missing" range of women; that is women aged 53-60 years. I had hoped more of the entire range of 40-60 years would be captured in this study. However, it just so happened that the women who responded to my recruitment poster, and who were part of the snowball sample, only occupied the range of 40-52 years. Does it matter that I had no one between 53-60? Well, yes and no. The findings of this study would have certainly benefited from the input of women of that age so that they could have helped to further flesh out why active women are driven to exercise regularly. Still, as women approach 55, and especially 60, they tend to already be well represented, or at least duly considered, in the older adult exercise literature (Caserta & Gillett, 1998; Fiatarone et al., 1990; O'Brien Cousins, 1996a, 1997, 2003; Schneider, 1997).

The use of "cold calling" to gain access to managers or other people with decision-making power at fitness facilities was another study limitation. For example, establishing contact with a single administrator at the public clubs was a challenging process. In two out of three instances where I left telephone message, they were never returned. In the one case where I was able to speak with somebody, I was first

referred to the Fitness Director of the public club, who then had to consult with her supervisors for permission to allow me access to their club members.

What do the study findings mean?

The findings of this study are important because they present the reader with the narratives of 12 midlife women socialized in a North American culture and who have been successful in maintaining a regular exercise program for at least 10 years. Results of this mixed methods study indicate that midlife women's thinking regarding physical activity, health, and aging is as complex as they are. The women in this sample continually emphasized that exercise was imperative to their overall health and to their interrelated experiences of aging well, feeling good, and looking good. Yet, they did not feel the need to consult exercise experts to ensure they were on the right track to meeting current guidelines for physical activity. They overwhelmingly believed themselves to be healthy because they were "feeling good" and doing something good for themselves, namely exercise. Additionally, they had vast experience and personal knowledge of their bodies and personal needs. As far as aging was concerned, they predominantly expressed delight and optimism with their experience of it because they felt they were succeeding by having some control over it through exercise.

The findings of this study relate strongly to Bandura's SCT (1986) and how one's self-agency is reciprocally influenced by three main determinants: internalized beliefs (cognitions), cultural values (culture), and ongoing experiences (experiential). The fact that these 12 active midlife women had extensive lifelong exercise experience helps to explain the roots of their strong self-agency. Further, the women's midlife

"status" and experience with aging may have strengthened their self-efficacy for both exercise and aging well since they had developed personal beliefs of efficacy based on their accumulated knowledge and experience. And even though these 12 women appeared to largely ignore exercise experts and many cultural messages about exercises, they did not deny that they were, to some extent, products of their environment. For instance, they were aware of current trends like yoga and Pilates and enjoyed them enough to incorporate them into their exercise regimes.

The issue of control saturated the core category of health, as well as distinctly overlaying the other themes of aging well, feeling good, and looking good. Support for the women's beliefs of control and how it influences their exercise fits with Bandura's (1977b, 1982) concept of self-efficacy, self-agency, sense of competence. Further, the findings of this study find some support in social cognitive theory (SCT), which posits (in part) that effortful human activity is guided cognitively by five belief constructs: perceived control, social influences, value for the behaviour, self-efficacy, and goal setting (Bandura, 1977a, 1982, 1986, 1997; O'Brien Cousins, 2003. A more detailed discussion about what these study findings might mean is contained within the framework of the three research questions.

Question one: What do active midlife women do for exercise?

Recent evidence shows that over half of Canadians over age 45 are not adequately active in their leisure time (Spence, 2001). Therefore, it was heartening to find 12 women whose exercise participation was atypical of both their gender and age, both provincially and nationally (Alberta Centre for Active Living, 2003; CFLRI, 2002) whereby they all either met or exceeded most of the guidelines set out

in Health Canada's Physical Activity Guide (1998). This sample of women engaged regularly in a variety of physical activities such as running, yoga, and weight training, at least four days per week at a moderate to vigorous intensity for about 45-50 minutes.

Physically active midlife women were found strategically and were defined by regular physical activity, thus one might be quick to discount what they were doing as any special achievement worthy of admiration. Nonetheless, despite their self-selection into this study, the fact remains that every single one of them was already exercising for a minimum of 30-minutes a day, at least four days a week, with the majority of them reporting more exercise during the past week. If nothing else, being able to find these women provides some hope that perhaps not all women will fulfill the statistical prophecy whereby 67% of women will be inactive as they age (CFLRI, 2001). Indeed, the women in this sample possessed a healthy dose of self-efficacy beliefs that were "self-aiding", beliefs that not only determined their level of motivation, but also how long they would participate and how much effort they would exert (Bandura, 1989, p. 1175).

The frequency and duration of the women's exercise sessions is worth paying attention to, if only to confirm that some midlife women are meeting, or is close to meeting, exercise guidelines for health (O'Brien Cousins & Gillis, in revision, 2003). The women's propensity for vigorous activity choices, like running and weight training, bodes well for them since most Canadians report doing less intense activities during their leisure time, like walking and gardening (CFLRI, 2001). For instance, among another sample of midlife women, vigorous physical activity was not even

considered an option. Consider the words of this 42-year-old women in light of the narratives in this sample, *"It's too difficult for me at this age,* [especially if] *my expectations were higher than what my body is able to give out"* (O'Brien Cousins & Gillis, in revision, 2003). The attention the women in this sample gave to more challenging and vigorous exercise was quite remarkable and bodes well for them since increasing the intensity of one's physical activity can lead to greater health benefits (Health Canada, 1998).

The women's attention and adherence to strength activities is also noteworthy since there is a positive relationship between muscular strength and health as one ages (Payne et al., 2000). Although strength training is on the rise, many women can expect to experience some form of disability or loss of physical function to perform even simple daily activities in their older years (La Croix et al., 1997). The only apparent weakness among the women in this sample had to do with meeting the recommendation for flexibility (only four out of the 12 women met it). Most of the women were already aware of this shortfall in their program, although many did not feel compelled to do anything about it, while the remaining women appreciated it being brought to their attention and thought they might "try harder".

The women in this sample believed they were capable of any type of exercise, especially vigorous intensity for a sufficient duration, despite distractions such as weather or work demands. Resnick and Spellbring (2000) found that self-efficacy expectations related to exercise were one of several factors that contributed to the adherence of regular exercise among a group of older adults, mostly women and unmarried (average age was 81 ± 7.2 years). The women in that sample also had

better functional performance and fewer functional limitations attributable to health. Further, the Resnick sample of women believed they were capable of safely exercising, recognized the benefits, and enjoyed their exercise. That study could perhaps be likened to a crystal ball for what the future might hold for this sample of 12 midlife women, if they continue on their current path. The older adults who adhered to a regular walking program in Resnick and Spellbring's sample are living proof of the benefits of regular exercise in curbing losses of physical function and weaknesses in overall health. The findings also accentuate the interrelated importance of health and exercise beliefs, physical function and performance, and perceived health and ability. It is unlikely a coincidence that Resnick's exercise adherers had less physical and emotional limitations, less pain, higher outcome expectations, and stronger motivation than the non-adherers since they were experiencing the well-documented benefits of exercise.

