THE PROCESS OF SHAPING SELF THROUGH REGULAR PHYSICAL EXERCISE AMONG WOMEN: A GROUNDED THEORY

by

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Abstract

The purpose of this study was to investigate the psychological and social processes of regular physical exercise use by women who consider themselves "exercisers." In using grounded theory method, the primary objective of this study was to generate a substantive theory that described (a) the experiences of women who self-identified as exercisers and engaged in regular physical exercise, (b) the contextual factors that influenced their participation, and (c) explained the experience of participating in regular exercise, considering both the positive and negative effects of exercising, and the process of change through its use.

Twenty-two women (age range, 21 to 60 years) were interviewed about their exercise experience. Twenty participants self-identified as exercisers. Two other participants, a former exerciser, and a nonexerciser, were interviewed in order to explore theory limits.

A middle-range theory of "shaping self through exercise" was identified as the basic process of these women's experience of regular physical exercise. The process involved the reciprocal connection between two intrapersonal phases: "shaping up" and "experiencing self as shaped." Through interactions among the subprocesses of shaping up ("talking to self," "experiencing exercise," "diverting from self" and "feeling good about self") exercisers in this study experienced self as shaped through "growing into self," "grounding self in exercise," and "expressing self through exercise." Influenced by personal meaning and contextual conditions (one's personal exercise background, current life context, and social-cultural environment), exercisers frequently re-experienced both phases. Aspects of each conceptual element of the theoretical model are identified and illustrated by narrative data.

This grounded theory provides insight into the complexity of women's physical exercise
experience. To appreciate this experience it is necessary to view the social-psychological process from an interactionist perspective. Findings suggest that women’s exercise may be more than physical movement in reaction to environmental and personal influences, but may also be an intrinsically motivated endeavour towards self-growth, self-care, and self-expression. Awareness of the complexity of this process, including personal and contextual influences, may provide guidance towards more successful adoption and maintenance of exercise. Implications include future research directions to extend theoretical boundaries and specificity.
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Dedication

To my parents.

To my father for teaching me the value of education and perseverance, and to my mother for modelling for me the value of caring for others, and for encouraging me to be physically active and strong for myself.

She could swing a six pound dumbbell
She could fight and she could box
She could row upon the river
She could climb upon the rocks
She could golf from morn ’till evening
And play tennis all day long
But she couldn’t do the dishes
For she wasn’t very strong

- Anonymous
CHAPTER I

INTRODUCTION

The question that initiated the present study stemmed from personal, academic, and clinical curiosity about my own and others' exercise behaviours, namely, "what is exercise about for women." Specifically, I wondered how exercise affects women over time, whether we change by participating in exercise, how the experience of exercise changes over time, and how we make sense of this experience. Further, I was curious as to why participating in regular exercise was easier for some women than for others, and for those women who do exercise regularly, why they sometimes find exercise more difficult to do, than at other times. As a counselling psychologist, I wanted to know how I could help clients with the process of change through exercise (including initiating, resuming, maintaining, or restricting exercise behaviour) for health benefits.

The study of women's experience(s) of exercise is important for the field of counselling psychology because of the assumed connection between mental health and regular use of physical exercise. Despite research in the area of exercise and sport psychology being quite broad, relatively little is known of women's personal experience of their participation. In general, existing studies range from the investigation of motivation for and adherence to participation in an exercise program (e.g., Marcus, Rakowski, & Rossi, 1992), to the physiological and psychological effects or outcomes of exercise (e.g., King, Taylor, & Haskell, 1993; Van Dooren, DeGeus, & Orlebeke, 1988). As a result of these studies, exercise is frequently prescribed by health-care professionals, or it is self-prescribed, not only for somatic benefits, but also for the alleviation of depression and anxiety, increasing social contact, and for the promotion of self-care and self-esteem (McEntee & Halgin, 1996;
Smith, Gould, See Tai, & Iliffe, 1996). In this way, exercise has been encouraged, yet
without consideration for the complexity of the psychosocial experience of exercise for
women, their perception of themselves in regards to exercise, or the rich social environment
in which exercise takes place. Thus, the purpose of this study was to develop a theory of the
basic social-psychological process of regular physical exercise use of women who consider
themselves "exercisers."

Although the physiological health-enhancing effects of physical exercise have been well-
documented, less is known about the psychological impact of exercise. Much of the research
to date has been directed towards the benefits of exercise and hypothesized effects. Recent
meta-analyses (e.g., Long & Van Stavel, 1995; McDonald & Hodgdon, 1991; North,
McCullagh, & Tran, 1990; Petruzzello, Landers, Hatfield, Kubitz, & Salazar, 1991;
Schlicht, 1994) and narrative reviews (e.g., Leith, 1994; Leith & Taylor, 1990) of research
on the effects of exercise support the finding that exercise participation is associated with a
reduction in depression (e.g., North et al.) and anxiety (e.g., Petruzzello et al.), and an
increase in self-esteem and self-concept (e.g., Marsh & Sonstroem, 1995; McDonald &
Hodgdon; Sonstroem, Harlow, & Josephs, 1994). These are problems that clients frequently
present in counselling settings (Simon, Ormel, Von Korff, & Barlow, 1995; Statistics
Canada, as cited in Hunsley, Lee, & Aubry, 1999), with a higher prevalence of depression
and anxiety for women compared with men (e.g., Cleary, 1987; Murphy, Sobol, Neff,
Olivier, & Leighton, 1984; Statistics Canada, 1995, 1998). It is important to note that
depression has been found to be associated with a high level of chronic stress for both men
and women (Statistics Canada, 1995). These effects of exercise have been studied largely by
examining pre- and post-differences in participants for short-term exercise treatment
programs (follow-up information, if any, is usually collected within 6 months). However,
there is more to be learned from women who seek to sustain exercise, without benefit of a
more formal and time-focused treatment program. Further, the results of these studies have
provided little insight into the negative psychological effects of exercise, or the effect on
individuals who may not initially present with negative affect and therefore do not require
"treatment." Considering that Sonstroem (1988), among others, has advocated the view of
adherence to exercise as a process as opposed to a static consideration, these studies provide
little information on how the experience of exercise may change over time, the process of
personal change through the experience of regular exercise use, or how exercisers make
sense of this process of change. Thus, previous investigations may have limited, rather than
expanded, our understanding of the experience of participation in regular exercise.
Substantive theory may more fully explain the experience of exercise beyond the relations
between the behaviour of physical activity, the physiological changes, and the psychological
outcomes.

Some researchers have argued that the beneficial effects of exercise in the prevention and
treatment of cardiovascular and other health disorders may accrue in part from exercise-
mediated psychological changes, such as decreases in depression and anxiety, and improved
self-concept (e.g., Martin & Dubbert, 1982). Caution has been expressed about the
interpretation of these research findings, for example, because of the use of reductionistic
arguments, and the hypothesized linear direction of causality (Fahlberg, Fahlberg, & Gates,
1992; Rejeski & Thompson, 1993). Moreover, little is known about the pervasiveness and
magnitude of these exercise-related psychological changes (Gauvin & Brawley, 1993). Thus,
it may be useful to discover from exercisers if they have experienced (are experiencing)
psychological changes that they attribute to their exercise, and what their experience has been
of these changes over time.
Numerous physiological and psychological hypotheses have been proposed to explain this assumed connection between exercise and mental health. The physiological hypotheses include: (a) that exercise stimulates the body's production of opiates known as beta-endorphins, which are said to have a calming effect on the brain; (b) that exercise increases body temperature, improving blood flow in the brain and relaxing the nervous system; and (c) that exercise somehow changes the electrical patterns of the brain (Etnier et al., 1997; Kubitz & Pothakos, 1997; for reviews see Morgan, 1985; Petruzzello et al., 1991).

However, Rejeski (1994) has stated that "it is misguided to theorize that explanations for psychosocial outcomes will ultimately be reduced to some physiological system (e.g., cardiac-related cortical activity) or neurochemical activity" (p. 1053).

Rejeski (1994) and others (e.g., Etnier et al., 1997) argue instead that psychological effects may occur in the absence of clearly identifiable changes in one's physiology. For example, one psychological hypothesis put forth argues that exercise provides a "time out" from the stress of one's environment (Bahrke & Morgan, 1978; Sachs, 1982). The studies that focus on the relation between exercise and psychological health from this perspective typically have been designed to verify hypotheses that were largely generated atheoretically, or from narrowly constructed theories. To date no integrated theoretical model has been either substantiated or proposed to explain the nature of the relation between exercise and psychological health (Plante, 1993; Scully, Kremer, Meade, Graham, & Dudgeon, 1998).

It is of interest that the recommendations for the prescription of exercise regimens (e.g., the suggested accumulation of 30 to 60 minutes of moderate intensity physical aerobic activity on most days of the week; Handbook for Canada's Physical Activity Guide to Healthy Active Living, 1998) follow from research findings that have identified regular exercise as a prevention measure against a variety of somatic complaints, including coronary
heart disease, hypertension, diabetes, some cancers, and osteoporosis (e.g., Hillsdon & Thorogood, 1996; Powell & Blair, 1994), even when prescribed for psychological benefits. In a brief review of intervention studies that evaluate both the physiological and psychological impact of exercise programs on adult women, Lee (1991) concluded that although there are physiological benefits to be gained, most women fail to exercise at a level that will enable them to achieve these benefits. However, it has been suggested that an exercise regimen to attain the psychological effects (preventative and corrective benefits for one’s mental health), may not equal the regimen prescribed to attain physical benefits (e.g., Scully et al., 1998). Levels of exercise for the achievement of psychological benefits remain unclarified (Lee). Relevant to counselling psychology, the underlying aim of this research appears to focus on exercise as a treatment to decrease negative symptoms. However, it does not address the individuals who do not display these negative symptoms; those who display traits such as optimism, resilience, perseverance, or those who feel generally happy and have a good ability to cope with life difficulties. Thus, previous research may confuse attaining psychological benefits as treatment outcomes and maintaining benefits over time, and suffer from the difficulty in separating existing characteristics from benefits attained. Thus, it is important to examine the experience of women who exercise regularly in order to gain a better understanding of the involvement in physical activity that they require in order to attain or maintain any psychological benefits.

Despite the evidence that exercise plays an important role in psychological and physiological health benefits, problems with initiation and adherence or maintenance of exercise programs persist (Dishman, 1988a, 1991; Stephens & Caspersen, 1993). In a comparison of the results of three surveys done in 1981, 1988, and 1994-1995, participation in regular exercise for both women and men appears to be declining since the late 1980s
(Federal, Provincial and Territorial Advisory Committee on Population Health, 1996), with a recent study finding that only 10% of Canadian adults are physically active (Stephens & Caspersen). Youth (19 years of age and younger) are much more likely to participate in regular exercise than are older Canadians (Statistics Canada, 1995). Women, particularly in their middle and later years, exercise less than men (Canada Fitness Survey, 1984; Dishman, 1994; Statistics Canada, 1995, 1998; Stephens & Craig, 1990), and women over 35 are unlikely to take up vigorous activity if not previously a part of their lifestyle (Sallis et al., 1986; Wilcox & Storandt, 1996). Of those who do begin an exercise program, exercise dropout rates in clinical settings averages 50% within the first 6 months of initiation (Dishman, 1990, 1991). Further, even when healthy adults initiate an exercise program on their own, many experience difficulty in consistently adhering to their exercise plans (Sallis et al., 1986, 1989).

It has been suggested that the effects of exercise may play a role in one's adherence to an exercise program (Sallis & Hovell, 1990). Furthermore, contextual factors, such as one's previous experiences with exercise and current life context (including physical health, social factors, and psychological state) may also play a role in adherence to regular exercise participation (Marcus, Dubbert, King, & Pinto, 1995). However, few practical applications for mental health or exercise adherence have been outlined because these effects (Gauvin & Brawley, 1993) and contextual factors have not yet been adequately described. In order to provide more specific recommendations that may enhance women's involvement in physical activity, it is important to gain an understanding of the maintenance of regular exercise as a process or journey, rather than as a fixed state or destination, such as (a) how women who are adhering to exercise on a regular basis do so, and what are the influential factors, (b) the importance of exercise-related psychological changes related to their continued participation,
whether reasons to initiate exercise remain the same or change as exercise participation continues over time, and (d) the contextual and intrapersonal factors that may hinder or help women in their adherence to exercise (Marcus et al.).

There is a need for the development of well-constructed theory with which to guide research programs, not only on the psychological effects of exercise (e.g., Buffone, 1984; Rejeski & Thompson, 1993), but also for a greater understanding of the complexity of the experience. The latter purpose may have implications for increasing our understanding of the process of change in general, and more specifically, for psychological interventions that make use of physical exercise. Whether an exercise program is initiated for the attainment of physical or psychological benefits (if, in fact, these can be separated and one desires to exercise for benefits within one specific focus area), how exercise is psychologically experienced remains largely based in self-report anecdotes, such as "success stories" or "how exercise changed my life" articles in fitness magazines. Rejeski and Thompson argued that theory should have multiple layers of construction that both recognizes individual differences and assists in clarifying the occurrence of a phenomenon and the process of change. Related to this, Sherif (1979) has argued that the most underdeveloped area in psychological research is: "How people feel and experience themselves, and why, when, and how these self-experiences affect their actions" (p. 51). Fasting (1994) related this statement to the current state of sport psychology research, noting that relatively little is known about individual experiences (including feelings, needs, and attitudes) towards exercise and sport.

Until recently, most theories in exercise and sport psychology have been developed based on men's experiences, and then have been generalized to women (Bredemeier et al., 1991; Fasting, 1994; Marcus et al., 1995). This may be a reflection of the fact that sport and exercise research has been largely a male domain (Bredemeier et al.; Fasting). This practice
of assuming males to be the standard for the entire population is a critical issue in current qualitative scholarship (see Bredemeier et al.). Scholars have called for women-centred research as a response to this historic problem, beginning with women’s experience as it is described by women (e.g., Gilligan, 1979; Hall, 1988; Messner, 1988; Oakley, 1981; Theberge, 1981). Women present potentially unique challenges in relation to physical activity through the milestones they confront such as changing physiology (e.g., menarche, menstruation, pregnancy, menopause), and the multiple roles they juggle (e.g., pursuing education and employment, building and maintaining relationships, caring for their homes, raising children, caring for elderly parents; Marcus et al.). More generally, women's involvement in the area of sport and exercise have changed dramatically during the past two decades, which no doubt affects how women currently experience exercise. The "experiences, practices, and consciousness" (Fasting, pp. 160-161) of women in sport has been suggested as the starting point for theory development, continuing the call for women-centred research.

Theorists have suggested that behaviour in which a person freely engages is a reflection of the self (Bem, 1972). However, a woman does not exercise in isolation "given sport’s global standing as a site of mass leisure, as an important complex of intersecting industries, and as the stuff of so much popular affect, speech, and imagery..." (Rowe, 1998, p. 242). Moreover, it has been argued that how one sees oneself is affected by the social world (e.g., James, 1890; Mead, 1934; Stryker, 1987), for example, one may be encouraged and feel accepted by others for engaging in behaviours seen as healthy. Potentially powerful social-environmental variables that may impact psychological experience and sense of self have not been systematically incorporated into the existing exercise theories. Moreover, available information on how one develops and maintains the self-definition of an exerciser remains
preliminary and based in correlational findings (Kendzierski, Furr, & Schiavoni, 1998). It is not yet clear what this experience of being an exerciser means for women (Dean & Choi, 1996), nor how it translates into behaviour. Thus, an examination of the experience of women who self-identify as exercisers and exercise regularly, should yield insight into the complexity of the phenomenon. Theory of the experience of exercise is required that integrates the processes of change on an individual level as well as incorporating broader social-environmental influences.

A clear understanding of the basic social-psychological process associated with regular exercise use and its efficacy may prove useful on several fronts. First, an increased understanding of the process of regular use of physical exercise may aid in the successful prescription and adoption of exercise as a preventative and rehabilitative measure (Marcus et al., 1995), and may therefore result in physical (e.g., increased physical fitness, strengthened immune system, reduced cardiovascular morbidity or mortality, protection against stroke and breast cancer, reduced obesity, potential reduction in the risk of osteoporosis; e.g., Powell & Blair, 1994) and mental health benefits (e.g., reduced anxiety, depression, and increased self-esteem; Petruzzello et al., 1991), as well as reduced health care costs (Powell & Blair). Second, women who are exercisers may use this information to make sense of their experience, possibly furthering them in their particular personal exercise goals. Third, a more complete understanding of this process may guide women who want or need to take up exercise on their own (self-prescription). Thus, this study was designed to address a critical gap in understanding women’s experience of exercise, including an exploration of the multiple factors affecting this experience, that would lead to the development of theory. The grounded theory method (Strauss & Corbin, 1998), a naturalistic-inductive method of inquiry and analysis that is based in the philosophy of social interactionism, is well-suited for the
purpose of developing middle-range theory of women’s experiences of exercise, which includes contextual aspects of their lives and their consciousness of this experience.

In summary, there has been a call for the development of an integrated theory to explain the complexity of exercise that may be unique for women, highlighting the relations and possible processes between regular exercise and psychological effects and including multiple factors that may effect, or be part of, the experience. Therefore, this study begins to address this need through the development of middle-range theory that describes (a) the experiences and consciousness of women who self-identify as exercisers and engage in regular physical exercise, (b) the contextual factors that may influence their participation, and (c) explains the experience of participating in regular exercise as a process, considering both the positive and negative effects of exercising, and the process of change through its use.
CHAPTER II
LITERATURE REVIEW

The literature presented in this chapter provides the starting point and background for this project, and indicates the perspectives and assumptions I initially held regarding this phenomenon. As is commonly practised in grounded theory research, an initial familiarization with pertinent literature was necessary to ensure that I was knowledgeable and sensitized theoretically to the field. However, during data collection and analysis, I also simultaneously tried to avoid an excessive reliance on the existing literature in order to remain open to the process of discovery. This chapter includes empirical literature reviewed prior to, and in the early phases of data collection and analysis. In Chapter V, literature reviewed thereafter that supported or contrasted with my findings is presented, along with current developments in the field related to the theoretical and clinical implications of this project.