And while the women in this sample claimed to ignore expert exercise advice, or at least not actively seek it out, I got the distinct impression that they knew exactly what they should be doing to achieve their goals. They seemed to know, at least roughly, the main components of Health Canada's Physical Activity Guide (1998) and how, and why, to include each one into their exercise routines. The nine women who were regular, or semi-regular, fitness facility attendees, would have been exposed to expert exercise information without them really even noticing it. There is an undeniable "culture" in a fitness facility whereby much of the talk and poster displays have to do specifically with health and fitness information, namely professional exercise recommendations. It seems improbable for them to have been

immersed in such an environment and not retain, at least residually, some of the more dominant messages.

Question two: Why are midlife women physically active?

At first glance, the women's reasons for regular exercise in this sample do not appear to be new or particularly remarkable; that is, one would be hard-pressed to find many people who do not want to be healthy, or age well, feel good, or look good. These are likely common and rather generic goals of virtually all aging adults. Indeed, the findings of this study share some striking similarities with other research conducted with women (Hassmen et al., 2000; Rohm Young et al., 2001; Poole, 2001). For instance, among a group of currently active African-American women over 40-years-old, personal factors like health and body weight were motivators to exercise regularly. The women in that sample were driven to exercise more by an inner sense of how they felt, rather than depending on other people for feedback or advice. Even their narratives sound similar to this sample of women, *"I like to look good and feel good", "I feel a lot better, "It helps me mentally, it helps me emotionally, it gives me the opportunity to take some time for myself"* (Rohm Young et al., 2001, p. 234). The parallels that can be drawn between these studies could indicate that while specific age and cultural influence are important factors in explaining midlife women's motivation for exercise, they may not be the most critical ones, especially when health is a main concern.

What WAS striking about this group of women is how certain they were in their absolute dedication to and belief in the importance of regular exercise in their lives. They described exercise as a fundamental act of self-preservation. Further, they

believed they could control their health destiny to a large extent; indeed they viewed their health as more secure if it could be "modifiable by psychosocial means" rather than a biological fate in which they played no directive role (Bandura, 1997, p. 207). And with health as the driving force behind their exercise motivation, it certainly enhanced their chances of achieving their goals of aging well, feeling good, and looking good, as well as making it unlikely that they will be riddled with multiple chronic conditions as they age and thus contribute to the growing public health issue of sedentary living. The three general motives of aging well, feeling good, and looking good will be discussed in more detail in the upcoming sections.

"I want to age well": Control for a healthy aging body.

One particularly salient aspect of women's dedication to regular exercise in this sample of midlife women was a desire to exert control over their current and future health. And they are not alone. Most Canadian adults believe strongly that regular physical activity can help them go about their everyday tasks as they age, can help prevent some chronic conditions, and can help reduce stress (CFLRI, 1998a). For the women in this sample, health was everything; if their physical, emotional, or cognitive well being was compromised in any way, they viewed themselves as "unhealthy" and felt a compulsion to remedy the situation. They considered themselves to be active, responsible participants in their own lives and, as such, expected to exert a substantial amount of control over their health through exercise. This finding corresponded exactly to group of regular exercisers who perceived their health to be better than non- or less frequent exercisers, which included less depression and stress (Hassmen et al., 2000). The active group viewed their health as something more in their control, as opposed to luck;

they considered themselves responsible for their own health to a significantly greater degree than the less active group.

Indeed, the human quest to assume control over life circumstances is not new and it "permeates almost everything people do" because of the many personal and social benefits it can provide (Bandura, 1997, p. 1-2). Therefore it should be no surprise that the women in this sample wanted to ensure they maintained a firm grip on the reigns of their lives. One of the women's chief concerns had to do with their aging experience and deciphering to what extent they could influence it. For them, to "age well" meant avoiding, or at least minimizing, the risk of disease or impaired mobility. They did not expect perfect health, with no pain or discomfort, but they did believe that regular exercise was a sure way to ensure a good quality of life as they aged.

Indeed, participation in functional activities has been found to improve or maintain function, which in turn can have positive influences on physical and emotional health and quality of life (Resnick, 2000). Further, the goal of aging well may not be out of reach for the majority of people since most of them "navigate through the middle years efficaciously...[and are] aging well physically and cognitively" (Bandura, 1997, p.198). Yet, Canadian statistics indicate that while the average woman can expect to live 81.2 years, as many as 11 of those years could be filled with at least one activity limitation and a distinct alteration to her quality of life (Statistics Canada, 1996). It should then come as no surprise that women would want to find a way to retain some control over what is often presented as an inevitable, natural course of life events.

As Gail Sheehy wrote in her popular book Passages back in 1976, "More than anything else, it is our own view of ourselves that determines the richness or paucity of the middle years" (p. 345). The women in this sample were comfortable in their own skin, not to mention excited and hopeful about what the future might hold for them, which is contrary to some midlife women in other studies who did not view themselves or their aging experiences as positive (Bannister, 1999; Wyn & Solis, 2001). And while it might be unfair to compare this sample of women, who were strategically recruited based on their physical activity participation, with the two other groups of midlife women, it is striking to compare women of similar ages and witness such a distinct contrast in both their perceived and actual health and their exercise behaviour. One could speculate that exercise (or the lack thereof) plays a significant role in women's lives such that they are able to age healthfully, productively, and confidently. Of course, there is also the possibility that the women I interviewed just happened to be exceptionally lucky and illness-free.

Feeling good: "I know the outcome!"

Another of the women's main motivators for regular exercise was their knowledge, based on personal experience, that they could exercise and that it would make them feel good and consequently enhance their health. Two important precursors to propelling certain individuals onto a lifelong path of regular exercise are their beliefs that exercise can help them achieve their goals for better aging and health (future expectations) combined with a strong sense of feeling capable of performing vigorous and challenging activities (self-efficacy) (O'Brien Cousins, 2003; Piazza et al., 2001; Resnick & Spellbring, 2000). Indeed, self-efficacy and outcome

expectations were "the only statistically significant predictors of exercise behaviour" among a group of older women living in long-term care settings (Resnick, 2000, p. 13). The role of outcome expectations and self-efficacy are even more potent when considered alongside the reality of life, in that there always seem to be distractions that can knock the most confident, best-laid plans off course.