The use and review of the extant literature in grounded theory research differs from its use in other research paradigms. Strauss and Corbin (1990, 1998) acknowledged that the researcher must begin the grounded theory project with sufficient knowledge of the extant literature to be sensitized to the recurring themes, categories, and ideas, but without hindering creativity and the possibility for discovery. They further caution researchers to be wary of how unrecognized assumptions associated with the extant literature may influence one's analysis:

There is no need to review all the literature beforehand (as is frequently done by researchers trained in other approaches), because if we are to be effective in our analysis, then new categories will emerge that we, nor anyone else, had thought about previously. We do not want to be so steeped in the literature as to be constrained and even stifled in terms of creative efforts by our knowledge of it! Since discovery is our purpose, we do not have beforehand knowledge of all the
categories relevant to our theory (Strauss & Corbin, 1990, p. 50).

In this chapter, I critically examine the empirical and theoretical research on the psychological experience (i.e., effects) of physical exercise. Following Strauss and Corbin's (1990, 1998) recommendations for the use of the extant literature with the grounded theory method, my initial examination of the literature sensitized me to the information that seemed important about the phenomenon being studied. I first place exercise in context within the literature with an examination of how exercise is defined, and suggest how this may call into question the generalizability of research findings. This is followed by a brief look at the research on the present social context of exercise, specifically, the context that may affect women's experience. Third, I examine research on the psychological effects of exercise, in terms of possible benefits or hindrances for one's psychological well-being. Specifically, research in this area has mainly focused on the relationships between exercise and depression, anxiety, stress responsivity, self-esteem and self-concept, body image, and exercise addiction and withdrawal. Implications this research has for the psychotherapeutic use of exercise are outlined. Fourth, I present the most current theoretical ideas proposed to help explain (a) connections between exercise and psychological effects, and (b) the process of behaviour initiation and maintenance, noting their contributions and limitations in terms of providing a framework for our understanding. Finally, I present research on exercise schema, which is relevant in terms of exercisers' self-definitions. This critical review highlights a gap in the literature, that is, a need for substantive theory that describes the more complex nature of experiencing exercise which outlines the basic social-psychological process involved in women's use of regular physical exercise.
Definition of Exercise

When approaching this research literature, it is important to first consider how exercise is defined. Research in the area of exercise psychology has focused on a variety of related variables of interest, such as physical fitness, physical activity, exercise (aerobic and anaerobic), and training (Van Doornen et al., 1988). Physical fitness has been defined as the strength and stamina to accomplish daily tasks without unwarranted fatigue, and possessing ample energy to enjoy leisure time activities and to respond in unforeseen emergencies (President’s Council on Physical Fitness and Sports: Physical Fitness Research Digest, 1971). Physical activity is defined as any bodily movement produced by skeletal muscles that results in the expenditure of energy (Caspersen, Christenson, & Pollard, 1986). In general, exercise has been defined as a subset of physical activity that is structured, repetitive, and has the objective of improving or maintaining physical fitness (Caspersen et al.). Aerobic exercises are designed to improve respiratory and circulatory function through an increase in oxygen consumption, for example, walking, jogging, running, swimming, and cycling. Anaerobic exercises focus on muscular strength, endurance, and flexibility, and do not emphasize obtaining an increase in oxygen consumption, for example, weight training. Training is defined as the process of being involved with either aerobic or anaerobic exercise, usually with a goal in mind, such as increasing fitness, endurance, or skill for a competitive race or game. For researchers, these definitions have not changed in the past few decades.

Despite the general understanding of these terms within the exercise psychology literature, use of these definitions is not consistent. For example, in the research literature the word exercise is frequently used without qualification (Rejeski & Thompson, 1993). Thus, the statement exercise is correlated with a reduction in anxiety is left vague as to the
type and duration of exercise. Drawing conclusions about the efficacy of exercise as an intervention remains difficult, because there is no one standard definition of exercise.

The problem presented in defining exercise has been considered in narrative reviews (e.g., Leith, 1994) and meta-analyses (e.g., Petruzzello et al., 1991). On perusal of the literature, it is apparent that exercise is often specified according to type (aerobic, anaerobic) and mode (e.g., running, swimming). Furthermore, the frequency (e.g., number of exercise sessions per week), duration, length of training (for studies of exercise programs), and intensity of the exercise are of interest (Petruzzello et al.). Intensity of exercise has been operationalized as either a self-reported level of exertion, a percentage of one's maximal oxygen uptake (%VO₂ max), or a percentage of one's age-adjusted maximal heart rate (Petruzzello et al.). Exercise may not lead to improved aerobic fitness unless it is of sufficient intensity and duration (Van Doornen et al., 1988). Therefore, in training studies physical activity is frequently prescribed at levels thought to improve one's physical fitness, that is, participation in exercise that involves large muscle groups in dynamic movement for time periods of at least 20 minutes, 3 or more days per week, performed at an intensity of 60% or greater of an individual’s cardiorespiratory capacity (Caspersen et al., 1986), or 70% of VO₂ max (e.g., Dishman, 1985). However, it has been suggested that this level of exercise and changes in physical fitness may not be necessary to experience psychological effects (e.g., Leith).

In addition to the definitions of exercise used by researchers, there are also lay understandings of exercise, however, these are usually not considered in research. Due to national education projects such as "Participaction" (Association for Health, Fitness, Physical Education, and Recreation, 1979) in the 1970s and 1980s, and the focus on active living in the 1990s (Canadian Federal, Provincial, and Territorial Conference of Ministers Responsible
for Sport and Recreation, 1993; International Conference on Physical Activity, Fitness and Health, 1994), many people are aware of the frequency and intensity of exercise needed for improvements in aerobic fitness. However, personal definitions of exercise vary widely among the general population. To some, the term exercise refers to almost any form of physical exertion, including activities such as walking to work and gardening, while others reserve exercise to mean vigourous aerobic activity such as running, or anaerobic exercise, such as resistance (weight) training (Rejeski & Thompson, 1993). Further, whether any differences exist in meaning between terms such as exercise, sport, physical activity, and workout in use by the general population, has not been clarified. Leonard and Schmitt (1987), sport sociologists, made a unique attempt to define the meaning of sport from the perspective of the research participants, within a framework of symbolic interactionism. They suggest that sport (which may extend to exercise in general) is conceived as a symbol that is defined and redefined by members of society. Furthermore, these researchers argue that

Sport... appears to be more than explicit rules, physical exertion, structural contexts, competition, and distinctive activity. The institutional portrayal of sport that predominates the sport literature disattends the human, the subtle, the interactional, and the process aspects of those activities that many label sport. Sport involves informal as well as formal aspects. Sport is covert as well as physical exertion. Sport does not simply take place in structural contexts. Structural contexts also emerge, are modified, and maintained through sport activity. (p. 115)

Thus, what is known by researchers about lay understanding and definitions, that is, the variation in personal meaning of exercise to the exerciser, remains incomplete. Unexplored aspects of the experience include not only what exercise is understood to be, but also variables such as how one exercises (alone, with an exercise video, with friends, among strangers, with a personal trainer), where (at home, at a gym, outside, and if so, with what type of scenery), and the effects exercising has on one’s lifestyle and relationships. Therefore, it is important to explore women’s definitions of exercise, and to allow them to
identify themselves as exercisers in their own terms.

Social Context of Exercise

The current social context of exercise has been related to the promotion of health and fitness (Brawley & Rodgers, 1993), leisure, sport, body image, and beauty (Rowe, 1998). The social context of exercise has implications for women, because the "fitness movement" has occurred during a time of social change in gender roles and gender relations, which has offered women support and encouragement to pursue activities that were traditionally discouraged (Theberge, 1991a). Some theorists have explored the question of the empowering potential of sports and exercise for women, based on its physicality (e.g., Birrell & Theberge, 1994; Gilroy, 1989; Theberge, 1987, 1991b). Yet investigations of "women's leisure have drawn attention to the gendered nature of leisure participation, and demonstrated the nexus of structural, material, practical, and ideological constraints that severely limit the opportunities for women to indulge in active leisure, and particularly sport" (Wheaton & Tomlinson, 1998). Thus, the social context for exercising women may have contradictory elements.

Since the 1970s, the social context of exercise has emphasized the association of physical activity and promotion of health. The media, one of the most important influences in this campaign, currently highlights exercise and its purported benefits. Theberge (1991a), a sociologist, suggests that "the power of the media lies in their ability not only to provide information but to formulate imagery and shape ideas" (p. 37). Examples from the media include television spotlights on the notion of active living (e.g., "Bodybreak"); television and magazine advertisements; magazines, several of which target a female audience and focus solely on exercise and its benefits (e.g., Shape Magazine); billboards for fitness centres; and
poster boards and pamphlets in locations such as health services centres that extol the benefits of exercise.

Theberge (1991a) briefly reviewed research on the construction of media accounts of women's sport. She pointed to marginalization and trivialization of women's sports that focus on appearance and sexual imagery, rendering their physical performance to a secondary status (due to evaluation through the use of male standards and norms; cf. Rowe, 1998). In an analysis of four Canadian newspapers (three English, one French) over 6 months, and one English Canadian women's magazine over 10 years 6 months, Theberge investigated the construction of gender in print media accounts of recreational sport and physical activity. She found that neither the newspapers nor the magazines greatly supported women's participation in physical activity. The print media failed to highlight women's participation, women's issues related to sport and exercise, or to challenge gender stereotyped imagery. She found that the magazines, however, did promote participation and improvement of fitness, especially after 1980. Therefore, although women and men are encouraged to participate in physical activity, the dominant images and messages the media (at least in print) present of sport and exercise have remained largely a male preserve (Theberge).

From observations of television portrayal of women in sport, sport highlights on newscasts remain dominated by male sports teams and athletes (e.g., Stoddart, 1994 cited in Rowe, 1998). There are exceptions, for example with television coverage of figure skating and gymnastics ("so-called gender-appropriate, aesthetic sports," Rowe, p. 246), the Olympics, or the occasional track meet. In the past few years, female sport teams have received more of a focus largely for their newness (e.g., women's hockey was accepted into the Olympics; the first women's soccer World Cup was held). Commentaries on the high quality of skill with which these athletes play their sport seems accompanied by veiled
surprise. It was interesting to note that in the soccer World Cup mentioned above, the media’s attention to the skill of the athletes and quality of the games were eventually overshadowed with the focus on the athlete who scored the final goal and her wearing and showing of a sports bra from a well-known manufacturer. The controversy concerned not only the advertising of the bra, but the athlete’s appearance in it. Theberge (1991a) raised concerns about the emphasis on appearance and weight control in the fitness movement, and cautioned that they should not become the dominant focus of physical activity.

An interesting finding with particular relevance to the present study was that out of 69 articles Theberge (1991a) reviewed on sport and physical activity in women’s magazines, nearly half discussed psychological and emotional well-being as a major or minor focus. Thus, the media images of women in sport and exercise may have important implications for women’s subjective experience of exercise and their behaviour.

Exercise and Psychological Effects

The assumption that participation in exercise has beneficial effects on psychological health and well-being is widely held by both the general public and health practitioners (Morgan & Goldston, 1987; Ryan, 1983; Scully et al., 1998; Tuson & Sinyor, 1993). This belief stems in part from the multitude of anecdotal reports indicating that people commonly feel better during and after they exercise (Morgan, 1985; Sime, 1984). Effects of well-being and euphoria such as peak experiences (Kostrubala, 1976), the runner’s high (cf. Andrews, 1978; Glasser, 1976), and states of synergy or flow (Jackson & Csikszentmihalyi, 1999), have been highlighted in the popular press. Active people tend to be more optimistic and less pessimistic than those who are inactive (Kavussanu & McAuley, 1995). Various beneficial effects of exercise have been related to those of meditation (e.g., Solomon & Bumpus,
biofeedback (Hollandsworth, 1979), hatha yoga (Berger & Owen, 1988), and relaxation (e.g., Berger, Friedmann, & Eaton, 1988; Long, 1984, 1985, 1993; Long & Haney, 1988a, 1988b). Further, these subjective reports and observations encouraged the notion of exercise as therapy, or as an adjunct to therapy (both for self-change and for change aided by a health professional). Interest in the therapeutic use of exercise gained momentum in the 1970s and 1980s (e.g., Andrews; Kostrubala; Sachs & Buffone, 1984), and continues today (e.g., Hays, 1999). Heeding calls for scientific rigor, researchers studied depression, anxiety, and self-esteem as they relate to exercise participation (Morgan). This empirical literature has become quite technical as variables such as exercise type, frequency, and mood outcome have been investigated. Although fraught with methodological problems (less so in more recent work), the results of the research point towards a cautiously optimistic view of the benefits of exercise on mental health. These psychological benefits of exercise have been propagandized by popular media and are now widely accepted by the public (Tuson & Sinyor).

Early literature reviews on mental health and exercise (e.g., Layman, 1960, 1972; Morgan, 1969) mainly focused on general mental or emotional health rather than on specific psychological constructs. However, during the past few decades this focus appears to have shifted to investigations of the relationship between exercise and specific variables associated with mental health problems (e.g., psychometric measures of anxiety and depression). Although it is premature to conclude that exercise used as a therapeutic intervention alters personality or reduces psychotic symptomatology (McDonald & Hodgdon, 1991), some researchers have shown that exercise or an increase in aerobic fitness levels or both, led to improved mood in the form of decreased state anxiety (Bahrke & Morgan, 1978; Boutcher & Landers, 1988; Morgan, 1985), trait anxiety (Czajkowski et al., 1990; Folkins, Lynch, &
Gardner, 1972; Morgan; Ross & Hayes, 1988; Sonstroem & Morgan, 1989; Weinberg, Jackson, & Kolodny, 1988), depression (Folkins et al.; Morgan; Ross & Hayes; Roth & Holmes, 1987; Sonstroem & Morgan, Weinberg et al.), as well as reductions in tension, confusion, fatigue, and anger (Weinberg et al.). Exercise has also been associated with happiness (Carter, 1977), optimism (Rodin & Plante, 1989), and vigour (Weinberg et al.). Furthermore, it has been argued that women who frequently exercise (noncompetitively) may be somewhat protected from negative affect before and during menstruation (e.g., Choi & Salmon, 1995) and during menopause. However, other researchers have failed to find any significant changes in affect with exercise participation or with an increase in fitness level. For example, failure to note any relation of fitness or exercise with general mood (Agnew & Levin, 1987; Lennox, Bedell, & Stone, 1990), state anxiety (Sinyor, Golden, Steinert, & Seraganian, 1986), and depressed mood (Hughes, 1984) have been observed.

In an early narrative review, Folkins and Sime (1981) attempted to synthesize the growing research on the relationship of physical fitness training to improvements in psychological variables among normal and selected clinical populations. Since then, several more recent narrative reviews (e.g., Leith, 1994; Leith & Taylor, 1990), and meta-analyses (e.g., Long & Van Stavel, 1995; McDonald & Hodgdon, 1991; North et al., 1990; Petruzzello et al., 1991; Schlicht, 1994) have shed light on conflicting findings. These analyses suggest that aerobic exercise is associated with a reduction in state anxiety, trait anxiety, several psychophysiological correlates of anxiety (e.g., McDonald & Hodgdon, Petruzzello et al.), depression (e.g., McDonald & Hodgdon, North et al.), and with an increase in self-esteem and aspects of self-concept (e.g., Marsh & Sonstroem, 1995; McDonald & Hodgdon; Sonstroem et al., 1994).

Due to the vast research of the effects of exercise on psychological health, and
burgeoning narrative reviews and meta-analyses, I draw on the reviews and meta-analyses here in order to summarize and critique the research on depression, anxiety, and self-concept as outcomes of participation in regular exercise. Definitions and measures of aspects of psychological health studied in relation to exercise are presented first in order to place study results in context. These reviews and meta-analyses offer a more focused examination of how specific variables of interest may moderate the hypothesized relationship between exercise and psychological health. Such variables include the population studied, and aspects of exercise such as type, intensity, the duration of the exercise session, the frequency of sessions, and length of the exercise program. These reviews and meta-analyses provide the background for my argument that research in this area has been largely atheoretical, and that further work is required towards the development of theory for understanding the experience of women's regular use of exercise.

**Definitions and Measures**

**Depression**

A large body of research has accumulated that suggests that exercise is associated with reductions in symptoms of depression. Clinical depression is a debilitating disease, that represents a serious state of psychological malaise and self-dejection (Leith, 1994). However, depression is also seen in the normal population as a transient emotional state that most of us experience at different points during our lives, usually in the context of situational stressors (Shepel, 1984).

The psychometric instruments used most frequently in studies of the relationship between exercise and depression include the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the Profile of Mood States (McNair, Lorr, & Droppleman, 1971), the Zung Self-Rating Depression Scale (Zung, 1965), and the MMPI depression subscale...
(Hathaway & McKinley, 1943). Of these measures, it has been argued that the latter is the best discriminator between physically fit and unfit individuals (Lobstein, Mosbacher, & Ismail, 1983). North et al. (1990) concluded from their meta-analysis that depression was decreased whether it was measured as a personality trait, or a temporary mood state.

**Anxiety**

Moderate periodic anxiety is a normal stress emotion, arising as a reaction to hassles, frustrations, challenges, and interpersonal interactions. It may be defined as a subjective feeling of apprehension and threat, and heightened physiological arousal (Lazarus & Folkman, 1984). When individuals experience anxiety frequently and it generalizes over many situations, this condition is referred to as *trait anxiety*. A different reaction, *state anxiety*, represents an immediate, and relatively transitory response that includes cognitive worry and somatic symptoms (Spielberger, 1972). Trait anxiety can reach clinical magnitude for some individuals, which then interferes with well-being, work, and relationships, and may result in maladaptive behaviour and distress that does not subside without intervention.

In discussing the potential of exercise to reduce anxiety, it is important to distinguish between acute (a single bout of exercise) and chronic exercise (regular, habitual use of exercise) effects, as well as acute (immediate) and chronic (long-term) effects of exercise on anxiety (Kerr & Vlaswinkel, 1990). To avoid confusion in this paper, I use the term *acute* to refer to a single bout of exercise, whereas *regular* or *habitual* refers to prolonged participation in an exercise program. In contrast, the short-term effects of exercise on anxiety are assessed by state anxiety measures and psychophysiological correlates, and long-term effects of exercise on anxiety are assessed by measures of trait anxiety.