The women in this study said they always felt better after exercising, physically and emotionally, and that was why they needed to make time for it. This viewpoint relates to Bandura's (1997) concept of outcome expectations and how positive expectancies serve as incentives for future performance. More specifically, the women in this sample continually processed their positive and negative expectancy beliefs regarding future outcomes; that is, they placed a high value on exercise and believed that harmful outcomes were unlikely, all the while convinced that regular and more vigorous exercise would lead them to better current and future health. Exercise is something these women knew they could do and they had no doubt they would do it consistently over time. This finding is in sharp contrast to the random sample of active boomer women in O'Brien and Gillis' sample (in revision, 2003) who often stated they "just do it" without thinking much about it because they do not trust their cognitions and are worried they might talk themselves out of exercise.

The women in this current sample may have employed a similar "just do it" approach in their thinking in that they considered exercise such a natural part of their lives. However, they never talked about not trusting themselves to follow through with their planned exercise. Instead, they relied on their high levels of efficacy to help them envisage "success scenarios" that propelled them onto their paths of action

(Bandura, 1989, p. 1176). They also leaned on their recollections of past experience with exercise to guide them; moreover, they credited this history with their current enjoyment of exercise. This finding aligns with Bandura's (1977a) thinking that past behavior is the most powerful influence on self-efficacy. With an average of 10 years of regular physical activity behind them, these women were examples of how early life experience with exercise could contribute to greater self-efficacy for it in later years due to their former competencies (O'Brien Cousins, 1997). Their collective success with exercise maintenance offers a glimpse into how, or why, some people appear to be impervious to disruptions.

The women's strong self-regulatory efficacy could be attributable to at least three factors. First, they attached significant value to regular exercise and talked about it as if it was the most natural thing in the world to do. Second, this intimate bond they had with exercise was developed early in life and had been nurtured consistently over the years such that regular exercise seemed to be a strongly ingrained and prominent part of their identity. As such, they were confident that they could self-assuredly weather the inevitable ebbs and flows of life, knowing that they would always find their way back on course; in a way, back to themselves and the way they wanted to feel. As Bandura wrote (1997), "Any effortful activity requiring continuous self-regulation taxes adherence unless the activity is invested with personal value and becomes ingrained as a habitual part of one's lifestyle" (p. 409). A third consideration is that some people may simply be hard-wired for particular behaviors, like exercise, suggesting a genetic component that could heartily support one's cognitions and environmental influences.

The women in this sample said they were motivated to stick with their exercise programs because of their knowledge that they would feel good when they were done. This strategy correlates with expectancy-value theory where "people motivate themselves and guide their actions anticipatorily by the outcomes they expect to flow from given courses of behavior" (Bandura, 1977a, p. 125). Moreover, their associations of "feeling good" flowed directly from their concept of health. They believed that it was practically impossible to feel good if you were not healthy. Using that logic, they viewed their dedication to regular exercise as a necessary precursor to good health in that exercise afforded them opportunities to do what they enjoyed, either individually or with other people.

This social aspect of exercise was important to them in that they felt their overall health benefited from being in the company of like-minded people. Indeed, this form of social support probably enhanced their exercise experience to a certain degree in that it has been found to be related to adherence, intentions, and self-efficacy (Chogahara, O'Brien Cousins, & Wankel, 1998). However, it should be reiterated that the women in this sample did not rely on other people in order to be disciplined about exercise; their levels of efficacy were exceptional.

Looking good counts, but not for everything.

The women in this sample were not driven to exercise because of a desperate need to conform to somebody else's standard of beauty. Their desire to look good, in tandem with their high levels of exercise, did not approach an obsession with body image or wanting to look drastically younger than their years. Their idea of "looking

good" was more a reflection of self-care practices, like exercise, versus striving for physical perfection. They gained great satisfaction in knowing they were making positive contributions to their health. The women's readiness to view beauty as a result of their health practices finds support in Hurd's (2000) conclusion that the existing literature has "failed to address the emerging prioritization of health over appearance in an older woman's experience" (p. 92). The women in this sample were motivated by a broad spectrum of life goals that went far beyond what they saw in the mirror.

The women maintained that looking good was an attractive "side benefit" they received from their commitment to regular exercise. They made it extremely clear that their motivation for exercise was not steeped in insecurity about their changing physical appearance. In that regard, these women are less likely to succumb to the stereotypical "midlife crisis" (if in fact one exists). Indeed, there was no sign of a midlife crisis brewing, no endless preoccupation with wrinkles or other cosmetic issues among these women. They had no desire to recapture their youth because to "recapture" implies something is missing and they did not feel they were deficient in any form or fashion. They proved, rather brilliantly, that not all women "of a certain age" are fanatical about their appearance. Thus they were not victim to the grieving process some women appear to go through, such that signs of aging like weight gain and wrinkles challenge their sense of identity and self-esteem (Banister, 1999; Coney, 1994) nor did they make the equation between youth and physical attractiveness that older women have made (Hurd Clarke, 2002).

The women in this sample wholeheartedly refused to buy into any social messages promising youth-everlasting, or worse, messages demanding it of them. They did not allow their minds or actions to be taken over by such images or ideas if they did not support their life goals. Still, while the women were not ruled by cultural messages, such as those in women's magazines, they admitted that the messages could be difficult to escape; this was especially true when the messages came from people close to them, like their mothers or husbands. The women talked about how they tried to maintain a reciprocal relationship with their environment; taking from it what worked for them, and ignoring what did not feel right. Of course, this does not mean that cultural influences, like images in women's magazines or the words of a mother or spouse, had no effect on them whatsoever. Instead, the women were "active agents" in their own exercise behavior and motivation, as opposed to passive recipients of environmental stimuli (Bandura, 1977a, p. 165). Their strong self-regulatory capability enabled them to actively consider and process the stimuli they were exposed to and thus exert some means of control over their own behavior in the face of powerful cultural influences (Bandura, 1997). For instance, the women admitted to admiring pictures of women in health and fitness magazines. However, they knew about the common measures taken to get a woman in a magazine to look a certain way, like computer regeneration, and were more in-tune with their own harmony such that viewing magazine images did not cause them angst or a compulsion to conform to what they saw or read. These findings can be linked to Bandura's triadic model of reciprocal determinism (1986); where the women's

exercise behavior was most definitely influenced by a constant and complex interplay among their own beliefs, their culture, and their ongoing experiences with exercise.

The women's regular physical activity participation coupled with their feeling of control over their life are two possible explanations as to why they seemed to be adjusting to their changing appearance with ease and grace. For instance, if as a woman ages she needs to do more exercise to be satisfied with her bodily appearance as Waaler Loland (2000) found, then the women in this sample have set themselves up well for the future given their long history with and current commitment to physical activity. Still, they talked more about the thrill they got when considering what their bodies could do, and how they could hone that ability via regular exercise, rather than focusing on what their bodies looked like when they stood in front of a mirror. The women's comfort within their aging bodies may also be due to their experience with weight training and its contribution to the improvement of their body image and emotional well being (Tucker & Maxwell, 1992). Again, when they talked about lifting weights it was not a discussion about how to mould their body into a particular shape, rather it was about how to maximize bone density and what they could accomplish with their strength.

One last potential explanation for the women's satisfaction with their appearance might be found in McKinley's (1999) finding that middle-aged women's body esteem was positively related to their belief that appearance can be controlled. She noted that middle-aged women "may feel better about their bodies when they feel in control, or it may be that women who feel better about their bodies (perhaps because their bodies conform to some standard) believe they control their bodies more" (p. 767). The

women in this sample seemed to be comfortable with their bodies, both in how they looked, but more importantly, in what they could do. They did not appear to be experiencing any anxiety regarding their bodily appearance and how it may have been changing. Still, their exertion of control could have contributed indirectly to their satisfaction with their appearance by regulating their exercise, which in turn, affected how their bodies looked.

Question three: What influences the type and amount of physical activity midlife women do?

"It's my time."

Most Canadian adults report time as their most common barrier to regular exercise (CFLRI, 1996b). Moreover, it has been suggested that women have "unequal access" to active leisure time when compared with men (Wen et al., 2002, p. 127). The findings of this study show how the women in this sample resolved to avoid having their need and desire to exercise buried under the demands and wishes of everybody else. They made no apologies for insisting that they have designated time during the week to engage in their physical activity, something that brought them pleasure and satisfaction. They stressed that exercise was fundamental form of self-preservation that was essential to their overall health and well being.

As mentioned earlier, seven out of the 12 women in this sample did not have children. It is worthwhile to remind readers that there were still five women in this study who DID have children and that those who did not only figured to just over half the total sample; the numbers easily could have gone the other way. Still, because this

childless reality is atypical of most Canadian households (Statistics Canada, 2001b), further attention will be given to this issue.

Most women are familiar with the daily juggling act that has them satisfying most of, if not all, the routine responsibilities of family life and household duties, while trying to adjust to and fulfill the demands of interchangeable roles such as, wife, mother, and working person (O'Brien Cousins & Keating, 1995). However, it is reassuring that by midlife, some active women have demonstrated an ability to be adaptable to the "changing context of their families" such that they do not allow themselves to be constrained by family and household demands (p. 356). This would be a good parallel to draw with this sample, for even though half or more of the women in this sample did not have children that required close care, or care at all, they still had numerous demands placed on their time, and they had to reconcile those demands with their own needs.

Still, it is possible that a reader of this study could challenge the findings by posing questions like: "Do they not already have enough time to themselves? What could they possibly need 'me time' for?" or "What is the challenge to fitting in regular exercise when you do not have children relying on you?" or worse, "Why should I care about these findings? I can't relate to a woman who doesn't have children." And while those are legitimate queries, it should be noted that this is not the only study to look at exercise motivation among women, and have an available breakdown of who has children and who does not, and not exhaustively detail how that reality may have influenced the woman's exercise plans and motivation (Rodgers & Gauvin, 1998).

It is difficult to compare and contrast the exercise patterns and motivation of women who have children, with those who do not, when current statistics (Alberta Centre for Active Living, 2003; CFLRI, 2002; U. S. Department of Health & Human Service, 1996) do not address the impact motherhood can have on physical activity participation. More detailed information regarding family composition, that includes children in the household, would be valuable considering that women are often cited in those same reports as being less adequately active than men yet the reasons are not investigated. For all we know, it could be that the so-called "insufficiently active" women who, on an average day spend more time on primary child care than men: 2.4 hours versus 1.8 (Statistics Canada, 1998), spend their days chasing their children around the house rather than lifting weights in a gym.

Perhaps not surprisingly, in the few studies that have explored the role of motherhood on women's physical activity participation, mothers have been found to be less active than women without children, especially in terms of frequency, duration, and intensity and experience common barriers, like lack of time and energy, to a higher degree (Verhoef & Love, 1992, 1994). Indeed, the role of motherhood was found to encompass many of the barriers to physical activity, like dealing with multiple demands and lack of support (Wen et al., 2002).

The life choices the childless women made would appear to make their decision and ability to exercise regularly easier than it might be for a mother since it would appear that not having children protects a particular lifestyle, in this case regular exercise. However, two points are worth making by way of Verhoef and Love's (1994) sample. In their quantitative study, 56% of the women in that group were non-

mothers; suggesting that not having children may not, in fact, be so unusual. Also, among the women who did not have children, one might have expected their participation rates to soar; yet, while their exercise participation was higher than the mothers, their engagement in strenuous, frequent (more than twice per week), and sufficient length (at least one hour in the past weak) averaged out to just under 41%; not exactly the stellar participation rates one might expect among people who supposedly have "all the time in the world" to exercise.

In the end, everybody makes life decisions that affect how their lives will unfold. The women's decision to not have children was not investigated in this study. In any case, it should still be judged fair that all women, regardless of whether or not they have children, deserve time to themselves and some respect and admiration for making a long-term commitment to regular exercise.

Being one's own best expert and guide: "I know what works for me...I certainly don't take my direction from anyone else at this stage."

According to them, it was the women themselves who influenced the type and amount of exercise they did. Many of them described an inner drive or motivation to exercise that was stronger than any outside source, like Health Canada's Physical Activity Guide (1998). And while they were not too keen on constantly consulting and monitoring their exercise performance based on the specific exercise guidelines, they still managed to meet most of the main recommendations. Many of the women expressed rather matter-of-factly how it was their own inner drive to exercise that kept them moving on a regular basis.