Effects of both acute and regular use of exercise on state anxiety have been measured using the state anxiety scale from the State-Trait Anxiety Inventory (STAI; Spielberger,
Gorsuch, & Lushene, 1970) and the Profile of Mood States (McNair et al., 1971). These instruments were designed to assess the "how you feel right now" aspect of anxiety. State anxiety has also been measured with psychophysiological correlates such as blood pressure, heart rate, muscle tension, skin responses, brain-wave activity, and the Hoffman reflex (Leith, 1994). The effects of regular use of exercise on trait anxiety have largely been measured by means of the trait scale of the STAI (Spielberger et al.) and the Taylor Manifest Anxiety Scale (Taylor, 1953). The latter two measure between subject differences in long-term aspects of anxiety.

Self-concept and Self-esteem

Researchers have investigated a number of self variables such as self-concept and self-esteem as outcomes of participating in exercise. The prevailing notion is that participating in or completing an effortful task (e.g., exercise) can promote a good feeling about oneself, such as a sense of self-mastery or self-competence. Rogers (1950) defined self-concept as "an organized configuration of prescriptions of the self which are admissible to awareness" (p. 179). The construct has since been expanded to include our ordered awareness of personal experiences, social interactions, behaviours, and future goals (Dishman, 1986), that is, a system of knowledge structures about the self (e.g., Markus, 1983). Originally considered a unitary construct (e.g., Rogers) from a cognitive perspective, self-concept has come to be viewed as multifaceted, with specific self-concepts for specific roles in life (Anderson, Cychosz, & Franke, 1998), such as physical, social, moral, emotional, and academic dimensions (Leith, 1994). These self-concepts are further subdivided; for example, in the exercise literature, physical self-concept is subdivided into self-perceptions of physical ability or competence, and physical appearance (Fox & Corbin, 1989).

Although self-concept and self-esteem are often used interchangeably, self-esteem has
been specifically described as the evaluative component of the self-concept based on
cognitive comparisons and associated affect (Brewin, 1988; Gergen, 1971). It is a personal
judgment of worthiness, or the extent to which individuals feel positive about themselves
(Leith, 1994). Thus, self-concept describes the perception of self in terms of personal
characteristics, social identities, physical attributes, and behaviours, whereas self-esteem
refers to the evaluation or affective reaction to those self-perceptions.

Self-esteem has been thought of as both a trait and as a state. That is, people can be
characterized by their relatively stable level of self-esteem, but self-esteem may also vary
with one’s circumstances (Brewin, 1988). Problems with low self-concept or self-esteem may
be expressed through self-deprecatory statements, feelings of worthlessness, lack of
participatory behaviours, and avoidance of eye contact (Leith, 1994). If low self-esteem is
expressed for example, through lack of participatory behaviours, one could assume this to
include exercising. Further, low self-esteem has been related to state and trait anxiety (e.g.,
Rosenberg, 1979), and acute levels of depression (Wylie, 1979).

Most studies have examined the relationship between exercise and global self-esteem, as
opposed to considering domain specific esteem (McAuley, Mihalko, & Bane, 1997). Self-
concept and self-esteem have been assessed mainly with the Tennessee Self-Concept Scale
(Fitts, 1964), the Coopersmith Self-Esteem Inventory (Coopersmith, 1981), the Rosenberg
Self-Esteem Scale (Rosenberg, 1963), and a variety of study-specific instruments. The study
of domain specific esteem includes research on exercise and body image, with self-esteem
measured by the Body Cathexis Scale (Secord & Jourard, 1953), the Physical Estimation and
Attraction Scale (Sonstroem, 1978), and the Physical Self-Perception Profile (Fox & Corbin,
1989). Physical self-efficacy has been measured with the Physical Self-efficacy scale
(Ryckman, Robbins, Thornton, & Cantrell, 1982).
Population Trends

Researchers have argued that any improvements in mood depend, in part, on characteristics of the individual before engaging in fitness training. Some suggest that improvement in mood depends on the participant's initial mood (Gauvin, Rejeski, & Norris, 1996; Sime, 1984; Simons & Birkimer, 1988) and level of physical fitness (Kowal, Horstman, & Vaughan, 1979), that is, that those with the poorest psychological and physiological condition will show the greatest improvement after an acute bout of exercise or an exercise training program.

Specific clinical populations (i.e., clinically diagnosed psychological or physiological problem) have been shown to benefit from physical exercise. For example, a narrative review of several intervention and observational studies concluded that physical exercise is effective in the prevention and treatment of some psychiatric disorders, especially in the reduction of anxiety and depression (Weyerer & Kupfer, 1994). Further, results of the majority of the studies with special populations such as medical rehabilitation patients, physically challenged individuals, and clinically depressed adults showed significant improvements in self-concept or self-esteem (Leith, 1994).

However, it cannot be argued that exercise has beneficial effects only for clinical populations. For example, Byrne and Byrne (1993) cite general support for the claim that exercise treatments have positive psychological benefits for clinical and non-clinical populations alike, especially in the reduction of depression, but argue that these data should be interpreted with caution due to methodological problems within many studies. North et al. (1990) report a decrease in depression for both participants who were initially clinically depressed and those who were not. Moreover, about half of studies on healthy populations reported improvements in self-concept or self-esteem (Leith, 1994). In a review of studies
conducted after 1980 that focused on the effects of physical fitness on psychological health among nonclinical populations, Plante and Rodin (1990) concluded that although consistent relationships were not found between exercise and physiological responses to stressful tasks or cognitive functioning, exercise was found to improve mood and well-being, and reduce anxiety and depression.

Conceptually, it may be limiting to consider mental health of the population in "clinical" or "nonclinical" terms, because even within a nonclinical population, there will be individuals who range higher and lower on levels of depression, anxiety, and self-esteem (e.g., Hughes, 1984). Support for this position is provided by Hilyer and Mitchell (1979), who studied the effect of exercise on male college students. Participants were differentiated in terms of having low versus high self-esteem, and were randomly assigned to an exercise group, an exercise plus therapy group, or a control group. At the conclusion of the 10-week program, improved self-esteem was demonstrated only among the participants who initially scored low in self-esteem. In addition, Long and Van Stavel (1995) sought to determine the effectiveness of exercise as a stress-management intervention in a meta-analysis of research investigating the effects of exercise training interventions on anxiety. They found that exercise training is particularly effective for adults who initially have elevated levels of stress. That is, individuals who identified themselves as experiencing stress prior to beginning a research exercise program reduced their anxiety levels significantly more than did others (see also Fasting & Grønningsæter, 1986; Steptoe, Edwards, Moses, & Mathews, 1989; Wilfley & Kunce, 1986).

Therefore, in nonclinical populations, researchers who have studied the effect of exercise on depression, anxiety, and self-esteem have begun to distinguish initial psychological health as ranging from low to high levels. A limitation of this dichotomous approach however is
that assessing individuals as either high or low on depression or self-esteem may be a measurement of a longer-term trait of the individual, but may fail to highlight the fluctuation (even by the moment) of these variables within an individual (as in the research that differentiates between state and trait anxiety). Most studies investigating psychological health fail to assess initial mood, anxiety, or self-esteem in a comprehensive manner. Thus, current environmental stimuli (of varying type and severity) that affect mood state may also affect the efficacy of exercise. For example, if a woman is usually quite happy, but at a particular moment is feeling "down," will exercise help her to alleviate her mood at that time? Unfortunately, individual variation in mood, self-esteem, and contextual influences, have not yet been adequately studied as an aspect of the experience of exercise.

It has been argued that improvements in mental health through exercise participation depend on the individual's previous physical activity or level of physical fitness (Kowal, Horstman, & Vaughan, 1979), however, not everyone has found this effect (Gauvin, 1988). Determining initial levels of cardiovascular fitness, and minimal levels of improvement in cardiovascular fitness for treatment groups has been considered critical in evaluating research on the relation between exercise and mental health (Doan & Scherman, 1987).

A synthesis of related research suggests that improved cardiovascular fitness is not a necessary prerequisite for a reduction in depression, trait anxiety, or for an increase in self-concept (Leith, 1994). In regards to research on depression, this result is not surprising considering the finding that the antidepressant effects of exercise take place within the first few weeks of treatment, prior to improvements in cardiovascular fitness (McCann & Holmes, 1984; North et al., 1990). In related research, some argue that individuals with initial low fitness levels are more depressed (Berger, 1984; Martinsen, 1993), which may confound any understanding of the unique influence of these variables (initial fitness and initial mood).
However, in research on anxiety, although physical fitness gains have not been found necessary to achieve reductions in anxiety, there is a trend in this direction—perhaps due to the length of time necessary to improve physical fitness, which may then have a cumulative effect on trait anxiety (Leith, 1994). Finally, it has been suggested that by engaging in an exercise program, the individual's perception of fitness may change and that this factor, rather than physiological changes, may be responsible for enhancing one's self-esteem (Sonstroem & Morgan, 1989; Sonstroem et al., 1994). This hypothesis highlights the failure of studies focused on the effect of changes in physical fitness on psychological health, to account for the cognitive and emotional experiences of the exerciser before, during, or after an exercise session, and also over time.

Petruzzello et al. (1991) attempted to examine potential gender differences in this regard through meta-analysis. However, because most studies failed to specify necessary information (such as number of males and females in various groups) insufficient information was available for meaningful comparisons. Therefore, only overall mean effect sizes (combination of male and female data) could be reported in this meta-analysis with no distinctions based on gender. While others concluded that exercise had decreased depression (McDonald & Hodgdon, 1991; North et al., 1990) and increased self-concept (McDonald & Hodgdon) equally for both genders, in the latter meta-analysis women did not show comparative decreases to men in either state or trait anxiety (McDonald & Hodgdon). Correspondingly, Long and Van Stavel (1995) found that women-only group exercise interventions (in comparison to men-only or mixed groups) were less effective in reducing anxiety. This finding may have resulted from the effect sizes of one particular study (Griffith, 1982 as cited in Long & Van Stavel), that when removed, decreased the gender difference (Long & Van Stavel). Although there is little evidence of statistically significant gender differences in
the psychological effects of exercise, it has been suggested that future studies should include more female participants to test the notion more effectively (McDonald & Hodgdon).

Although the efficacy of exercise as a treatment for depression, anxiety, and low self-esteem appears robust across various populations (including age groups, gender, and health status), the largest decreases are seen in medical and psychological rehabilitation settings (Folkins & Sime, 1981; North et al., 1990), which suggests that exercise is most effective for individuals who are the most physically and psychologically unhealthy at the outset of an exercise program. This finding offers compelling support for the prescription for, or adoption of exercise, and clarifies what an individual might reasonably expect should they take up exercising. Nonetheless, this research does not answer questions about the experience of women who are already exercising, such as why they do so (which may include the outcomes of reduced depression or anxiety, or increased self-esteem as demonstrated in the above research), if exercise successfully meets these needs, and how they view their participation in light of their individual characteristics, or fluctuations in mood or self-esteem as influenced by daily life events.

**Depression**

In answering the call in the literature to identify the specifics of exercise required to achieve positive psychological effects, recent reviews and meta-analyses have begun to investigate the "dose-response" relationship of exercise (dose, e.g., activity type, frequency, intensity and duration) to psychological effects (response, e.g., decreased depression or anxiety). However, in attempting to distinguish the separate influences of these variables, many studies fail to account for the complexity of the relationships, including the cognitive and emotional experiences of the exerciser (Scully et al., 1998), and the contextual aspects of the exercise.
Types of Exercise

Researchers have sought to determine if certain types of exercise are more effective than others in decreasing depression in participants, usually by comparing effects of aerobic and anaerobic exercise. Recent meta-analyses (McDonald & Hodgdon, 1991; North et al., 1990) and a narrative review (Leith, 1994) of exercise program interventions have concluded that overall, a reduction in depression follows participation in a variety of aerobic exercise (e.g., running, walking, aerobic dance, cycling, karate, racquetball), and anaerobic exercise (e.g., weight training). However, these analyses were not able to identify any one particular type of exercise as being superior in this regard. Given that many studies have found no antidepressant effects from anaerobic exercise (e.g., Folkins & Sime, 1981; Sachs, 1982), researchers caution that further information on the effects of both aerobic and anaerobic exercise is necessary, especially for therapeutic intervention purposes.

Type of exercise, however, cannot be considered separate from context. For example, factors such as why the exerciser chooses a particular aerobic or anaerobic activity, the location where an individual exercises (e.g., at home, a gym, a medical centre, outside; North et al., 1990), whether the individual exercises alone or with others (and specifically, who, e.g., a personal trainer, a group of strangers, or friends), and whether or not an individual varies exercise type from session to session or always participates in the same mode, may also have profound effects on mood in and of themselves.

Duration, Frequency, and Intensity of Exercise

Although no published studies have been specifically designed to compare different lengths of exercise programs and their effects on depression, Leith (1994) compared these effects across a number of studies including training programs ranging in length from 3 weeks to 4 years, with the majority of training programs 10 weeks or longer. Leith argued
that "more consistent results can be expected with longer involvement" (p. 24), although some research reported significant reductions in depression with programs less than 10 weeks long. However, Leith did not define what he meant by "consistent results," or how he came to this conclusion from his review. But in their meta-analysis North et al. (1990) found that, overall, exercise—categorized as both acute (a single exercise session), and as an exercise program (several sessions of exercise developed for research purposes ranging from 4 weeks to greater than 24 weeks)—provided antidepressant benefits to all treatment groups and that the greatest antidepressant effect was seen in programs of 17 weeks or longer. This suggests that exercise may have an antidepressant effect that begins in the first session of exercise, but highlighted that the longer the program and the greater number of sessions, the greater decrease in depression. Further, North et al. suggest that exercise has long-term effects (although it was not clear whether participants were continuing to exercise at follow-up).

In terms of the duration of an acute exercise session, researchers have suggested that exercising for 15 to 30 minutes, which promotes an increase in aerobic fitness, will be sufficient to promote positive mental health (Brown, 1990; Dishman, 1985, 1986; Morgan, 1988). However, North et al. (1990) found that the length of each session had no influence on effect size in their meta-analysis.

In terms of frequency, most training programs require exercise to be performed two to five times per week, and of those reviewed by Leith (1994), with one exception (cf. King, Taylor, Haskell, & DeBusk, 1989), significant improvements in depression were reported by the end of the treatment program. According to the meta-analysis performed by North et al. (1990) the number of times exercise was performed per week did not have a differential effect on depression. Although involvement in exercise three times per week has been encouraged and suggested as sufficient for reducing depression, it appears that exercise per
se is associated with significant reductions in depression regardless of the exercise frequency (Leith).

It is necessary to take into consideration that while these analyses and observations regarding length of exercise programs and sessions, and frequency of exercise, were arrived at by comparing results across a number of studies, they have limited generalizability beyond exercise in a research context. Further, findings provide only limited understanding in regard to the potential role of exercise in prevention of depression for those already exercising. Moreover, since many exercisers may not see their active lifestyles in terms of acute bouts of exercise, or even as a time-limited exercise program, the experience of exercise may prove more complex than would be suggested, based on research that attempts to separate out discrete variables.

Researchers have found benefits for depression at some, but not other intensity levels of exercise. Intensity of exercise may be identified through a physiological measure (e.g., \( \%VO_2\text{max} \)) or a psychological self-report (e.g., Rate of Perceived Exertion Scale; Borg, 1985). In their review, North et al. (1990) found that when comparing a more difficult exercise group to an easier exercise group, the easier exercise group was not as effective an antidepressant, suggesting that there may be an optimal level of physical activity to reduce depression. This raises the issue of whether the assumed benefits of exercise are monotonically related to fitness level.

There are no established dose-response curves that identify whether psychological benefits continue to increase with ever higher levels of exercise, or greater fitness levels (Gavin, 1988; Haskell, 1987, 1994; King et al., 1989). Some suggest that psychological benefits are maximally obtained from moderate (e.g., walking) but not extreme, or highly intense levels (e.g., running at 60% of one’s cardiovascular capacity for 20 minutes or more).
of exercise (King et al.; Moses, Steptoe, Mathews, & Edwards, 1989; Weyerer & Kupfer, 1994). For example, some studies point to high-intensity exercise leading to negative mood states such as an increase in tension, anxiety, and fatigue (Crossman & Jamieson, 1985; Morgan, Costill, Flynn, Raglin, & O'Connor, 1988; Moses et al.; Steptoe & Cox, 1988); whereas positive mood changes (vigour and exhilaration) were found to follow low or moderate intensity exercise only (Moses et al.; Steptoe & Cox). Investigations on overtraining and staleness suggest a threshold for psychological benefits (e.g., Morgan et al.; Raglin, 1990, 1993; Veale, 1991). In terms of the dose of exercise (frequency, length of program, and intensity), it may be that a range of optimal exercise intensity or frequencies leads to a reduction in depression. That is, for cumulative effects of exercise to be sufficient to reduce depression, one may need to perform exercise within, and not below, the range of exercise frequencies. As well, exercise frequencies exceeding the maximum range may increase rather than decrease depression, as the frequency of participation may be perceived as a stressor or task.

On the basis of the existing literature, it appears safe to conclude that participation in physical exercise has a positive influence on depression, with the most significant effects found with clinical populations. Limited evidence suggests that participation in aerobic activities and regimens extending over several months yield the most positive effects. However, the experience of exercise including reasons for exercising (e.g., getting a workout vs. recreation), competing activities and responsibilities that may influence time spent exercising (e.g., work, parenting), and the meaning of exercise (e.g., pleasure vs. competition and sport endorsements) may yet prove to have a greater influence on any potential antidepressant effects than the suggested linear dose-response relationship.
Anxiety

Types of Exercise

Research results point to a relationship between exercise and the reduction of anxiety regardless of anxiety measures used (trait or state, behavioral, self-report, or physiological), or exercise regimen engaged in (acute vs. chronic). This appears to be a real and substantial effect (Petruzzello, 1995; McAuley, Mihalko, & Bane, 1996) as opposed to a methodological artefact as previously implied (Gauvin & Brawley, 1993). In a meta-analytic review of studies reporting effects of exercise on either self-reported state or trait anxiety, psychophysiological correlates of anxiety, or both, statistically significant differences were found between aerobic and anaerobic exercise (Petruzzello et al., 1991). Aerobic exercise showed greater anxiolytic (anxiety-reducing) effects (Petruzzello et al.). However, no statistically significant differences were found among the different types of aerobic exercise, for example, walking, running, swimming, and cycling (McDonald & Hodgdon, 1991; Petruzzello et al.). Because of the small number of studies comparing different types of aerobic exercise, or aerobic and anaerobic exercise, further research is warranted (Leith, 1994). As with the research on depression, determining the differential effects of modes and types of exercise on anxiety may have implications for the use of exercise as a therapeutic intervention. However, it will also be important to account for how exercisers experience their participation in exercise over time, since it may include a variety of aerobic and anaerobic exercises within and over sessions, and may vary depending on personal (e.g., desiring to cycle rather than swim on a given day, being pregnant and so choosing to walk rather than run) and environmental (e.g., exercising indoors when raining rather than exercising outdoors) situations.
Duration, Frequency, and Intensity of Exercise

The explication of the relationship between exercise and the reduction of anxiety has proven difficult, as few studies have specified variables such as length of program, duration, frequency, and intensity. One study compared treatment groups based on participants' length of commitment to jogging (for at least 20 minutes, three times per week), which ranged from those who jogged for more than 1 year, between 4 months to 1 year, 2 weeks to 4 months, those who dropped out, and nonexercisers (Nouri & Beer, 1989). The results revealed significantly lower levels of trait anxiety for all groups, with those who jogged the longest experiencing significantly lower levels of trait anxiety than participants in the other conditions (Nouri & Beer). The authors concluded that in order for physical activity to be effective in reducing trait anxiety, individuals must persist with it over time. However, a causal relationship cannot be inferred since the groups may have differed in their initial anxiety levels.

Exercise durations of 20 minutes or more have been associated with significantly lower levels of subjective state anxiety (Petruzzello et al., 1991), but there are no discernible trends for the reduction in trait anxiety. However, decreased state anxiety has been reported following exercise durations as short as 15 minutes (Rejeski, Hardy, & Shaw, 1991), 10 minutes (Roth, Bachtler, & Fillingim, 1990), and two sessions of only 45 seconds each (Caruso, Dzewaltowski, Gill, & McElroy, 1990). Although these short durations counter the earlier suggestions, too few studies with exercise durations less than 15 minutes are available to make generalizations. Both the meta-analysis (Petruzzello et al.) and narrative review (Leith, 1994) concluded that exercise produces a state anxiety-reducing effect regardless of the duration of an acute exercise session. The currently accepted duration of 20 minutes of exercise as the base level necessary to reduce trait anxiety remains an untested assumption.
(Leith; Petruzzello et al.), since all of the studies reviewed that examined the effects on trait anxiety involved exercise sessions of 20 minutes or more (Leith).

Research exercise training programs typically range from 4 weeks to 9 months with the majority of studies using training programs of 9 weeks or longer (Leith, 1994). However, the significant reductions in anxiety found following exercise programs of 4 to 8 weeks suggests that even short-term exercise programs can effect trait anxiety (Leith). In contrast, Petruzzello et al. (1991) found that exercise training programs must be at least 10 weeks in length before significant changes in trait anxiety occur, with the best results occurring at 15 weeks. As the majority of studies use training programs of at least 9 weeks, it is difficult to hypothesize whether the program length mediates the relation between exercise and anxiety. Again, aspects of what the individuals experience on initiating an exercise program which may initially increase anxiety are not accounted for (e.g., whether meaningful and attainable goals are set; facing challenges such as finding the time for exercise, learning a new skill).

In terms of exercise frequency, Leith (1994) reported that most studies with significant reductions in trait anxiety have required exercise to be performed three times per week. He found no studies in which exercise frequency was controlled in an attempt to determine necessary rates per week to obtain reductions in anxiety. Two studies (Goldwater & Collis, 1985; King et al., 1989) that required exercise frequencies of five times per week reported no significant changes in trait anxiety, which may be because the demanding exercise program became a stressor in itself.

Recent research indicates that both moderate and low intensity exercises are as effective as more strenuous activity in producing significant reductions in state anxiety (e.g., Berger, 1994), in that 15 to 30 minutes of aerobic exercise at 60% to 90% of maximum heart rate, or 60% VO$_2$max or greater, have been found sufficient to promote significant reductions in
state anxiety following exercise (Brown, 1990; Leith, 1994). However, similar anxiolytic effects have also been reported at exercise intensities of 30% maximum heart rate (Felts, 1989). Mild to moderate workloads on a cycle ergometer (Roth et al., 1990), and walking at a comfortable pace (Sexton, Maere, & Dahl, 1989) have also been correlated with lower subjective state anxiety. However, Petruzzello et al. (1991) found no differences among the exercise intensities on anxiety reduction. Suggestions from the 1970s and early 1980s that exercise must be performed at an intensity exceeding 70% of VO$_2$ max (e.g., Bahrke & Morgan, 1978; Dishman, 1985, 1986; Morgan, 1979) or age-adjusted maximum heart rate (e.g., Dishman, 1985, 1986) do not appear to be supported. Thus, the intensity of exercise required to reduce anxiety may depend on aspects other than the exercise itself, for example, whether the anxiety is experienced as largely physiological (e.g., muscular tension) or psychological (e.g., worried cognitions or fear).

Moreover, personal variables such as one's emotional commitment to, reasons for, and perceptions of the activity may play a role in any anxiolytic effects found. One area of study has investigated the relationship between expectancy of benefits from exercise and affect. However, recent results suggest that expectancy is not strongly related to acute mood changes in exercisers (Berger, Owen, Motl, & Parks, 1998), although the relations to trait anxiety has not yet been explored. It is possible that potential mediating variables of the exercise-psychological effect link are not related in a linear fashion, and that perhaps other variables, such as personal importance (Berger et al.), may interact with other variables such as expectancy or commitment.

In summary, the literature supports the positive effects of physical exercise on anxiety, with the nature of the exercise not appearing important, moderate and low intensity levels of exercise as effective as more strenuous activity, and the accepted duration of 20 minutes of
exercise an untested assumption. As with the research on depression, the most significant effects are observed among those who maintain a program over several months. Through hypothetico-deductive research which views aspects of exercise as distinct variables to be accounted for, a certain limited understanding of exercise can be achieved. However, a greater understanding may result from the development of a theory that highlights the complex nature of the exercise experience, and may guide researchers to questions more profound than those focusing on dose-response and laboratory performance.

**Self-concept and Self-esteem**

**Types of Exercise**

Along with the previously examined relations, a positive link between exercise and constructs of self-concept and self-esteem has also been established. A variety of physical activities have been studied to determine their potential to impact self-concept or self-esteem. The results, however, appear inconsistent. Leith (1994) concluded that only one-half of the empirical studies demonstrated significant beneficial effects. However, comparisons of different types of exercise point to a slightly greater efficacy of weight training, compared with other types of exercise (e.g., running, swimming), in terms of reported improvements in self-concept or self-esteem (Leith). As with the research on depression and anxiety, findings may be confounded by the categorization of study participants based upon their involvement with one type of exercise, rather than considering the possibility that they may engage in more than one exercise type within that time frame, a factor which may influence their overall experience of exercise, sport, and fitness.

It has been suggested that more specific domains of self-concept and self-esteem such as perceived sport competence, physical fitness and strength, and perceptions of one’s body or physical appearance (Fox & Corbin, 1989; Sonstroem et al., 1994) may be associated
differentially with different physical activities or sports. Thus, the efficacy of exercise for increasing self-esteem may be dependent on the individual’s desired appearance and exercise goals. For example, weight training may be more effective in increasing self-concept for an individual who wants to improve muscle strength and tone, whereas running may be more effective for individuals who want to lose weight and increase their cardiovascular fitness. Thus, it makes intuitive sense that individuals who participate in exercise of their own choosing may show greater benefits in increased self-concept than individuals assigned to exercise groups for research purposes. It may be the process of exercising (including aspects such as expectations, involvement, purpose, and social factors) that contribute to benefits of exercise in the form of self-esteem.

Further, self-esteem may vary within individuals’ various self-concept subdomains. For example, Sonstroem et al. (1994) found that for adult female aerobic dancers, exercise was associated with positive evaluations of their physical condition, but negative evaluations of their bodies. Although studies such as this captures a picture of women at a certain point in time in their exercise career, it fails to capture possible fluctuations in self-esteem over time that may result from developmental or life experience influences. Moreover, few studies examine the importance of exercisers’ self-concepts to their exercise experiences, if in fact exercise has helped them to form specific aspects of their self-concept. For example, questions that require further investigation include: how do exercisers perceive themselves over time, and how is their exercise behaviour related to this view (e.g., is this a role in life, or is it a filter through which roles and perceptions are formed)?
Duration, Frequency, and Intensity of Exercise

Due to the paucity of research documenting exercise intensities, duration, and frequencies of sessions, meaningful conclusions cannot be drawn regarding these factors for improvement of participant’s self-concept or self-esteem (Leith, 1994; Scully et al., 1998). The majority of studies have used exercise frequencies of two to three times per week, and half of these studies documented improvements in self-concept or self-esteem (Leith). Further, findings were inconsistent for programs shorter than 12 weeks. However, when exercise programs lasted at least 12 weeks in length, participation almost invariably resulted in significant improvements in self-concept or self-esteem. This suggests that the longer one exercises, the greater the chance the exerciser will see results in the form of physical changes (i.e., fitness level and body composition). It would seem logical that seeing these physical results leads to a change in one’s self-esteem and self-concept. However, approximately one-half of the studies reviewed showed self-esteem improvement in shorter programs, suggesting that something beyond change in body image is involved, and only one study (of male participants in a 5 month walking program) investigated change over time (McAuley et al., 1997). Thus, it is possible that within a societal context where fitness participation is valued, perhaps both the exercise and process of exercising itself contribute to improved self-concept.

In conclusion, exercise appears to be related to reduced depression and anxiety, and increased self-esteem. Only a few studies have explored potential differences in self-esteem over time, with the focus of most studies on differences in self-esteem between exercisers and non-exercisers at a given point in time (Scully et al., 1998). Moreover, between exercise and these variables, a linear causal effect has been more or less assumed. The nature of the connections between continued exercise over time to self-esteem, depression, and anxiety, have not yet been fully examined.
Body Image

Body image refers to a multidimensional construct consisting of a set of cognitions and feelings about one's physique. It has been found to be less positive among women (Koff & Bauman, 1997) and is more closely linked to women's overall self-esteem than men's (Furnham & Greaves, 1994). Although the perception of one's body can be viewed as a subdomain of self-concept (Fox & Corbin, 1989), it is of sufficient importance to consider it separately. The concept of body image dissatisfaction is viewed as a discrepancy between the perceived-self and the ideal-self (Silberstein, Striegal-Moore, & Rodin, 1986), and it has been suggested that one is provoked to resolve the discrepancy by dieting and exercise (Davis, Fox, Cowles, Hasting, & Schwass, 1990). Dissatisfaction and distortions of body image have been associated with decreased self-esteem (Rosen & Gross, 1987) and depression (Noles, Cash, & Winstead, 1985).

Some suggest that women who exercise may have a more positive perception of their own bodies than women non-exercisers (e.g., Ben-Shlomo & Short, 1985-1986). In a study of regular exercisers of both genders, Davis and Cowles (1991) found that women were more dissatisfied with their bodies, and more likely to consider their appearance as an important influence on feelings of well-being than were men. Given the media tendency to promote exercise and health with accompanying pictures of slender women, almost promising that exercise will provide such outcomes, the importance placed on body image by exercisers is hardly surprising (Davis et al., 1990). Further, women are still more likely to engage in non-competitive activities such as aerobics (Scully & Clarke, 1997), which may serve to reinforce the cult of thinness and femininity (Friedman & Berger, 1991; Scully et al., 1998), foster feelings of social-physique-anxiety, restrict enjoyment (Frederick & Morrison, 1996; Frederick & Shaw, 1995), and limit comfort in exercise locations. Social-physique-anxiety
has been found to be higher among women and correlated with appearance-related motives for exercise, such as weight control.

Women tend to view their body as an aesthetic statement, whereas men typically focus on the dynamic aspects of their bodies as coordination, strength, and speed (Franzoi, 1995), although this may be changing. Even so, studies with athletes have highlighted high levels of body awareness (e.g., they may equate leanness with improved performance, or feel pressured to maintain a low body weight) and alarming rates of pathogenic weight control strategies (Dummer, Rosen, Heusner, Roberts, & Counselman, 1987; Rosen & Hough, 1988), which can lead to physical health conditions such as amenorrhea, bone loss, and osteoporosis. Further, a large majority of women report dissatisfaction with their current weight and figure, so much so that dieting has been viewed as normative behaviour (Fallon & Rozin, 1985; Rodin, Silberstein, & Striegal-Moore, 1985). As an example, in a survey of 803 women in the United States, more than half reported globally negative evaluations of their body parts and a preoccupation with losing weight (Cash & Henry, 1995). Furthermore, the prevalence of eating disorders has an assumed connection to societal pressures to be thin (Furnham, Hester, & Weir, 1990; Furnham & Baguma, 1994; Shaw, 1995). In a survey of leading women’s magazines spanning 30 years, Wiseman, Gray, Mosimann, and Ahrens (1992) found an increase in articles with emphasis on weight control, with a corresponding increase in the proportion of diet and exercise articles. However, these authors reported that in the last 8 years of the survey, the number of exercise articles had surpassed diet articles, which may indicate increasing pressure to engage in exercise.

It is not clear that women engage in physical activity for weight control more than do men (Furnham & Boughton, 1995). Nonetheless, the use of physical activity for weight control is similar to dieting in that it reflects a continuum of healthy to generally unhealthy
behaviours. In fact, preoccupation with vigorous exercise out of proportion to that required for basic health has been related to the excessive purging activity engaged in by some individuals with eating disorders (Yates, Leehey, & Shisslak, 1983). Some suggest that excessive exercise is not only correlated with a psychological predisposition for an eating disorder, but may be a contributing factor in its progression and maintenance (Davis, Kennedy, Ravelski, & Dionne, 1994). Clearly, the relations between body satisfaction, self-esteem, and exercise from a mental health perspective, may be important aspects of the overall experience of exercise for women.

**Exercise Addiction and Withdrawal**

With the focus of research and the media largely on the benefits of exercise, advocates seem to have lost sight of what Morgan and O'Connor (1988) referred to as "the darker side of exercise" (p. 116). In some cases, exercise may result in negative psychological changes that may be both separate from, or related to body image. An emerging focus within the literature on the relation between exercise and psychological effects concerns the idea of exercise addiction (e.g., Morgan, 1996) or exercise abuse (Morgan & O'Connor). Although the term *exercise addiction* has been viewed as a *positive addiction* [i.e., a healthy habit that adds to the quality of life, builds physiological and psychological strength (Glasser, 1976; Sachs & Pargman, 1984)], and has been hypothesized to combat negative addictions such as drug abuse and alcoholism (Glasser), recent use of this term implies dependence, compulsiveness, and abuse of exercise. Exercise abusers have been described as those who place an inordinately high priority on physical activity, and are characterized by an unwillingness to stop exercising in the face of physical injury (Raglin, 1990). Exercise addiction or dependence may lead to overtraining and a greater risk of injury. This concept has been described both from a physiological view (i.e., the mood enhancing and analgesic
properties associated with exercise are influenced by chemicals in the brain that are akin to opiates; Grossman, Bouloux, & Price, 1984), and from a psychological perspective (e.g., personality types). Early support for the existence of exercise addiction was sparse and frequently anecdotal (Grant, 1992; Sachs & Pargman, 1979; Veale, 1987). Recent research has suggested connections between exercise addiction and eating disorders (Katz, 1986), weight preoccupation (Davis et al., 1995; Veale, 1995), and obsessive-compulsive personality traits in women (Davis et al.). Moreover, exercise abuse may result in negative social consequences in that the term "exercise addiction" has seemingly entered the lay persons' vocabulary to imply either a strong personal desire or need to exercise frequently, or the very frequent and zealous exercise behaviour of another. Cautions have been raised including (a) whether exercise addiction exists at all except as an aspect of eating disorders (Veale, 1995), (b) the dangers of confusing exercise addiction, abuse, or dependence with exercise adherence or training (Annett, 1995), or with exercise deprivation (Szabo, 1998) and (c) the notion that exercise releases endorphins that produce physiological dependence remains only a hypothesis with little supportive evidence (Steinberg, Sykes, & LeBoutillier, 1995).

A related concept, that of withdrawal from, or deprivation of habitual exercise, may also be relevant in understanding the relationships of exercise to psychological health. Some suggest that cessation of regular physical exercise may result in a state of distress, for example, increased anxiety, depression, guilt, and restlessness (Chan & Grossman, 1988; Mondin et al., 1996; Morris, Steinberg, Sykes, & Salmon, 1990). These feelings have often been presumed to reflect exercise addiction (Szabo, 1998). However, the existing research on exercise deprivation and withdrawal is fraught with methodological difficulties (Szabo). Further, empirical research on this topic is limited, and given methodological differences, comparisons across studies are not possible (Mondin et al.).
Given the theoretical and clinical importance, a more balanced understanding of the complexity of the experience of exercise that takes into account the potential negative effects of exercise (such as exercise addiction and withdrawal) and their links to other psychological effects (reduced depression, anxiety, increased self-esteem, and impact on body image) is needed.