Self-motivation involves standards, or goals, against which to evaluate performance and relies on discrepancy production and discrepancy reduction (Bandura, 1977a). Goals represent the yardstick by which individuals measure their performance and define personal success (Dzewaltowski, 1994). Further, goals provide a means to "raise or lower one's efficacy expectations or create satisfaction or dissatisfaction" (p. 1397). The women in this sample talked about the importance of constantly challenging themselves in their exercise programs; which may be why they seemed to be so drawn to vigorous activities like running and weight lifting. They acknowledged their need to repeatedly do something that would test their abilities and not allow them to become lax in their effort, for indeed a certain amount of dissatisfaction with performance is always necessary to maintain or heighten motivation and to spur on the creation of higher goals (Bandura, 1986). For instance, if a woman perceives negative discrepancies between her performance and the standards she has set, then her dissatisfaction (and hopefully still intact self-efficacy) motivates her to attain the standard or goal and become satisfied, and ultimately move toward another goal.

SCT contends that intrinsic motivation for exercise behavior is gradually generated as one's self-efficacy and self-evaluative mechanisms, such as perceived competence and mastery, come into effect and grow (Bandura, 1986). Some authors contend, for example, that it is unlikely a woman would be intrinsically motivated to adopt and maintain an exercise program for the sheer enjoyment of it (McAuley, Wraith, & Duncan, 1991). Rather, exercise initiation, in their view, is seen as initially stemming from an external reason like wanting to improve appearance. Intrinsic

motivation, they write, only comes into play once "physiological adaptation sets in and the individual perceives herself to be self-determining in their activity" (p. 150).

That explanation of intrinsic motivation might hold some truth for this sample of women. Some of the women recalled being more focussed on their appearance when they were younger, but they could not say for sure that their current inner drive to exercise stemmed from that earlier motivation since they were so heavily immersed in their current goals. If anything, they attributed their successful involvement in regular physical activity to the roots laid down in their early childhood and teenage years and to the vision they have created for their future. As Bandura (1997) wrote, "conceived future states are converted into current motivation and regulators of behavior...this forethought is translated into incentives and courses of action through the aid of self-regulatory mechanisms" (p. 122). The women in this sample envisioned themselves to be healthy now and in the coming years. They were motivated to achieve goals that were, to them, natural derivatives of health, like aging well, feeling good, and looking good. Their positive visualizations enabled them to persist in the day-to-day practice of exercise by offering glimmers of hope and satisfaction.

Cultural influences.

The women in this sample did not view themselves as victims of a society that imposed wild or unrealistic appearance expectations on them. Instead, they seemed to view their social environment as a fluid "backdrop" whereby they took what they needed, manipulated what they could, and adjusted to the conditions they could not control or change (Hooyman & Kiyak, 1996, p. 5); in essence, they had a symbiotic view of their culture that allowed them a more harmonious life experience.

However, their more independent stance would seem to fly in the face of what advertisers and magazine copywriters would have us believe; that women are willing to go with every cultural whim about what they should do or look like. To be sure, the women were aware of social influences, in the form of television, magazines, or other people, but their commitment to regular exercise was guided by more internal messages, like how they felt and what they wanted to achieve. Their heavy reliance on their own beliefs and experiences might indicate that they felt let down or confused by the plethora of medical and health information dispensed in the popular media. Again, while these women did not totally dismiss cultural influences regarding exercise or aging, they did take a strong stance against allowing their environment to dictate how they would live their lives; they trusted themselves more than any outside source.

Chapter six

Summary and conclusions

The midlife women in this sample appeared to be exemplary role models for regular exercise amid the North American epidemic of sedentary living. On average, they fared far better than the typical Canadian when it came to meeting or exceeding the exercise guidelines set out by Health Canada's Physical Activity Guide (1998) for frequency, intensity, duration, and type of exercise. Their consistent involvement in physical activity may protect them from the increased likelihood of encountering some form of disability in their later years (La Croix et al., 1997). This is especially important considering that women's life expectancies are currently rated at least five and a half years longer than men (Pan American Health Organization, 2001) and that life expectancy has been rising continuously over the last 25 years (Health Canada, 2002).

The women demonstrated good knowledge of health outcomes as they considered their regular exercise participation to be a fundamental act of self-preservation that benefited their current and future health, which for them included aging well, feeling good, and looking good. Their drive to exercise regularly was guided by their ardent beliefs of personal control and exercise's value, self-efficacy, and social influences. These findings fit well with SCT (Bandura, 1986) in that the women's physical activity behavior was guided cognitively by the theory's dominant theory constructs, as well as their positive expectancies regarding the outcome of their regular investment of time and effort.

Physical and emotional health was at the apex of their list of priorities. The women overwhelmingly perceived themselves to be healthy in mind, body, and spirit, and therefore took proactive steps, like participating in regular physical activity, to remain that way and stay in control of their health destiny. And while some mothers and husbands tried to impose beauty ideals on them-- influences powerful enough to affect, even for a moment, how the women perceived themselves—the women generally appeared to be happy and confident in their own skin.

Implications and recommendations

Future research into female exercise motivation could apply the specific knowledge and insight derived from this study to create an in-depth questionnaire for distribution to a larger sample of midlife women. The resulting research tool could delve more comprehensively into the social and cultural issues that shape active midlife women's motivation for regular exercise by asking more targeted questions, both on paper and during subsequent interviews; thus, an even more focussed picture of what women are doing for exercise, and why, could be developed.

Further, the findings of this study may guide researchers in their quest to piece together the puzzle of why some people are able to cultivate successfully and maintain a regular exercise program and why some find that to be an elusive goal; could it be that some people are hard-wired for exercise? For instance, since the women in this study seem be aging better, both physically and psychologically, than previous generations and their male peers, further investigation into the role of early life experience with exercise, perceived control, and self-efficacy may be warranted

since each of these three factors appeared to be pivotal to the women's success with regular exercise.

Health was the overarching theme for the midlife women in this sample. It may be time for health to be viewed more holistically within our health care system whereby programs to cultivate and maintain it would be better supported. For instance, our current system is set up to care for people once they have become ill. Why not have health and fitness programs accessible to everybody so that susceptibility to chronic conditions that will eventually require medication and hospitalization are lessened? This is where professionals who work in the fields of health, fitness, and recreation come in; they are essentially the frontline workers in this scenario.

Health and fitness programmers now have another resource to draw upon when they are confronted with the challenge of creating, marketing, and implementing effective and enjoyable exercise programs to a group of individuals who are not well profiled in the literature, and in general not well understood. Their creation and promotion efforts may be enhanced if they realize that some midlife women are motivated more by health than beauty; that their exercise goals are largely determined by their quest for health and to experience aging as a positive, productive, and relatively pain-free journey. For instance, based on the time I spent with them, the midlife women in this sample would probably not attend an exercise class that used the embarrassing title of "Tums and bums" (which unfortunately is more common that one might think). Instead, the women would be more excited and engaged by an exercise class that emphasized building muscular and core strength so that they could

be more productive with their bodies, like being able to re-arrange their furniture if need be and staving off so-called inevitable declines in physical mobility.