Research on the Meaning and Experiences of Exercise

There are a few recent qualitative research studies that have attempted to elucidate the complexity of exercise behaviour through exploring the experience and meaning of exercise (Dean & Choi, 1996; Fahlberg, 1990; Wheaton & Tomlinson, 1998). Fahlberg conducted an inquiry into women’s experience of exercise using a method based in both phenomenology (in order to describe the lived experience), and hermeneutics (in order to focus on the context and history of this experience). Dean and Choi published their initial findings of a grounded theory study that explored the meanings of exercise and of being an exerciser for women. Wheaton and Tomlinson relied on an ethnographic approach to study the experience of women who windsurf (compared with that of men) "within the specific historical context and space of this leisure culture" (p. 254). The results of these studies highlight the importance of the social-cultural environment within which exercise occurs, the personal meaning of exercise, and identity in sport (including developing or negotiating a sense of personal identity, collective identity, and sense of community; and reacting to the social-cultural conditions). Despite the valuable contributions made to the extant literature by this research, an integrated theory that explains the interactions of these concepts, the process of personal change through regular exercise, and how exercisers make sense of this process, has not been proposed.
Summary of the Psychological Effects of Exercise

Although evidence for the beneficial psychological effects derived from exercise participation is modest (Gavin, 1988), meta-analyses of more recent and controlled studies support the hypotheses that exercise reduces anxiety and depression, and increases self-esteem overall (McDonald & Hodgdon, 1991; Petruzzello et al., 1991) as well as some domains of self-concept. Further, more recent research has begun to clarify specific requirements of exercise in order to achieve these effects.

The purpose of many of these studies was to gain knowledge about the underlying mechanisms of the relation between exercise and psychological effects. Yet, these primary mechanisms remain poorly understood. The word mechanism itself implies a definable law or reductionistic process. This focus may be oversimplified and may limit the research questions proposed (Howard, 1984). For example, a recent concern is to identify a dose-response relationship, that is, what aspects or requirements of exercise are necessary to achieve a desired psychological effect (e.g., Berger, 1994). This type of relationship makes logical sense in the exercise physiology literature (the establishment of a specific association between the dose of exercise and achieving biological responses or physical gains; Shepherd, 1994), but not necessarily from a psychosocial perspective (Rejeski, 1994). This line of inquiry follows from a positivistic template of discovering "probability relations between and among operationally defined variables" (Polkinghorne, 1984, p. 418). The difficulty of using this template against the complexity of human experience has been suggested to be partly responsible for the low practical application of research findings to explain everyday social and psychological behaviour of human beings (Polkinghorne).

Further, research in this area remains atheoretical and as a result, although the literature describes an interaction between exercise and specific psychological effects, it has stopped
short in being able to describe the nature of this relation or why it exists (Scully et al., 1998). In an attempt to make sense of research findings, explanations are often connected to social-psychological constructs, or hypothesized models, but the nature of how and how many of these constructs are pertinent is a matter of debate (Scully et al.). In much of the empirical research on the connection between exercise and psychological states, exercise is isolated from the context of the exerciser’s life, and abstracted into specific modes (aerobic or anaerobic) and types (e.g., running) of exercise. However, the experience of exercise has been suggested as a more complex gestalt (Dean & Choi, 1996; Fahlberg, 1990; Wheaton & Tomlinson, 1998); the experience being greater than the sum of its parts (such as type, intensity, and frequency).

Laboratory studies cannot take into consideration intrapersonal variables and the social or environmental conditions that accompany one’s exercise history (Gauvin, Rejeski, & Norris, 1996). Moreover, there appears to be little research on the negative effects of exercise, and much of this research has failed to take into consideration cognitions and emotions (Rejeski, 1994), in effect, the exercisers’ subjective experiences. Further, this research has been criticized for ignoring exercise behaviour as a meaningful action directed towards goals and purposes of the exercisers (Howard, 1984). Except for a few studies (Dean & Choi, 1996; Fahlberg, 1990; Wheaton & Tomlinson, 1998) there remains a paucity of research with the aim of elucidating the complexity of the experience of exercise. As a result, the links between exercise and psychological effects remain poorly understood (Scully et al., 1998). Theory of the social-psychological process of exercise that incorporates change over time, and historical, social, and physical influences, needs to be delineated. Thus, a study with the goal of developing theory, and that considers the subjective experience of exercisers within the context of social and environmental influences, is required.
Exercise Therapy

Research on the psychological effects of exercise have implications for psychological interventions that make use of physical exercise. Due to the recognition of the benefits, or therapeutic effects of exercise, in the past 30 years the use of exercise in psychotherapy has been of interest (e.g., Eischens & Greist, 1984; Hays, 1999; Kostrubala, 1976). For example, exercise has been suggested as a treatment for emotional disorders, the enhancement of mood and self-esteem (e.g., Sachs & Buffone, 1984), psychiatric disorders (e.g., Faulkner & Sparkes, 1999; Plante, 1993), and as an aspect of stress management programs (e.g., Berger, 1994; Long, 1988, 1993; Long & Flood, 1993). Exercise therapy with a trained mental health professional involves the use of exercise as the therapeutic medium, either alone or as an adjunct to other modes of therapy, to promote psychological and physical well-being. Exercise therapy incorporates the prescription, support, and possibly the technical assistance (i.e., more than recommendation) of exercise to clients who present with particular clinical problems. Some therapists exercise with clients during therapy sessions, whereas others prescribe exercise for clients to enact on their own. Guidelines for using exercise in therapy, and contraindications (e.g., physical problems, some medication), have been suggested for use by researchers and mental health practitioners (e.g., Berger; Hays; Long & Flood; Sachs & Buffone). However, exercise is also being used as a form of self-therapy for achievement of the same beneficial effects without guidance from a mental health professional, as self-reports and the existence of a number of "self-help" books suggest (e.g., Andrews, 1978; Huang & Lynch, 1992). It has been suggested that through exercise clients may access a variety of emotions, connect their physical and mental selves, enhance health consciousness, and potentially change behaviour (e.g., coronary-prone or Type A behaviour; Taylor, Sallis, & Needle, 1985), and that some "sports such as jogging are
conducive to introspection as well as to thinking" (Berger & MacKenzie, 1981, p. 104). However, the process through which exercise may effect these changes remains ambiguous.

**Theoretical Bases of Exercise Therapy**

The exercise therapy literature is based on both the empirical findings from research on the psychological effects of exercise, and on psychological theories of change. These perspectives of change provide the theoretical bases for the interventions and techniques used in exercise therapy, and range from cognitive-behavioral and developmental, to Eastern and experiential. The majority of exercise interventions have been derived from cognitive-behaviour therapy (Anderson & Williams-Rice, 1996), which have shown to be effective in a meta-analysis among non-elite athletes (Meyers, Whelen, & Murphy, 1995). In addition, behavioral or rational-emotive methods (e.g., Ellis, 1994) and Reality Therapy (e.g., Glasser, 1976) have formed the basis for some exercise interventions. With their direct and educational focus, interventions developed from these theories--such as the combination of relaxation training, cognitive restructuring, and imagery training--lend themselves well to both therapeutic and performance enhancement interventions. A life-span development model of counselling has been suggested as an alternative to the cognitive-behavioral theories, and focuses on the development of a sense of competence through creating and attaining goals (Danish, Petitpas, & Hale, 1995). Eastern philosophies that link body and mind have been used as an approach to exercise therapy and sport performance enhancement (e.g., Gallwey, 1997, 1998; Huang & Lynch, 1992). Further, methods of meditation and conscious breathing have been incorporated with physical activity (e.g., Green, 1995; Solomon & Bumpus, 1978); and yoga and martial arts, such as judo, aikido, and karate, aim to integrate body and mind through physical and symbolic expression (e.g., Gleser & Brown, 1988). Other theoretical perspectives, such as theory from somatic methods (e.g., Feldenkrais), may
provide an increased understanding of the experience of exercisers, and in providing effective intervention (Hays, 1999).

**Critique of Exercise Therapy Research**

It is generally agreed that further research is necessary to clarify the particular parameters within which exercise can be effective therapy. Parallel to the research on the psychological effects of exercise, questions remain concerning (a) for which clients, with which emotional problems, is exercise therapy effective (Sachs & Buffone, 1984), (b) the effectiveness of exercise conducted in therapy sessions versus that carried out between sessions, and (c) the effectiveness of exercise as the central element of therapy, versus its effectiveness in combination with other psychotherapies (Sachs & Buffone). In general, researchers suggest that clients may benefit more from exercise as an adjunct to psychotherapy, than from either intervention used alone (Buffone, 1984; Sime & Sanstead, 1987; Summers & Wolstat, 1984). Furthermore, clearer guidelines in offering exercise as therapy need to be studied and outlined, including an understanding of the appropriate amount and types of exercise necessary for psychological effects, and risks and contraindications. For example, researchers and clinicians caution that exercise is neither therapeutic nor therapy when it is overused or used as a substitute for addressing real life issues (Kirkcaldy & Shephard, 1990; Raglin, 1990; Sachs & Pargman, 1984). As discussed by Hays (1999), in using exercise as therapy, therapeutic guidelines need to consider the interpersonal effects, such as the influence of the therapist—including qualifications and knowledge in exercise and therapy, personal attributes, and exercise experiences (McEntee & Halgin, 1996), the therapeutic relationship (Sachs & Buffone), and the potential for change in the relevance for, and use of, exercise during therapy. Moreover, research and therapy guidelines need to consider intrapersonal client factors, such as the importance of exercise to
the client’s life and identity, the client’s psychological and physiological experience of exercise, and the process of client change over time. Theory of the intrapersonal experience of exercise and the process of change through its use, may provide further direction for the therapeutic use of exercise.

Proposed Hypotheses for the Psychological Effects of Exercise

Although exercise has been consistently associated with reductions in depression and anxiety, and an increase in the self-concept of participants, researchers have only speculated as to the underlying mechanisms of this relationship. In addition, exercise training also produces a host of physiological, biochemical, metabolic, and other effects (e.g., Morgan, 1985). Several hypotheses have been advanced in an effort to explain how exercise may affect one’s psychological well-being. Curiously, some differ from the traditional concept of hypothesis, that is, predictions that are formulated before the experiment is conducted. Leith (1994) has pointed out that within the exercise research literature, hypotheses have been deduced in an attempt to explain the results already obtained.

What follows is a brief description of the main hypotheses offered in the psychological literature to explain the underlying social-cognitive processes of psychological change from exercise. As theory concerning the social-psychological process of change is of primary interest, existing psychobiological theories (e.g., Dienstbier, 1989) are not reviewed here (for reviews see Petruzzello et al., 1991, Plante & Rodin, 1990).

Distraction/Time Out Hypothesis

The distraction hypothesis originated from observation that resting quietly in an area free from distractions for 20 to 45 minutes was correlated with reductions in blood pressure and state anxiety (Bahrke & Morgan, 1978; Raglin & Morgan, 1987). Several investigators (e.g.,
Bahrke & Morgan; Sachs, 1982) proposed that because exercise involves the passage of time, it may allow a "time out" from anxiety-provoking stressors and thoughts, and therefore may be responsible for the reduction of depression and anxiolytic effects of exercise. In addition, some exercisers may experience an alteration in consciousness, further interrupting ruminations over problems (Greist et al., 1978). While this suggestion makes intuitive sense, a later study (Crocker & Grozelle, 1991) failed to replicate these earlier results, finding that although an aerobic exercise group and a relaxation group reported significant reductions in anxiety, the quiet rest control group revealed no such changes.

Furthermore, findings reported by Crocker and Grozelle (1991) suggested that there is more at work while exercising than simply being distracted from the daily hassles of life. This was also the conclusion of Roth et al. (1990) who addressed this issue by randomly assigning participants to exercise versus no exercise treatment groups, and to exposure versus no exposure of a mental (distracting cognitive) task. They found that participants who exercised but were not distracted still experienced significant reductions in anxiety. However, the study failed to recognize the potential for exercise to be the distraction itself (Leith, 1994). It is possible that some may find it more difficult to focus on worrisome thoughts while exercising, whereas others may use that time to think through and perhaps solve their problems.

Leith (1994) was unable to find research testing the distraction hypothesis as an explanation for the positive effects of exercise on depression, and conclusions of North et al.'s (1990) meta-analysis generally do not support the distraction/time out hypothesis. Exercise decreases depression more than relaxation (time out) or enjoyable activities (distraction), implying that regular and habitual exercise may be more effective for long-term reduction of depression than habitual relaxation. Although the distraction/time out hypothesis
may account for at least some of the effect of exercise in reducing depression, there is little support for this hypothesis as the primary underlying mechanism (North et al.).

How exercise is viewed by regular exercisers, what occurs while exercising, including cognitions and emotions, and how it might impact their immediate and long-term experience and effects of exercise, remains unclear. For example, as yet we do not know if exercise generally provides the same effect for an exerciser with each exercise session, or if it changes over time. It may be that what we think or feel while exercising, or what we think about our exercising may be almost as important as exercising itself.

'Self' Variables and Skills Mastery

Numerous 'self' variables have been suggested as both outcomes of exercise, and as potentially mediating the relationship between exercise and its affective changes. The constructs of perceived self-efficacy (Bandura, 1977, 1997), self-mastery (Ismail & Trachtman, 1973), perceived self-competence (Harter, 1978), and self-esteem (Sonstroem, 1984) may all be related to the change in affect associated with exercise participation. The fundamental notion of these overlapping concepts is that participation in, and completion of an effortful task (e.g., exercise) that is held as important, may promote a sense of self-mastery, self-competence, or accomplishment from having achieved a goal.

Self-efficacy, the level and strength of an individual's perception (including expectation) that one is capable of performing a behaviour successfully (Bandura, 1977, 1997), has been examined frequently in the psychology of exercise literature. Self-efficacy, which is derived from various sources of information (e.g., prior accomplishments, vicarious experiences, verbal persuasion, physiological arousal), has been thought of as a cognitive mediator of motivation and behaviour (Bandura). The perception of one's capabilities to perform a demanding task such as exercise affects one's emotional reactions. Self-efficacy has been
shown to increase as a result of participation in an acute bout of exercise (Mihalko, McAuley, & Bane, 1996) and in an exercise program (e.g., Bandura, 1977; Ewart, Taylor, Reise, & DeBusk, 1983; Long & Haney, 1988a, 1988b).

Sonstroem and Morgan (1989) have proposed a model based on some of these 'self' variables. They posit that changes in physical self-efficacy (self-efficacy related to physical capabilities) enhance more general levels of physical competence (the perception or feeling of capability to master and control one's physical self in one's environment) and physical acceptance (an appreciation and acceptance of one's body and physical capabilities), which jointly contribute to global self-esteem. Sonstroem and Morgan hypothesized that as an individual continues with an exercise program, self-efficacy will increase through increased judgments of competency and mastery, thus decreasing negative affect such as trait anxiety. This model does provide a more comprehensive understanding of the relation between exercise and self-esteem, and recent research has provided some validation for adult men (Sonstroem, Harlow, Gemma, & Osborne, 1991) and women (Sonstroem et al., 1991; Sonstroem et al., 1994). However, although some support for the connections among these multidimensional components of self-esteem for adults involved in a structured exercise program has been provided, the suggestion that exercise may have an effect on global self-esteem (beyond physical self-efficacy) has been called into question (McAuley et al., 1997). Moreover, these findings are understood from a theory that has been deduced rather than inductively derived from data grounded within exercise phenomenon.

Studies have shown that many psychological benefits of exercise relate directly to the physical benefits observed with exercise participation. These benefits include an increase in perceived fitness level (King et al., 1989), improved subjective physical health (Agnew & Levin, 1987; Kowal et al., 1979; Ross & Hayes, 1988), and an increase in one's satisfaction
with physical appearance (King et al.; Kowal et al.). However, the research findings remain contradictory, and further theoretical development is required in this area (Hughes, 1984; McDonald & Hodgdon, 1991). Contradictions in the literature may be due to differences in the population studied, for example, those who had not exercised before on a regular basis may be pleased with their physical changes, while regular exercisers and athletes may remain dissatisfied if having a certain body type or size will make them more efficient or accepted appearance-wise in their sport. The emphasis on perceived physical competence and physical acceptance necessary for improving self-esteem and self-efficacy indicates that an individual would need to engage in regular exercise over a prolonged time period, and thus does not explain the more immediate benefits gained from participation in exercise.

It seems reasonable to consider that exercise may encourage psychological changes, such as a reduction in depression and anxiety, by providing the exerciser with a feeling of self-confidence for having mastered the particular exercise goal or physical activity skill. However, the model is limited in that it fails to take into consideration potential changes in self-esteem and self-efficacy over time, within a larger life context. Furthermore, other aspects such as the importance of exercise for the exerciser, one's physical health, the social context of exercise and notions of physical health, may have important implications for women's perceived physical competence, physical acceptance, and general self-esteem.

Transactional Model of Stress and Coping

The stress and coping literature provides a further understanding of how exercise is proposed to moderate perceived anxiety (Long & Flood, 1993). Lazarus and Folkman's (1984) transactional model of stress provides a theoretical basis from which an understanding of the psychological effects of exercise may be gained. From this perspective, exercise may be understood as a coping response to a stressor, and serves as a regulator of emotions.
Further, exercise may also contribute to the development of coping resources from which one can draw during stressful times (Long, 1993; Long & Flood), such as increased self-efficacy (Bandura, 1997). For example, Long and Haney (1988a, 1988b) found that self-efficacy in women was increased during an exercise program, and was maintained 14 months after the end of the treatment.

A criticism of research in this area is that treatment effects may be due to variables other than participation in exercise. For example, Long and Haney (1988b) suggested that the exercisers had obtained an increased awareness of how stress affects them, and how a coping strategy such as exercise may enhance their mood, and that this knowledge may have been sufficient in maintaining the treatment effects. This points to the potential importance of expectancy effects, that is, if the efficacy of exercise is related to what an exerciser expects as an outcome (Bandura, 1997). Rather than statistically separating these effects out, expectancy effects may be a supportive component to one's experience.

A further concern is the narrow focus of the investigation of exercise in relation to anxiety and coping. Although theory of how exercise may be used as a coping strategy or developer of resources is undoubtedly useful and interesting, it sheds little light on what else women might be experiencing through their exercise use, how they make sense of it, and the social context wherein exercise is taking place. There is a larger picture of the experience of exercise—which may incorporate exercise as a stress management strategy—that is missing from this literature (Berger, 1994; Long & Flood, 1993). The role of exercise as a coping response and as a contributor to the development of coping resources (such as a regulator of emotions) within this larger picture may be further understood through gaining a greater understanding of how women experience exercise.
Current Conceptualizations of Exercise Behaviour Change

Alongside research that strives to explain the relations between exercise and psychological effects, interest has grown in developing theoretical models for understanding exercise behaviour change—in particular exercise adoption and adherence (King et al., 1992). The goal in building these models is to develop intervention strategies to increase the initiation and maintenance of exercise participation, because "exercise has been more popularized than popular" (Hays, 1999, p. 7). The constructs of perceived self-efficacy, self-mastery, perceived self-competence, self-esteem, self-motivation, and perceived health have been suggested as important determinants of exercise (Sallis et al., 1986; Sonstroem, 1988; Ward & Morgan, 1984). Further, access to facilities, perceived time available, and social support also weigh in favour of exercise participation (Dishman, Sallis, & Orenstein, 1985). Although these findings have been important, they have failed to increase our understanding of how people determine whether to initiate and persist in exercise behaviours (Gavin, 1988). To address this criticism, models have been developed, or adopted from other areas of study where adherence and health behaviours are issues.

Theories of the Intention to Initiate Exercise

Theoretical models that have guided research on the initiation of exercise behaviour include the theories of reasoned action (Fishbein & Ajzen, 1975) and planned behaviour (Ajzen & Madden, 1986). These continuum theories attempt to identify variables that, when combined into a set sequence, can predict an individual's action (Weinstein, Rothman, & Sutton, 1998). However, they are problematic in that the manner in which the identified variables combine to influence behaviour is assumed to be the same for everyone. Adopted from social-psychology, the theory of reasoned action (Fishbein & Ajzen) and the theory of planned behaviour (Ajzen & Madden) have largely been applied to exercise adoption (Blue,
1995; Courneya, 1995; Godin, 1994; Godin, Valois, & Lepage, 1993; Hausenblas, Carron, & Mack, 1997), that is, the decision-making process that may lead to the initiation of this behaviour. These theories outline a progression from health beliefs to attitudes to intentions to behaviour, with the theory of planned behaviour adding the influence of perceived behavioral control. Specifically, social-cognitive theories have been used to predict exercise behaviour from an individual's intentions. The intention to exercise is postulated to be influenced by the person's attitudes toward exercise and subjective norms regarding what significant others believe about the person's exercise behaviour (Ajzen & Madden).

Developed as a framework to explain volitional behaviour, these theories are based on the assumption that people behave in a sensible and rational manner by taking into account available information and considering the potential implications of their behaviour. The summary proposition of the theory of planned behaviour is that individuals will intend to perform a behaviour when they evaluate it positively, believe that significant others think they should engage in it, and perceive it to be under their own control (Ajzen, 1988).

However, these models have been criticized for not adequately considering how past behaviour or habit may influence future actions (e.g., Aarts, Verplanken, & Van Knippenberg, 1998). These theories, along with cognitive-behavioral theories of decision-making (e.g., Janis & Mann, 1977; Kendzierski, 1990a; Kendzierski & LaMastro, 1988), have proved useful for predicting intention to initiate exercise behaviour, but have not been as useful for describing or predicting exercise implementation (i.e., commencing exercise; Kendzierski & Johnson, 1993) or maintenance of regular exercise.
The Transtheoretical Model of Behaviour Change

The most widely used model of behaviour change in health psychology is the Transtheoretical Model of Behaviour Change (Prochaska & DiClemente, 1982, 1983; Prochaska, DiClemente, & Norcross, 1992). The transtheoretical model is an attempt to identify several stages an individual moves through in their effort to both adapt and maintain a health behaviour (Prochaska & DiClemente, 1982). This model has recently been applied to exercise behaviour and the process of change (Marcus, Pinto, Simkin, Audrain, & Taylor, 1994) and its potential role as a mediator between exercise and self-efficacy (Marcus, Eaton, Rossi, & Harlow, 1994).

The transtheoretical model separates behaviour change into stages that are defined in terms of a person’s past behaviour and his or her plans for future action (Prochaska et al., 1992). This model predicts a progression through five stages that reflect the varying degrees of readiness experienced by individuals engaged in new health behaviours—precontemplation (no intentions to make changes, no exercise), contemplation (considering a change but no exercise), preparation (making small changes, such as occasionally exercising), action (actively engaging in exercise behaviour), and maintenance (sustaining the change over time such as exercising for 6 months or more; Prochaska & DiClemente, 1982). Progress through these stages is said to occur at varying rates, with both progress forward, and relapsing back into former stages possible (Marcus, Eaton, et al., 1994; Marcus, Pinto, et al., 1994). Multiple attempts and relapses may result in a spiral-like progression through the behaviour-change process (Prochaska et al.). Further, the stages of change are affected by a number of processes, clustered into experiential and behavioral constructs, by which people are said to change their behaviour (Marcus & Simkin, 1994). The experiential processes involve self-efficacy and outcome expectancies from having gathered information (perceived pros and
cons), affect, and reappraisal of one's behaviours, values, and impact on others. Behavioral processes include helping relationships, reinforcement management, counterconditioning, and stimulus control. According to the model, experiential processes are highlighted in the early stages of change, whereas the behavioral processes are said to be more central to the latter stages (Marcus, Eaton, et al.; Marcus & Simkin).

This model is useful in that it reflects a temporal dimension of the dynamic process of change, and it encompasses both behavioral intention and actual behaviour. Further, this model considers both experiential (including affective and cognitive) and behavioral constructs that may be relevant in one's experience of exercise. One potential limitation of the model is its structure. For example, in one cross-sectional study, participants were found to use the experiential as well as the behavioral processes well into the action stage, thereby transcending model boundaries (Marcus, Rossi, Selby, Niaura, & Abrams, 1992). Thus, those who were already exercising continued to display behaviours—such as taking stock of behaviour (self-reevaluation) and reflecting on its importance to others (environmental reevaluation)—associated with contemplation, based on other health behaviour studies (e.g., smoking; Prochaska et al., 1992). This points to a potential uniqueness of the process of initiating and maintaining exercise. Although this model distinguishes between individuals in the action and maintenance stages of the behaviour change process, this classification is based somewhat arbitrarily on the length of time a person engages in a behaviour (Bandura, 1997; Weinstein et al., 1998).

Another criticism is that maintenance is defined as "action sustained over time" (Rothman, 2000, p. 65), but further potential variations between these stages, and within each stage (i.e., the process of maintenance), are not elaborated. Because many who initiate a change in their behaviour frequently fail to maintain that behavioral pattern, it seems
appropriate to surmise that psychological factors that enable people to initiate a change in behaviour (e.g., start exercising), may differ from those that help them to sustain that behaviour over a longer period of time. However, the transtheoretical model fails to identify any of these potential differences (Rothman). A theoretical model that considers multiple determinants and supports of people (both intrapersonal and environmental) in maintaining exercise as a regular and continuous aspect of their lives, is required.

**Exercise Self-Schemata**

With the goal of further clarifying the process of initiation and maintenance of exercise behaviour, and to increase the efficacy of interventions, a large body of research has attempted to identify particular determinants of exercise (e.g., Dishman, 1988b; Dishman et al., 1985; Martin & Dubbert, 1982). Research on self-efficacy, self-esteem, and self-motivation have suggested that the "self" is an important determinant of exercise behaviour (Kendzierski, 1990b; Sallis et al., 1986; Sonstroem, 1988; Ward & Morgan, 1984). A social-cognitive approach to understanding the concept of self (cf. Westen, 1992)--a self-schema approach (Markus, 1977)--has been applied to the domain of exercise behaviour (Kendzierski, 1988, 1990b).

Self-schemata are generalized representations about the self that are derived from past experience, and that focus on aspects of the self that are personally regarded as important (Markus, 1977). They have been found to influence the processing of self-related information contained in an individual’s social experiences (Markus). For example, self-schemata may affect self-judgments and predictions of one’s future behaviour (Kendzierski, 1988; Markus). Further, people show increased sensitivity to self-relevant information and resistance to information incongruent with self-schemata (Westen, 1992). These self-schemata can be actual representations, also referred to as the working self-concept (Markus & Nurius, 1986),
or evaluative set-goals--elements of self-concept--that can be of past, present, future, or possible states of the self (Markus & Nurius). The construct of possible selves includes positive images of self in the future, or hoped-for selves; as well as negative images of self, or feared selves. The working self-concept model suggests a metaphor of the self as a continuous process "that is constantly designing and redesigning new blueprints for future possibilities" by incorporating changing and temporal aspects (Hoskins & Leseho, 1996, p. 247). Self-schemata may be motivational, for example, if there is a personally important (Westen; Cohen, 1992) discrepancy between how we perceive our present self and how we perceive our future self (Higgens, 1987; Markus & Nurius).

Kendzierski (1988, 1990b) examined the links between self-schemata and exercise behaviour and has provided support that self-schemata may influence behaviour (Markus, 1977). Moreover, research has demonstrated the existence of three exercise self-schematic types (Kendzierski); those who are schematic for exercise (exerciser schematics), those who are schematic for not exercising (nonexerciser schematics), and those who are aschematic regarding exercising (aschematics). Individuals are schematic in regard to a particular attribute (exerciser or nonexerciser) when they consider that attribute to be extremely important to their self-image and either extremely self-descriptive or nondescriptive (Markus). Individuals are considered aschematic when they do not consider the attribute to be important to their self-image and only moderately self-descriptive or nondescriptive. Recent researchers suggest that exercise self-schemata is predictive of both self-report and objective measures of exercise behaviour, and may moderate the exercise intention-action relationship (Estabrooks & Courneya, 1997; Kendzierski).

These studies have clearly increased our theoretical understanding of the role of self in the regulation of exercise behaviour. However, limitations of the latter study (Estabrooks &
Courneya, 1997) include that the investigation of exercise a fairly short period of study (4 weeks), and the assumption that exercise only took place in one location (campus recreation facilities). This suggests further investigation is necessary to explore the experience of exercise over time, and taking place in multiple locations. Further, this research (Estabrooks & Courneya; Kendzierski, 1988, 1990b) does not consider or explore potential effects on one's exercise self-schema such as prior exercise history or potential social-environmental influences. The conceptualization of the self from this approach is largely cognitive-affective, and there are other aspects of self, such as experiential awareness that requires recognition and exploration (Curtis, 1992). Although speculative, Long and Flood (1993) suggest that exercise is developed as a resource through changes in one’s self-schemata (Kendzierski). The possibility of individuals changing their exercise self-schemata, what might affect that change, and the experiential knowledge of self, are important areas for consideration.

Summary

Relations between participation in physical exercise and psychological effects have been addressed in the research literature. Research results remain largely atheoretical, and generally ignore the complexity of these connections. Some studies have attempted to highlight possible links between exercise and psychological effects from a social-psychological perspective. These latter studies focus only on the benefits and potential challenges to be met in the exercise experience, and rarely incorporate negative effects.

Due to research findings that point to therapeutic effects of exercise—including decreased depression and anxiety, and increased self-esteem—psychological interventions that use physical exercise as a therapeutic medium have been of interest to researchers and mental health practitioners. One area of research focuses on the development of theoretical models
of exercise behaviour in order to design intervention strategies to promote exercise participation. There are a few models that have conceptualized the psychological processes that may guide the initiation and maintenance of new patterns of behaviour. However, many of these models assume that the psychological processes underlying the decision to initiate a change in behaviour generalizes to decisions regarding behavioral maintenance (Rothman, 2000).

Furthermore, it has been argued that the theories of behaviour change and therapeutic interventions predominant in the exercise psychology literature are informed by a mechanistic/reductionistic worldview that "inhibits the recognition and development of additional epistemologies for studying the complexity of human life and human movement" (Fahlberg et al., 1992, p. 172). I do not suggest that these approaches are wrong, but that they are insufficient; in having only regarded behaviour and cognitions, they do not address meaningful human experience (Martens, 1987; Fahlberg et al.). In addition, "without knowing what the experience of the habitual exerciser is, we cannot know the meaning of that exercise" (Fahlberg, 1990, p. 177). Although the cognitions and emotions of exercisers may be included in these models, they still do not elucidate the complexity of exercise behaviour, with historical, social, intrapersonal, and physical influences, despite an increasing recognition of these behaviours as complex human phenomena embedded in the social-cultural contexts (e.g., Dean & Choi, 1996; Fahlberg et al.; Peele, 1981; Wheaton & Tomlinson, 1998) with a variety of meanings (Fahlberg; Leonard & Schmitt, 1987). Fahlberg and Fahlberg (1990) caution that exercise prescriptions or programs based on experimental and correlational research may generate formulas for physiological or psychological enhancement that are unrelated to the individual’s unique meanings of exercise. They further warn that intervention programs aimed at changing exercise behaviour without regard to
individual intent, context, or personal meaning, may be misguided and inappropriate (Fahlberg & Fahlberg). Moreover, the existing models fail to consider the potential uniqueness of the experience of exercise for women over time, considering their continuous physiological and life role changes. Our understanding of the process of exercise itself, including its context (e.g., personal past experience, current life context, and social environment of exercise), the complexity of interactions within a dynamic phenomenon, and personal consequences of the process, remains incomplete. There is a need for a fuller understanding of the experience of maintaining exercise as a process, as opposed to an end-point (Orleans, 2000).

In a review of the sport and exercise literature, Snyder and Spreitzer (1974) concluded that "a basically content-oriented strategy [of research] will not result in a body of systematic knowledge about social life" (p. 481).

If we wish to understand people, then we need to know their lived experience. If we wish to know what their experience is, we must give them an opportunity to describe it to us. If we wish to intervene, then knowledge of their reality is vital. Consequently, rather than starting a program of inquiry with hypothesis testing and experimentation, it may be more appropriate to ask questions that require description, interpretation, and understanding (Fahlberg et al., 1992, p. 183).

Thus, the questions concerning the complex human experience of exercise cannot be addressed solely through a reductionistic approach, and require a method capable of explaining process and experience. Sport sociologists Leonard and Schmitt (1987) argue "sport is interaction" (p. 115) and therefore suggest that formal and substantive theories of sport be developed.

Thus, the purpose of the current research was to develop a substantive theory that explains the social-psychological process of participation in regular exercise by women who consider themselves to be regular exercisers. By substantive theory I mean "that developed
for a substantive, or empirical, area of [psychological] inquiry" (Glaser & Strauss, 1967, p. 32). It was expected that this theory, grounded in the experiences of women exercisers, would highlight the complexity of exercise, by (a) identifying conditions that may influence this process, (b) describing women's experience of connections between regular exercise and psychological effects, and (c) focusing on the process of individual change through its use.
CHAPTER III

METHOD

Grounded Theory Method

The purpose of grounded theory method is to generate explanatory theory that furthers our understanding of psychological and social phenomena (Glaser & Strauss, 1967; Strauss & Corbin, 1990, 1998). This naturalistic-inductive method of research strives to generate theory that reflects and explains the phenomenon of interest, through a systematic research approach to the collection and analysis of data. One does not begin with a theory and then try to verify it. Rather, one begins with an area of study in which data are analyzed to produce abstract concepts and to hypothesize plausible conceptual relationships. Thus, this method is "discovery-oriented." As analysis progresses, hypotheses are continually tested, rejected, or integrated with others until a substantive theory that explains as much of the data as possible is developed. My purpose in using the grounded theory method was to further knowledge of women's exercise experience, specifically women who self-identify as exercisers, by developing theory based on their experience.

The emphasis of the grounded theory approach is on the generation of theory through the inductive examination of phenomenon by means of a systematic set of procedures (Strauss & Corbin, 1990, 1998). These methodological procedures are based in symbolic interactionism. The intent is to provide a representational theoretical model of participants' experience that is grounded explicitly and meaningfully in their reports. The focus is more than to simply present and describe data, but to generate theory through the development of theoretically informed interpretations (data are conceptualized and concepts are related to form a theoretical rendition of reality, or a scheme). It can then be used in explaining that reality
and provides a framework for action (Strauss & Corbin, 1990). The function of grounded theory is to make an unclear process more understandable by providing a conceptual network displaying the relational consistencies within the phenomenon under investigation (Strauss & Corbin, 1994). That is, the method focuses on identifying interactions, patterns of behaviour, and consequences or processes, rather than on static situations. Strauss and Corbin (1990, 1998) explain that a focus of grounded theory is to answer questions concerning process, which is described as "the analyst’s way of accounting for or explaining change" (p. 148, 1990). A grounded theory is discovered, developed, and provisionally verified through the collection and analysis of data pertaining to the phenomenon of interest.

**Historical Perspective: Symbolic Interactionism**

Grounded theory developed as a research method through the collaboration of two sociologists: Barney Glaser and Anselm Strauss. Glaser was influenced by the environment at the University of Columbia that encouraged empirical research and theory development. He identified the need for a systematic set of procedures during qualitative data analysis and hypothesis testing (Strauss & Corbin, 1990, 1998). Strauss studied at the University of Chicago and was influenced in his thinking by interactionist writings and his experience in field research. Their backgrounds contributed to the development of grounded theory method and its theoretical base (Strauss & Corbin, 1990, 1998).

Grounded theory has its roots in the social sciences, specifically, in the symbolic interaction tradition of social psychology and sociology. Symbolic interactionism, described by sociologists George H. Mead (1934) and Herbert Blumer (1969), provides the philosophical foundations for grounded theory and guides the research questions, data collection strategies, and method of data analysis (Bowers, 1988; Hutchinson, 1993).
Symbolic interactionism has been articulated as "a social-psychological theory of social action" (Bowers, p. 36). According to the theory of symbolic interactionism, the self and world are socially constructed, and through the processes of social interaction they are ever changing (Blumer).

According to Blumer (1969) symbolic interaction rests on three basic premises. First, "human beings act toward things on the basis of the meanings that the things have for them" (Blumer, p. 2). These things may be other human beings, objects, institutions, ideals, situations, activities of others, or a combination of these (Chenitz & Swanson, 1986). Second, the "meaning of such things is derived from, or arises out of the social interaction that one has with one's fellows" (Blumer, p. 2). Third, "these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he [sic] encounters" (Blumer, p. 2). These premises are based on the assumption that the human being is an acting organism, responding to factors from his or her self and world, and directing his or her action (Blumer). Thus, individuals and their actions cannot be understood independent from their social context.