The insight health and fitness professionals gain about midlife women's reasons for exercise could assist them in gaining greater access to other groups of people, who perhaps have been unable to mobilize themselves into a regular exercise routine, and inform them about the specific benefits of particular types of exercise. This access should include both the managers and the people that actually deal with the participants on a regular basis, like the class instructors. All to often, important programming decisions are made in the absence of the very people who could provide valuable input and insight based on their frontline experience in exercise classes.

Advertisers may have to re-think their ideas of what aging women want and need and refrain from playing the youth "card" at virtually every point so as to not alienate a large and potentially profitable chunk of their consumer market. The midlife women in this sample did not relate to messages decrying age and an older appearance, so advertisers might be wise to stop assuming that all midlife women are obsessed with so-called visual flaws of aging like wrinkles or cellulite. For example, if midlife women exercise predominantly for health and not beauty, then exercise might be better positioned in advertisements and magazine articles as a way for women to achieve both short and long-term health goals, instead of the usual quick fix to help them lose weight for bathing suit season.

Final words

In sharing these women's perspectives on physical activity, health, and aging, I hope that the findings of this qualitative study will contribute to the recognition of at least

three things. One, active women in this sample dispelled any notion that midlife has to be a waiting area for entry into a life phase of decline and degeneration. Rather than "slowing down" and making their physical activity "age appropriate", they seemed to be eager to continually review and, if necessary, accelerate their exercise programs to ensure they were sufficiently challenged and enthused about their program.

Second, active women's perspectives about exercise and life require us to re-examine the "rules" of aging such that getting older is not regarded as a travesty of life that all people must endure, especially women and how they look, but rather a potentially splendid opportunity for continued growth and pleasure. The women in this sample offered an exciting glimpse into midlife that has the potential to inspire women (and men) of all ages. They were able to showcase beautifully the vitality and confidence of physically active contemporary midlife women and how they are redefining aging by refusing to shuffle into the background of life.

Thirdly, active midlife women are a wealth of life experience and knowledge formulated over years of personal experience and experimentation. They were very clear about what they want, what they need, and what they will and will not do in order to satisfy their health and exercise goals. Their honest opinions and insights are of interest to a whole host of people, ranging from local fitness instructors, to fitness club managers, to municipal, provincial, and federal government health and recreation department representatives, to researchers in the field of aging and exercise, to CEOs of multi-million dollar corporations, to advertising and marketing executives. At every point on the communication continuum, and at every level on the social hierarchy, midlife women have a role to play in shaping our current and

future views of aging and exercise, and they certainly have the knowing voice to do it. Indeed, the fitness industry seems to be taking notice of adults aged 50 and over, the so-called "fastest growing market segment in the fitness industry", by tapping more into their interests and offering more mind-body fitness activities, like yoga and Pilates (Merrithew & Merrithew, 2002, p. 20).

The significance of this study lies in its potential to open the door to a host of other ways of thinking about North American women's interconnected experience of health, exercise, and aging. Until recently, most research dedicated to midlife women focussed on their experiences and management of menopause and its concomitant symptoms thus negating the possibility of revealing the "meaning midlife holds for contemporary women and how they are experiencing it" (Fugate Woods & Sullivan Mitchell, 1997, p. 439). The voices of the 12 women in this study provide a glimpse into why regular exercise is such a draw to many midlife women and describe in refreshing detail what it means to age well, feel good, and look good as a physically active midlife woman in contemporary North America. To them, health is at the core of all their life experiences; thus everything they do, like regular physical activity, must support their goal of living a vibrant, long life. It is hoped that readers of this study will come away with a better understanding of what exactly makes this typically underrepresented, and sometimes misunderstood, cohort "tick" when it comes to their motivation for regular exercise.

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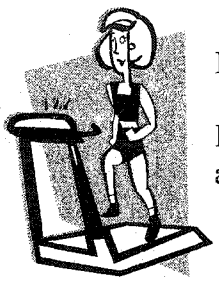
Appendix A

Adapted Older Adult Exercise Status Inventory (ESI)

HOW ACTIVE WERE YOU IN THE PAST 7 DAYS?*



Name:_____ **Phone:**_____

Instructions: How much time in minutes did you spend on these activities in the past week? Add your own activities at the end (as "Other") if they are not listed.

Activity	Time spent in minutes on each occasion							
	Mon	Tues	Wed	Thur	Fri	Sat	Sun	TOTAL MIN
Aerobic fitness class (6)								
Aquacise class (6)								
Aqua-jogging (8)								
Boxercise (12)								
Cycling (indoors-light) (5.5)								
Cycling (indoors- sweaty) (6.0)								
Bowling (all) (3)								
Calisthenics (4.5)								
Dancing: Ballroom & Ballet (5)								
Dancing: Hip hop/Funk (12)								
Dancing: Jazz (10)								
Gymnastics (10)								
Jogging (warmth-inducing) (10)								
Jogging (sweaty) (12)								
Pilates (10)								
Resistance training (6)								
Rebounding (10)								
Rope skipping (12)								
Rowing machine (8)								
Running (12)								
Skating (ice or roller) (6)								
Skiing (downhill) (6)								
Skiing (x-country) (12)								
Snowshoeing (6)								
Stretching exercises (3)								
Swimming (lengths) (10)								
Swimming (wading) (3)								
Tai Chi (3)								
Walking (stroll) (3)								
Walking (moderate) (4)								
Walking (brisk/race) (6)								
Weightlifting (6)								
Yoga (Hatha) (5)								
Yoga (Power) (5)								
Other								
Other								
Other								

For researchers only:

1) Calculate estimated kilocalorie expenditure for each specific activity:

e.g. MET (3) x total minutes (120)= 360 kcal

a) Total of physical activity of 3.9 METS or less (light)= _____

b) Total of physical activity of 4-5.9 METS (moderate)= _____

c) Total of physical activity of 6.0 METS or more (vigorous)= _____

*Adapted with permission: O'Brien Cousins, S. (1996). An older adult exercise status inventory: Reliability and validity. *Journal of Sport Behavior, 19*(4), 288-306.

Appendix B

Interview blueprint

1) Introduction/preamble:

This study is exploring midlife women's reasons for being physically active at midlife. You do not have to answer any questions that make you feel uncomfortable. Please ask me to explain anything that is unclear to you. There are no right or wrong answers -- your thoughts and opinions are what are important. I would like to record your answers, both with a tape recorder and a note pad. Is that o.k with you? (tape machine turned on and note pad is made available with permission). Ultimately, I am interested in three things: *what* you do for physical activity, *why* you are physically active, and *what influences* the type and amount of physical activity you do. All or some of those points may be covered in our interview. I will be taking my lead from you in terms of what we talk about because it is your thoughts and opinions that interest me. Now, if it's o.k. with you, let's move on...

2) Read information letter/ask questions

3) Sign informed consent form

4) Obtain demographic information

Name:

Age:

Address:

Phone number:

Education level:

Marital status:

Health:

Work status: Work type:

5) Complete adapted OA-ESI

6) Opening question:

I'm interested in learning about your physical activity history: You're active now, have you always been active? If not, when did you start and why?

7) Follow-up questions/Probes:

a) What do you do for physical activity?

b) Why are you physically active i.e., what are your reasons or motives?

c) What factors influence the type and amount of physical activity you do?

8) Telephone follow-up questions:

a) Note: This was a follow-up question only for interviews 1-7. It became part of the original face-to-face interview for interviews 8-12 after the women directly recruited from the fitness facilities were unable to refer me to any women who exercised at home:

First, women were told of the CFLRI (1996) exercise location study comparing home versus a facility. Then, they were asked:

i) Where are you active most often? (e.g., home or facility)

ii) Why?

iii) Does it ever change or vary (e.g., seasons, time of year)

b) All women were asked to confirm the following information after some interviews voluntarily uncovered this useful information:

i) smoking status (e.g., never, ex-, or current)

ii) number and age of any children

iii) any other dependents?

Appendix C

Recruitment poster

PHYSICAL ACTIVITY STUDY

1) Are you physically active for at least 30-minutes on most days of the week during your leisure time?

2) Do you participate in a variety of activities like walking, strength training, or stretching at a moderate to vigorous intensity?

3) Are you a 40-60 year old woman?

4) Would you be comfortable having your interview (s) audiotaped?

5) Do you live in Calgary?

If you answered "yes" to the above five questions then I want to talk with you! You may be interested in participating in a University of Alberta study that explores midlife women's reasons for being physically active.

FOR MORE INFORMATION PLEASE

CALL:

Michelle Gillis at 510-4771

Appendix D

Information letter for facility managers

Midlife women's reasons for being physically active

Investigator: Michelle M Gillis, B. A.
M. A. candidate (Physical Education & Recreation)
Faculty of Physical Education & Recreation
University of Alberta (403) 510-4771

Supervisor: Sandra O'Brien Cousins, Ed. D. (Professor)
Faculty of Physical Education & Recreation
University of Alberta 1-780-492-1033

Information Letter

Purpose: The purpose of this study is to explore active women's reasons for exercising at midlife and to build a better understanding of their specific motives for exercise. Ultimately, this study aims to discover *what* women do for physical activity, *why* they are physically active, and *what influences* the type and amount of physical activity they do. The data being collected will be used in the graduate thesis of Michelle M Gillis.

Procedures: Women aged 40-60 who meet the inclusion criteria of the study are initially being recruited from a variety of Calgary fitness facilities via internal signage. Each woman recruited from a facility will be asked to refer the researcher to a woman who is physically active in a location other than a fitness facility. This two-step process will enable the researcher to better 'round out' the sample based on age, physical activity experience, and location of physical activity. One-on-one, in-depth, semi-structured interviews will be conducted with up to twelve women who meet the study's inclusion criteria. Interviews will take place either at your facility (or at the location most convenient for the women e.g., their homes). My questions will deal with their physical activity experience and factors that may influence their motivation for exercise. The opening question for every interview will be: I'm interested in learning about your physical activity history: You're active now, have you always been active? If not, when did you start and why? There will be three main follow-up questions or probes: 1) What do you do for physical activity? 2) Why are you physically active? 3) What factors influence the type and amount of physical activity you do? Interviews will be audio-taped with their permission. Handwritten notes may also be taken. Women will be interviewed a maximum of twice. Each interview will take between 1-2 hours. The first interview will be scheduled for two hours to accommodate: additional participant questions, reading of the information letter, signing of the informed consent form, obtaining demographic information, completion of an adapted weekly physical activity inventory, and to begin the

interview. The second interview (if applicable) will follow-up on the themes brought up by the women during the first interview.

Who is collecting data: I (Michelle Gillis) will be conducting and transcribing all the interviews.

Benefits: It is anticipated that women who participate in this study will welcome the opportunity to express their opinions or beliefs regarding physical activity and enjoy contributing to a growing body of knowledge that will contribute to our current and future understanding of midlife women's physical activity motives and behavior. Finally, if this work is published at a future date, your facility will be positively acknowledged.

Risks: Given the instrumentation used to collect the information in this study (i.e., interviews), the risks associated with participation revolve around the disclosure of personal or sensitive information. This may make some participants uncomfortable. If requested by the woman, referral to a counselor will be provided.

Confidentiality: All information that your members provide will be kept in strict confidence. Their identity will NEVER be revealed in any presentation or publication of the results of the study. To ensure confidentiality, raw data will be coded and stored in a locked filing cabinet to which only the investigator will have access. Normally data is retained for a period of five years post-publication, after which it may be destroyed.

Freedom to Withdraw: If any of your members decline to continue or withdraw from the study, their information will be removed from the study upon their request.

Additional contacts: If you have concerns about this study, you may contact Dr. Wendy Rodgers, Chair of the Faculty Ethics Committee, at 1-780-492-5910. Dr. Rodgers has no direct involvement with this project.

Appendix E

Information sheet for snowball sample

Physical activity study

Thank you for considering to participate in my study (in conjunction with the University of Alberta). The following information is an abbreviated version of the formal information letter created for research participants. You will receive the longer format information letter if you decide to participate in the study. Please contact me, Michelle Gillis, at 510-4771 if you have any questions or if you decide that you would like to participate in this study.

Purpose

-This study aims to identify midlife women's motivation for exercise by discovering *why* you are physically active, *what* you do for physical activity, and *what influences* the type and amount of physically activity you do.

Procedures

-A one-on-one, in-depth, semi-structured interview will be conducted with you at your facility (if applicable) or at the location most convenient for you.

-You will be interviewed a maximum of twice. Each interview will take between 1-2 hours.

-My questions will deal with your physical activity experience and factors that may influence your motivation for exercise.

-All interviews will be audio-taped.