Furthermore, symbolic interactionist theory posits that human beings act and interact on the basis of symbols. Examples of such symbols include words for an object rather than the object itself, or body language that communicates messages to others with or without words (Stern, Allen, & Moxley, 1982). Symbols have meaning and value for the actors based on experience (Blumer, 1969). As human beings, we negotiate shared meaning of symbols through our interactions. Meanings are thus conceived as social constructions that are derived through relationships and processes.
Locating the Researcher

Though the grounded theory method itself is a process of discovery, the development of theory is influenced by the researcher. From the collection of data to the analysis and writing of theory, the researcher takes an active part in the research process (Strauss & Corbin, 1998). For example, I collected data through the use of interviews, a more personal and interactional endeavour than the mechanical asking of questions. Due to my training in counselling psychology and experience as a therapist, I consider myself sensitive to nuances of behaviour—a "requisite ability" for conducting grounded theory research (Strauss, 1987, p. 299). Participants responded not only to the questions posed, but to me personally. Further, the initial interview questions formulated as the "departure point from which to begin data collection" (Strauss & Corbin, p. 205), were based on concepts I derived from the existing literature and from personal experience (e.g., sensitivity toward theoretical issues). During data analysis, which has been defined as "the interplay between researchers and data" (Strauss & Corbin, p. 13), I continuously compared data (meaning units), constructed groupings or categories, and interpreted and followed hunches about possible connections between categories (or concepts), until I shaped a higher level of theoretical abstraction (Charmaz, 2000). Thus, in developing insights from the data, I used specific procedures as well as creativity and intuition (Glaser & Strauss, 1967; May, 1994). Furthermore, in my own physical exercise during the period of this study, I found that I was "living by [my] analyses, testing them not only by observation and interview but also by daily living" (Glaser & Strauss, 1967, p. 225). My personal experiences, professional knowledge, and attitudes bring a unique perspective to the study. Therefore in Appendix A, I provide a brief personal background statement.
Theoretical Sensitivity

*Theoretical sensitivity* refers "to the attribute of having insight, the ability to give meaning to the data, the capacity to understand, and capability to separate the pertinent from that which isn’t" (Strauss & Corbin, 1990, p. 42). Theoretical sensitivity is stimulated by familiarity with the extant literature, professional and personal experience, and by the analysis process itself. Although grounded theorists attempt to rid themselves of preconceptions about the phenomenon under investigation in order to allow its "true" nature to be developed in the analysis, they realize that this phenomenological reduction can never be achieved (Rennie, Phillips, & Quartaro, 1988). Resolution of this paradox may be found in the assumption that despite having theoretical sensitivity to the phenomenon under investigation, the researcher does not initially have theoretically adequate knowledge of the phenomenon (Strauss & Corbin, 1998).

The process of discovery involves the creative procedure of establishing "solid connections between the previously known and the hitherto unknown" (Selye, 1956, p. 6). In regards to the "previously known" (Selye, p. 6), I initially made explicit my own preconceived notions about this phenomenon by outlining my knowledge and experience of the area in the literature review (e.g., understanding exercise as a coping behaviour for stress) prior to data collection and analysis, and then strove to "suspend belief" in this understanding. As new discoveries were made, I attempted to remain relatively free of biases and possibly unrecognized assumptions by (a) maintaining an attitude of scepticism towards early categories and propositional statements, (b) validating and refuting these tentative categories and propositions by examination of data, (c) periodically checking my analyses with my research group of colleagues who were also pursuing grounded theory studies of their own, and (d) by following the research procedures (Strauss & Corbin, 1998). Further, I
kept memos on the effects this study had on me, and recorded my awareness of my experience of exercise throughout the research period. My scepticism of the extant literature and proposed hypotheses, and of my own biases, was instrumental in the development of my research purpose, and therefore my choice of method. This scepticism allowed me to question what was thought to be true in order to be open to hearing what the participants described as their process.

**Maintaining Creativity**

Strauss and Corbin (1998) discuss the importance of maintaining creative thought along with attending to a rigorous method. I maintained a fresh perspective by paying attention to the multiple avenues of expression of exercise-related experiences pervasive in our environment. I noticed that fictional (e.g., Fielding, 1996) and nonfictional literature [including personal accounts (e.g., Krakauer, 1997) and self improvement books (e.g., Douillard, 1994; Jackson & Csikszentmihalyi, 1999; Kowalchik, 1999)], health and fitness magazines [e.g., *Runner’s World* (Burfoot, 1999), *Shape* (Harris, 1996-1999), *Women Outside* (Burke & Scott, 1999)], newspaper, newsletter, and magazine articles (e.g., Azar, 1996; Bowers, 1997; DeAngelis, 1996; Dworkin, 1997; McDonald, 1998; Stedman, 1999; Weyman, 1998), films (e.g., Briand & Frappier, 1998; Norbu, 1999), numerous television and print media advertisements, television news highlights on exercise, and radio interviews on exercise research or personal accounts, all share insights on exercise, movement, fitness, sport, adventure, and personal challenge through exercise, body image, and diet.

Further, I discovered that conversations with friends and strangers often turned to their own experiences and observations, on mentioning my research focus. These discussions were often held in the field (e.g., while hiking a local and popular strenuous trail, sitting on a chair lift while skiing in the local mountains, running beside the ocean). These informal
conversations not only offered me the opportunity of collecting information about others’ experiences, often while exercising, but also of exploring own experiences and developing theoretical ideas with a listener. Thoughts from these many encounters were recorded in a journal when possible. In addition, unsolicited shared experiences, the visual and auditory encounters with exercise in the media, films, and literature, and my own experiences with exercise, were used as secondary data sources and contributed to the development of theory.

Ethical Considerations

Prior to the recruitment of participants, this research was approved by the University of British Columbia Behavioral Research Ethics Board (Appendix B). Ethical considerations were taken into account in all phases of data collection and analysis in order to ensure that participants’ rights to privacy and confidentiality were respected.

During recruitment, potential informants either contacted me by phone or electronic mail (e-mail), or were approached in person, by phone, or by e-mail, depending on whether they were responding to the advertisement for volunteers, or whether they had initially been approached by a friend or professor about my study. In this initial contact, I introduced the purpose of the study, clarified the nature of the interview (Appendix C), and answered any questions. After agreeing to participate (all who were eligible agreed), informants chose the date, time, and location for the interviews to be held.

At the start of each interview, I reviewed the initial area of interest. An informed written consent to be interviewed and audiotaped was obtained from each participant before the interviews were started (Appendix D). To ensure each participant fully understood her role in the study, I reviewed the consent orally and answered any questions before beginning the interview.
A potential risk to the informants in being interviewed was that vulnerability could be evoked through the disclosure of personal details, possibly raising disturbing issues in regards to their sense of self and body, and their physical and mental health. For example, one woman disclosed her struggle with anorexia and depression, two women disclosed a history of sexual abuse, and several women shared events from their lives that had been difficult for them. These intimate issues were raised by the women as they had played an important role in their exercise experience. Being a trained therapist, I was prepared to manage issues and emotions that might arise as participants shared their experiences with me, and make offers of referrals if deemed necessary by the participants or in my clinical judgement. Ultimately, all participants reported having felt safe to disclose this personal information in the nonjudgmental environment of the interview, and in knowing their anonymity was secure. While conducting the interviews, I had also emphasized that they could end the interviews at any time or refuse to respond to any questions asked.

Participants’ right of privacy was protected by maintaining confidentiality and anonymity in the following ways. Each participant was assigned a code name for the purpose of transcribing and storing the interviews. Only I had access to signed consent forms, field notes, transcripts, and audiotapes that were stored in a locked filing cabinet. Biographical details presented in table form was kept disconnected to code names in order to leave identifying information of participants concealed. Participants had been made aware that transcripts of their interviews may be shared with supervising professors and the research analysis group for the purpose of analysis. When transcripts were shared, code names were used. All data will be destroyed 5 years after the end of this study, unless the study participants are consulted and agree to its further use.
Data Collection

In the grounded theory method, a theory is developed by following a series of analysis levels that proceeds both sequentially and concurrently from data collection to the categorization of data, to the synthesis of these categories into salient constructs, and resulting in the articulation of a theory that describes the developed constructs or concepts and their interrelationships. Thus, data collection and analysis were intertwined. The initial impressions from early data collection and analysis guided the data sampling, which then affected the later collection and analysis. For clarity however, I explain these two processes separately, beginning with the data collection process.

Sampling Procedure

A major purpose of data collection is to "maximize opportunities to discover variations among concepts and to densify categories" (Strauss & Corbin, 1998, p. 201). Thus the researcher samples for the phenomenon from sources (e.g., participants, happenings), and not from persons per se. How sampling proceeds is dependent on the stage of data analysis, and on the theoretical sensitivity the researcher gains in regard to the developing categories (Strauss & Corbin). Thus, sampling procedures involve both new sources of data (e.g., participants) and data collected previously in the study.

Initial Sampling

Initial or selective sampling (Schatzman & Strauss, 1973) was based on locating individuals who were the most informed about the phenomena of interest in order to maximize eliciting its aspects. As Strauss (1987) stipulated,

Selective sampling refers to the calculated decision to sample a specific locale or type of interviewee according to a preconceived but reasonable initial set of dimensions (such as time, space, identity) which are worked out in advance for a study. (p. 39)
Therefore, as the psychological process of the experience of exercise was of main interest, women who self-identified as regular exercisers (i.e., as being physically active on a regular basis), and who were willing to share their exercise experiences were recruited. Self-definition was thought to be adequate for subject selection, as correlations have been found between physical activity self-definitions and exercise behaviour (Estabrooks & Courneya, 1997; Kendzierski, 1988, 1990b, 1994), perceptions of exercise behaviour, motivation-related variables, and variables related to social perceptions (Kendzierski et al., 1998). The specific frequency of participation was not considered as part of the criteria (Estabrooks & Courneya). Moreover, given the discovery-oriented nature of the grounded theory method and the concern to not impose a priori limitations on the study, women’s definitions of regular exercise, including frequency of participation, were not "screened." In theory building, initial sampling facilitated the generation of provisional categories and preliminary conclusions about their properties.

The initial selection criteria of participants consisted of the following: (a) women who self-identified as being regular exercisers; (b) who were able to understand and speak English in order to communicate their experiences of exercise; (c) who were currently living in the Lower Mainland area in British Columbia; and (d) whose personal experiences provided variation in details, such as amount of time as an exerciser, types of exercise, use of exercise, and age. Volunteers were sought through advertisements displayed around the city at various locations such as exercise facilities and community centres (see Appendix E). Participants were also attained through word of mouth, the strategy known as "nominated, network, or snowball sampling" (Morse, 1991, p. 130), hearing of this study from other informants, and friends and professors who knew about my study.
Theoretical Sampling

A feature of this method is that data collection is influenced by the outcomes (i.e., derived categories) of the developing analysis, and based on the concept of "making comparisons" (Strauss & Corbin, 1998, p. 201). This evolving theory-based data selection is referred to as theoretical sampling (Glaser & Strauss, 1967), and is used for the purposes of rich description, and concept or theory development (Morse, 1991). Sampling is determined by the need to collect as much data as necessary in order to investigate categories and theoretical connections, and to ensure that the theory developed is representative of the phenomenon. Thus, data collection was determined by changes in criteria for selecting data sources (e.g., research participants) according to what had been learned from previous data sources (Strauss & Corbin). Further, collection of data involved returning to transcribed interviews to look for data (e.g., examples of categories) that may have previously been overlooked. Strauss (1987) posited:

Theoretical sampling is a means whereby the analyst decides on analytic grounds what data to collect next and where to find them. The basic question in theoretical sampling is: What groups or subgroups of populations, events, activities (to find varying dimensions, strategies, etc.) does one turn to next in data collection. And for what theoretical purpose? So, this process of data collection is controlled by the emerging theory. (pp. 38-39)

Two examples of theoretical sampling involved the investigation of the category "experiencing exercise." In the first example, I had data from women who were exercising for purposes of physical fitness and aesthetics, but wanted to know about others who may get exercise, and yet not consider it in the same light. Thus, I sought out two participants with varying experiences. The first was an elite athlete who was training and competing with the hope of competing in the Olympics, and the second was a woman who did not consider herself to be an exerciser, yet who had a physically demanding job and walked as a means of
transportation (thus getting exercise). In the second example, I noticed that some women interviewed discussed being married, living with, or dating men, in the context of "seeking balance" in life and "accepting body." A few women also mentioned increased sexual interest and satisfaction as a "benefit" from exercise (one woman discussed this in the context of a heterosexual relationship). However, the majority did not volunteer their sexuality (heterosexual, homosexual, or otherwise) and I did not want to make assumptions. Therefore, theoretical sampling suggested interviewing lesbian women about their experiences, and as a result one woman was identified and agreed to participate. Thus, in theoretical sampling, participants were actually sought who might provide information to push conceptual limits, and to find the boundaries of emerging categories.

In grounded theory research, an adequate sample refers to how widely and diversely the theorist has chosen and compared data sources in an effort to saturate (fully develop) categories. As the generation of theory requires achieving as much diversity in initial categories as possible (Rennie et al., 1988), I wanted information about variability within the area of women's experience of exercise. Rennie et al. defined variability as the appearance of informants' attributes that are potential qualifiers of the theory as it is elicited (e.g., age, length of time having exercised regularly, having or not having exercise-related employment, participation in competitive exercise or not, identifying self as an exerciser). In order to examine the impact of these attributes on the developing theory, I selected data sources representing the particular attributes to challenge working categories and provisional hypotheses and hunches.

Sampling continued until categories were saturated, that is, no new data were obtained, the categories and theoretical links were described through multiple examples, and the emerging theory provided a credible explanation about the experience of exercise among
women who identify themselves as exercisers. Note that sample size is determined based on saturation of categories for theoretical or descriptive purposes rather than on representativeness, for example, irregularities in maintaining a regular exercise program (such as taking holidays, not feeling motivated) can be considered and described as a characteristic of the experience of exercise, rather than a characteristic of individual women.

**Description of Study Sample**

Participants were drawn from a large urban city in Western Canada, a population who are more physically active than other Canadians (Federal, Provincial and Territorial Advisory Committee on Population Health, 1996). In total, a sample of 22 women (age range 21 to 60 years) acted as informants by participating in intensive interviews about their experience with exercise. The majority of participants identified themselves as committed exercisers ($n = 20$), while two other participants, one who identified herself as being a former exerciser, and one who identified with being a nonexerciser, were interviewed in order to challenge the limits of the theory. The former exerciser had initially identified herself as a regular exerciser when volunteering to participate, and during the interview changed her labelling of her exercise identity. The majority of these women did not identify their sexuality, but one woman identified herself as heterosexual, and one woman identified herself as lesbian.

The women in this study were mainly recreational exercisers who ranged in their level of expertise in their primary physical activity. Three women had formerly been involved in advanced amateur sport (two in skiing, one in basketball), and one current professional athlete spoke of both her professional (track) and recreational exercise. Several competed recreationally (e.g., in team sports such as basketball; in long distance running such as 10 km, marathons). The majority of the women in this study were considered to be "privileged," due to their personal or family’s economic status, resources available to them,
and personal level of education or employment. At the time of the interviews all of the women considered themselves to be fairly able-bodied. However, several were managing or had managed symptoms of ongoing health concerns (e.g., multiple sclerosis, obesity, osteoarthritis, asthma, high blood pressure, high cholesterol), past health concerns (anorexia, bulimia, chronic fatigue, depression, drug and alcohol abuse, illness such as mononucleosis), past or recent injuries (from exercise or otherwise), and past or ongoing pain (acute or chronic back pain, post surgical pain) that had affected their physical ability. The woman who suffered from multiple sclerosis spoke of times when she had not been able-bodied. Demographic characteristics of these women are found in Table 1.

Interviewing Procedure

Semi-structured interviews focusing on the women's experience of regular exercise were conducted, either at the University or at a location more convenient for the participant (including the participant's home or work place). Interviews were conducted between August 1996 through June 1999. Interviews were audiotape recorded after written informed consent was obtained from the participant. Interviews were 1 to 2 hours in length.

During each interview I attempted to create a relaxed and trusting environment through my interpersonal and interview skills (e.g., open questioning, reflecting participants’ answers to clarify my own understanding, encouraging their questions and reflection on their responses, empathy) in discussions with each study participant. Interviews were semi-structured (Appendix F) with later interviews becoming more focused in order to explore particular concepts competing for inclusion in the developing theory (e.g., see questions designed for use with the nonexerciser, the last woman to be interviewed, Appendix G). I allowed responses and questions to flow in a natural dialogue in order to facilitate honest and comprehensive responses. Questions were formulated both within the discussions with each
Table 1.

**Demographics of Sample (N=22)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identity as Exerciser</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current exerciser</td>
<td>20</td>
<td>90.9</td>
</tr>
<tr>
<td>Former exerciser</td>
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<td>4.5</td>
</tr>
<tr>
<td>Non-exerciser</td>
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</tr>
<tr>
<td><strong>Age (M = 33 years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 - 25</td>
<td>5</td>
<td>22.7</td>
</tr>
<tr>
<td>26 - 30</td>
<td>5</td>
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</tr>
<tr>
<td>56 - 60</td>
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<td>4.5</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
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<td></td>
</tr>
<tr>
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<td>19</td>
<td>86.4</td>
</tr>
<tr>
<td>Chinese</td>
<td>2</td>
<td>9.1</td>
</tr>
<tr>
<td>Black</td>
<td>1</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Citizenship</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadian</td>
<td>20</td>
<td>90.9</td>
</tr>
<tr>
<td>Canadian/Welsh</td>
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<td>4.5</td>
</tr>
<tr>
<td>American</td>
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<td>4.5</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
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<td></td>
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</tr>
<tr>
<td>Divorced</td>
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<tr>
<td>Married</td>
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</tr>
<tr>
<td>Common-law</td>
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*(table continues)*
Table 1.