Appendix F

Information letter for participants

Midlife women's reasons for being physically active

Investigator: Michelle M Gillis, B. A.
M. A. candidate (Physical Education & Recreation)
Faculty of Physical Education & Recreation
University of Alberta (403) 510-4771

Supervisor: Sandra O'Brien Cousins, Ed. D. (Professor)
Faculty of Physical Education & Recreation
University of Alberta 1-780-492-1033

Information Letter

Purpose: The purpose of this study is to explore your reasons for being physically active at midlife and to build a better academic understanding of your specific motives for exercise. Ultimately, this study aims to discover *what* you do for physical activity, *why* you are physically active, and *what influences* the type and amount of physically activity you do. The data being collected will be used in the graduate thesis of Michelle M Gillis.

Procedures: Women aged 40-60, who meet the inclusion criteria of the study, are initially being recruited from a variety of Calgary fitness facilities via internal signage. Each woman recruited from a facility will be asked to refer me to a woman who is physically active in a location other than a fitness facility. This two-step process will enable me to better 'round out' the sample based on age, physical activity experience, and location of physical activity. A one-on-one, in-depth, semi-structured interview will be conducted with you at your facility (if applicable) or at the location most convenient for you e.g., your home. My questions will deal with your physical activity experience and factors that may influence your motivation for exercise. Interviews will be audio-taped with your permission. Handwritten notes may also be taken. You will be interviewed a maximum of twice. Each interview will take between 1-2 hours. The first interview will be scheduled for two hours to accommodate: additional questions you might have, reading of the information letter, signing of the informed consent form, obtaining demographic information, completion of a weekly physical activity inventory, and to begin the interview. The second interview (if applicable) will follow-up on the themes brought up by you during the first interview.

Who is collecting data: I (Michelle Gillis) will be conducting and transcribing all the interviews.

Benefits: I hope you welcome the opportunity to express your opinions or beliefs regarding physical activity. Your ideas will contribute to a growing body of knowledge that will contribute to our current and future understanding of midlife women's physically active behavior.

Risks: The risks associated with interview data revolve around the disclosure of personal or sensitive information. This may make you uncomfortable. If you request, referral to a counselor will be provided.

Confidentiality: All information that you provide will be kept in strict confidence. Your identity will NEVER be revealed in any presentation or publication of the results of the study. To ensure confidentiality, raw data will be coded and stored in a locked filing cabinet to which only the investigator will have access. Normally data is retained for a period of five years post-publication, after which it may be destroyed.

Freedom to Withdraw: If you decline to continue or you withdraw from the study, your information will be removed from the study upon your request.

Additional contacts: If you have concerns about this study, you may contact Dr. Wendy Rodgers, Chair of the Faculty Ethics Committee, at 1-780-492-5910. Dr. Rodgers has no direct involvement with this project.

Appendix G

Informed consent form

Part 1 (to be completed by the Principal Investigator):

Title of project:

Principal Investigator:

Co-Investigator (s): Include affiliations and phone number (s):

Part 2 (to be completed by the research participant):

Do you understand that you have been asked to be in a research study?	Yes	No
Have you received and read a copy of the attached Information Sheet?	Yes	No
Do you understand the benefits and risks involved in taking part in this research study?	Yes	No
Have you had an opportunity to ask questions and discuss this study?	Yes	No
Do you understand that you are free to refuse to participate, or to withdraw from the study at any time, without consequence, and that your information will be withdrawn at your request?	Yes	No
Has the issue of confidentiality been explained to you? Do you understand who will have access to your information?	Yes	No

This study was explained to me by: _____

I agree to take part in this study.

_____ _____ _____

Signature of Research Participant Date Witness

_____ _____

Printed Name Printed Name

I believe the person signing this form understands what is involved in the study and voluntarily agrees to participate.

_____ _____

Signature of Investigator Date

MICHELLE M GILLIS

An energetic, creative, passionate and resourceful individual dedicated to a high level of achievement within the industries of health, fitness and communications.

AREAS OF SKILL

COMMUNICATIONS

- Counseled clients in health, fitness, and lifestyle issues
- Led health and fitness workshops and presentations
- Prepared written resources to promote a healthy lifestyle
- Appeared as a local television fitness expert
- Quoted in newspaper articles devoted to health and business
- Produced talk shows for Canada's top radio news station

LEADERSHIP/SUPERVISORY

- Founded and operated a successful health and lifestyle consulting company
- Trained and assessed new personal trainers for a national organization
- Created comprehensive personal training programs for clients
- Designed and instructed a range of fitness classes
- Organized, delegated, and supervised recreation staff duties
- Planned and implemented recreation programs for all ages

RESEARCH

- Explored active women's motivation for regular exercise at midlife (Master's thesis)
- Co-researcher in the study of self-talk and physical activity in baby boomers
- Assessed gross motor skill development in special education children
- Explored attitudes toward aging and leisure in North American society

EDUCATION AND TRAINING

University of Alberta, Edmonton, AB
- Master of Arts (Exercise Gerontology)

University of Waterloo, Waterloo, ON
- Honours B.A Recreation and Leisure Studies--Co-operative Program

Canadian Personal Trainers Network, Calgary, AB
- Western national training camp for course conductors and practical assessors

Ryerson Polytechnic University, Toronto, ON
- PPTS- Mastery of Personal Training (Professional Personal Training School)
- PATS- Mastery of Teaching- Level 1 (Professional Aerobics Training School)

The Radio Shop, Barrie, ON
- Trained in radio broadcasting techniques and principles

PRIMARY WORK EXPERIENCE

Academic course instructor (PEDS 384: Educational Gerontology)
- University of Alberta, Edmonton, AB (September- December 2001)

Co-researcher (Self-talk and physical activity in baby boomers)
- University of Alberta, Edmonton, AB (September 2000- February 2004)

Business owner/Personal trainer
- Links For Life, Edmonton, AB & Toronto, ON (April 1996- February 2001)

Fitness instructor
- Various locations, Edmonton, AB & Toronto, ON (May 1997- December 2000)

OTHER WORK EXPERIENCE

Talk show producer
- CFRB AM 1010, Toronto, ON (February- September 1995)

On-air personality/News announcer
- Rock 95 FM, Barrie, ON (March 1993- April 1994)

Personnel assistant
- Shell Canada Products Limited, Toronto, ON (January- April 1991)

Technical research assistant
- Employment & Immigration Canada, Hull, QC (April- July 1990)

Telephone sales representative
- Tele-Direct (Publications) Inc., Toronto, ON (August- December 1989)

Research assistant
- Variety Village, Toronto, ON (January- April 1989)

Summer program supervisor
- Fergus Recreation Department, Fergus, ON (May- September 1988)

PERSONAL DATA

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