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<tr>
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<th>f</th>
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<tr>
<td>Children</td>
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<tr>
<td>0</td>
<td>16</td>
<td>72.7</td>
</tr>
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<td>1</td>
<td>1</td>
<td>4.5</td>
</tr>
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<td>2</td>
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<tr>
<td>With children under 13</td>
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</tr>
<tr>
<td>Sexual Orientation</td>
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<td>Lesbian</td>
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</tr>
<tr>
<td>Heterosexual</td>
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<tr>
<td>Not reported</td>
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</tr>
<tr>
<td>Education (highest level obtained)</td>
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</tr>
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</tr>
<tr>
<td>Post secondary years</td>
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<td></td>
</tr>
<tr>
<td>1 - 2</td>
<td>1</td>
<td>4.5</td>
</tr>
<tr>
<td>3 - 4</td>
<td>4</td>
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</tr>
<tr>
<td>11 - 12</td>
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<td>Current Occupation</td>
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<tr>
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<tr>
<td>Full-time work</td>
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<tr>
<td>Student(^{b})</td>
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<tr>
<td>Stay-at-home mom</td>
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<tr>
<td>Current Employment Related to Exercise</td>
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<td>Athlete</td>
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<tr>
<td>Personal trainer/Fitness instructor</td>
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</tr>
<tr>
<td>Research(^{c})</td>
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<td>4.5</td>
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<td>19</td>
<td>86.4</td>
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</tbody>
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Table 1.

<table>
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<tr>
<th>Characteristic</th>
<th>( f )</th>
<th>( % )</th>
</tr>
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<tbody>
<tr>
<td><strong>Gross Annual Income (personal)</strong></td>
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<td></td>
</tr>
<tr>
<td>0 - 15,000</td>
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<td>13.6</td>
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<tr>
<td>16,000 - 25,000</td>
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<td>4.5</td>
</tr>
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<td>26,000 - 35,000</td>
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<td>36,000 - 45,000</td>
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</tr>
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<td>46,000 - 55,000</td>
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<td>9.1</td>
</tr>
<tr>
<td>56,000 - 65,000</td>
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<td>4.5</td>
</tr>
<tr>
<td>66,000 - 75,000</td>
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<td>4.5</td>
</tr>
<tr>
<td>76,000 - 85,000</td>
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</tr>
<tr>
<td>Not reported</td>
<td>10</td>
<td>45.5</td>
</tr>
</tbody>
</table>

| Years Living on West Coast              |         |         |
| 0 - 1                                   | 1       | 4.5     |
| 2 - 5                                   | 3       | 13.6    |
| 6 - 10                                  | 2       | 9.1     |
| 11 - 15                                 | 2       | 9.1     |
| 16+\( ^d \)                            | 10      | 45.5    |
| Not reported                            | 4       | 18.2    |

Note. Data were gleaned from interviews, so not all participants provided all information.

\( ^a \)Not all values sum to 100 due to rounding, or due to individuals being in more than one category in Current Occupation and Current Employment Related to Exercise.

\( ^b \)Four women were students with part-time employment, two women were students with full-time employment, three students did not indicate being employed.

\( ^c \)This individual also works as a fitness instructor.

\( ^d \)Includes women who have lived on the West Coast for duration of life (20-50 years).
participant, and evolved from the responses of the former participants. This helped to elicit the participants' experiences in more detail and in directions that they may not have otherwise considered. The committed exercisers were interviewed about their ongoing experience of exercise use, while the former exerciser and the nonexerciser were interviewed about their unique experiences with exercise (e.g., participation in the past, or on occasion; thoughts about exercise, not exercising on a regular basis, and not identifying as being exercisers).

Except for the first few interviews, the conversations were started with exploring the participants' background by asking questions such as their marital status, age, and location of residence. I found these questions to be useful in building rapport with the women. Further, this initial focused question and answer dialogue seemed to help participants to gain self-confidence about answering questions and reflecting on their lives. Moreover, responses to these questions sometimes triggered the participants to consider aspects of their lives that were related to their experience of exercise, and to which we returned later in the interview (e.g., living in an area of the city with easy access to parks they utilize for exercise, influence of their profession on exercise or vice versa, having children, health concerns).

In line with the grounded theory method (Strauss & Corbin, 1990, 1998), the participants focused on their exercise experience through answering open-ended generative questions. Initial questions raised were useful in gaining conceptual entry into the area of investigation and for raising more relevant questions specific to each participant. These questions were carefully worded so as to minimize any response bias in favour of constructs already in the psychological literature (e.g., asking the more general question "What does exercise do for you," as opposed to a more specific and leading "Some women have told me that exercise reduces their stress, have you experienced the same benefit;" words such as stress and
benefit were avoided until the participant used them first, at which time, their understanding and experience of these words was sought). These early open-ended questions came from theoretical sensitivity through familiarity with the research literature and my own experience with the phenomenon (Strauss, 1987). Questions such as, "Tell me about your experience of exercise." "What do you experience during or from exercising, that is, what does exercise do?" "Tell me how you have been able to remain physically active." helped elicit the women's perspective with as few prompts as possible. This data collection technique allowed participants to discuss freely their own experience with exercise, bringing up areas they perceived to be related, such as diet and health. Further, the depth and breadth of the interview largely depended on the comfort level of each participant in sharing personal information. Generative questions regarding the exercise experience of women provided enough structure for the discussion, without jeopardizing rapport nor depriving the women of the opportunity to make sense out of their experience and to communicate this understanding. Responses to the initial open-ended questions provided direction in making distinctions, comparisons, and in directing further sampling.

I encountered few difficulties in establishing rapport with the participants, and I believe all were reassured that they could choose what they wanted to tell me, and that they could stop the interview at any time. Only one participant initially declined to discuss a health-related experience, but later in the interview offered to discuss it stating that she trusted me, and that the information would help me to understand her exercise experience more completely.

During the interviews, the majority of study participants stated that they had not considered nor discussed their personal experience of exercise previously. However, many stated that they volunteered to share their opinion on this phenomenon. Further, many
wanted to know if their experiences were similar to or different from other women interviewed. I thought that this request had to be handled delicately, as my answer could effect their responses. However I discovered that questions or statements starting with "Some women have told me . . ." were useful in obtaining an elaboration of the individual woman's experience, whether in agreement or not. The majority of women expressed having some difficulty, especially at first, in finding words to express their experience to me. All of the women could easily express particular parts of their experience, such as their reasons for exercising (e.g., for physical health and fitness, weight loss or maintenance, stress reduction), challenges faced in undertaking such an activity (e.g., it is hard to maintain, fear of exercise compulsion), and benefits achieved (e.g., being at a comfortable weight and size, physical health and fitness gains, feeling energized and clear-headed). However, over the duration of each interview, participants were encouraged to explore and verbalize their experiences at a more profound level; this was done because "what respondents assume or do not apprehend may be much more important than what they talk about. An acontextual reliance on respondents' overt concerns can lead to narrow research problems, limited data, and trivial analyses" (Charmaz, 2000). At this more profound level, women began to talk about themselves as exercisers, their experience of exercise, how they have used exercise as a means to act as agents in their lives, and in having received many unexpected intrapersonal rewards. The women reported both the interview process (having one person listen to them discussing themselves) and the topic of discussion to be a unique, enjoyable, and fruitful experience.

Especially during the early interviews, due to my training as a counsellor, I found it a challenge to remain in the role of an interviewer. I believe my counselling background affected the method somewhat, in that I have been trained to listen for meaning and emotion
in a communicator’s words as they talk. Although the method as outlined (Strauss & Corbin, 1990, 1998) indicates that the conceptual work of coding begins after a few interviews are collected and possibly transcribed, I noted that this work would often occur for me during the discussion, as I listened to each participant. This was possibly both a help and a hindrance, in that I had to keep my thought processes in my awareness, checking frequently to make sure I was not making any assumptions of participants’ meaning. However, my counselling and communication skills were particularly useful when a sensitive topic was raised. For example, I felt it ethically necessary to refer to my clinical skills when issues such as sexual abuse or anorexia were shared, to make sure that external support, if necessary, was available to those participants. (Any offers of referrals for counselling assistance were declined as these women stated that they had their own resources.) As a fellow woman who exercises, I found talking with these women to be inspirational and motivating.

Three interviews were not audiotaped due to equipment failure that was not observed until after the interviews had been conducted. In these cases, field notes were written after the interview on what I had understood of the participant’s experience, and these notes were used in lieu of transcripts. Other field notes written for all interviews simply provided background information and context for interpreting the interview transcripts during analysis.

Early interviews led to discovery of initial categories, links among data, and some provisional concepts. As the study progressed, questions gradually became more specific as more information was gathered and analysis proceeded. Ideas, categories, and constructs under development from previous interviews were introduced and explored with greater frequency, and propositional relationships between concepts were tested through questions to which the women responded. Transcripts and field notes derived from the 22 interviews with
participants were considered the primary data source to be analyzed.

Data Analysis

Analysis involves a coding paradigm that provides a systematic procedure for locating data as concepts and the relationships between them (Strauss, 1987). I used three levels of data analysis: open coding, axial coding, and selective coding. Each level of coding analysis represented the gleaning of a more abstract view of the data. Theory was developed inductively and deductively through the constant comparative analysis process of interview transcripts (Corbin, 1986; Glaser & Strauss, 1967). This method of analysis involves "asking questions" of, and "making comparisons" among the data (Strauss & Corbin, 1998, p. 73). Comparisons are made of (a) differences among people (such as their views, accounts, actions, situations, and experiences), (b) data from the same individual with themselves at different points in time (either through further conversations, or at a later date reviewing the interview already done) (b) datum incident with incident, (c) data with category, and (d) categories with other categories. Data were systematically categorized, and theorizing was limited until patterns in the data were seen (Rennie et al., 1988). In this analysis, coded responses of each participant were compared constantly to those of others, until provisional categories were developed.

As data collection proceeded, these categories were integrated, combined, and further developed through analysis into concepts and constructs. Codes, categories, concepts, and constructs under development were tested on an ongoing basis by returning to transcribed interviews and questioning participants for refutation or validation. Properties of concepts, and their relationships were also tested through this process (Strauss & Corbin, 1998). The process of interviewing and returning to transcribed data continued until the concepts and
propositional statements were saturated (i.e., no new information could be gleaned).

Grounded theory requires an ongoing process of data collection, open coding, memoing, determining a core concept or process through further coding, reviewing earlier steps in terms of the core concept, and sorting memos--a process that continued well into the write-up of the theory. In this way, individual accounts of the exercise experience were developed into a theory that accounts for much of the individuals' "action."

I transcribed half (11) of the audiotapes and reviewed the remainder done by a transcriptionist. Notations of interruptions, laughter, change in tone and speed of voice, and emphasis on particular words were included. Transcribing the interviews, and reading through a transcript for accuracy, also provided an overall impression of the interview and story shared by the participant.

Data were initially approached through an open coding procedure. Open coding involves breaking down the data into discrete parts (such as observations, words, sentences, phrases, or paragraphs), and asking "what is happening here?" in order to discover its analytical potential. Data bits were compared for similarities and differences, whether or how they related to exercise, and whether they aroused interest, or revealed an idea or theme. Through this close examination of the data, code names were generated by reflecting the essence of what was said by the participants (Strauss & Corbin, 1998), frequently using the participants' language to label a code in order to remain close to the substance of the data. Some examples of code names that were developed during open coding are: "recognizing I'm good at it," "exercise being hard work," and "aerobisizing myself." This early analysis of the data was done with the aim of elevating my perspective on the data and my ability to understand its meaning.

After completing open coding of three transcripts, I began to more systematically
**categorize** data by grouping code names that seemed to pertain to the same phenomenon under a more abstract label (Strauss & Corbin, 1998). A **category** refers to a pattern of behaviour, theme, or process distinguished in the data. Through this process of naming, the provisional categories stimulated further questions, elevating the level of abstract conceptualization (Strauss & Corbin). Categories were also thought about in terms of their properties (characteristics) and dimensions (location along a continuum) that helped me propose provisional relationships. This systematic method was purposeful in discovering potentially salient features as soon as possible. "Getting in shape" was a category that was developed in relation to the previously described code names, capturing the effort involved and goals sought when initiating exercise. Although tedious at times, the processes of open coding and developing categories were repeated for all transcripts in order to avoid premature closure, and to remain open to new directions in collecting and analyzing data.

Grounded theory often has its foundations in the ideas that stem from the earliest exposure to the data. Thus, during data collection and analysis, I documented my thoughts in memos. Memos are written records of analysis that relate to the formulation of the theory (Strauss & Corbin, 1998). The process of writing memos parallels data collection and analysis, and leads to abstraction. I kept different types of memos. Labels given to data bits were maintained in **code notes** (Strauss & Corbin). **Operational notes** concerned the methodology, and consisted of notes regarding equipment, sampling, questions, possible comparisons, and leads to be followed up on (Strauss & Corbin). My **theoretical notes** contained my inductive and deductive thinking that occurred during analysis. These included my thoughts on potentially relevant categories and their properties, relationships, and processes (Strauss & Corbin).

Categories were constantly compared with newly coded data. I compared hunches from
previous memos with new ideas that occurred in response to the continued open coding. I built categories by combining and re-coding, found new categories, and discarded others. As data collection and analysis progressed, my memos became more detailed as I started to see common themes or processes shared by participants when exploring their experience of exercise. For example, I noticed "getting in shape" encompassed the subcategory "struggling with self-talk" that was described as both positive and negative, and healthy and unhealthy.

As the collection of data continued, determined by analysis and developing provisional categories, I began to synthesize categories into constructs and proposed hypothetical possibilities amongst data (Glaser & Strauss, 1967). Building upon categories already developed, with conceptual (K. A. May, personal communication, May 10, 1999) or axial coding (Strauss & Corbin, 1998), I identified potential relationships between categories, in essence putting the data back together in new ways by asking "what does this have to do with that?" Data were organized "by making connections between a category and its subcategories" (Strauss & Corbin, 1990, p. 97). Here "the focus is on specifying a category (phenomenon) in terms of conditions that give rise to it; the context (its specific set of properties) in which it is embedded; the action/interactional strategies by which it is handled, managed, carried out; and the consequences of those strategies" (Strauss & Corbin, 1990, p. 97). At this level of coding, I focused on categories that were substantiated by new data and connected in a way that pointed towards a credible explanation of the experience of exercise for women. I observed that certain categories (e.g., "intrinsic") were necessary to help develop the theory (often due to being action-oriented and richer in description), while other categories (e.g., "motivation") were regarded as increasingly peripheral as data analysis progressed. Hypothetical relationships derived from the conceptual coding were tested against
data. When incoming data did not support an hypothesis, the hypothesis was modified or discarded (Strauss & Corbin, 1990, 1998). This aided in verifying or refuting aspects of the developing theory. Conceptual links became more specific as the process continued and more variation was explained by the modified hypotheses.

While memoing at this level, I employed creative techniques such as the use of metaphor and imagery (e.g., while working on the concept of "balancing", used the image of a woman balancing priorities in life much like a juggler; while working on the notion of "struggling with self-talk," I role-played internal arguments about exercising and between self and body that I was hearing from participants), writing "storylines" of developing themes, and creating diagrams of plausible relationships to assist me in imaging a fuller extent of situations and consequences (Strauss & Corbin, 1998). Further, the conceptual ideas from memos were frequently discussed and debated within the analytic group (see Appendix H). This "refutational work" often confirmed, disconfirmed, or pushed my insights on these categories being developed. Memos became increasingly more complex with developing theoretical ideas, with the later memos extending and clarifying earlier ones.

Categories that I developed became more abstract in their explanatory power while still remaining grounded in data. The limits of each category were defined by reviewing all the coded data that pertained to it. In this manner, properties or characteristics of a category that distinguished it from others were identified, and the conditions under which a category arose were considered. Eventually I worked with the conceptualizations of categories that resulted from early and continuous analysis, and not the raw data per se (Glaser & Strauss, 1967). Labelling of categories continued until I was able to link them together into more major constructs. Data collection through theoretical sampling and the constant comparative method of analysis continued until the major categories, constructs, and their linking propositions
reached theoretical saturation (Strauss & Corbin, 1998).

As conceptual density increased, a core or basic process was sought to explain the overall relationships among the constructs through the more focused closed (K. A. May, personal communication, May 10, 1999) or selective coding (Strauss & Corbin, 1998). Within selective coding, categories are reduced and auditioned for their places in a provisional structure, which is then validated against the data. At this analytical level the researcher is focusing on constructs and relationships that seems core to the experience. For example, I initially auditioned "balancing" as a core construct, under which I tried to relate all categories. However, in light of new data it did not make sense, and was eventually reassigned the position of a subcategory in "seeking balance." Towards the end of the analysis, the dimensions of exercise as extrinsic to exercise as intrinsic pushed my understanding. I sought to refine the theory by coding for action or process with higher-order categories. Thus, exercise as extrinsic was integrated with other categories to become "shaping up," and exercise as intrinsic was combined with other categories to become "experiencing self as shaped." A reexamination of the data validated the reciprocal relationship between these two constructs as the plausible basic process of the study. Thus, the selective codes "account for the most data and categorize them most precisely" (Charmaz, 2000). Each step within the research process helped the resulting theory remain empirically grounded while preserving sufficient abstraction. "Shaping self through exercise" was developed as the core or basic social-psychological process.

Strauss (1987) advocated several criteria for judging core status of a construct. The criteria are (a) a category's centrality relative to other categories which accounts for "a large portion of variation in a pattern of behavior" (p. 36); (b) a category's frequency of occurrence in the data (i.e., "the indicators pointing to the phenomena represented by the
core category must appear frequently," p. 36), thus it is seen as a stable pattern; (c) its inclusiveness and the ease with which it can be related to other categories; (d) the clarity of its implications for a more general theory; (e) a category’s increased theoretical power as details of the category are worked out analytically; and (f) its allowance for "building in the maximum variation to the analysis" (p. 36) in terms of properties, dimensions, strategies, conditions, and consequences.

I conducted data analysis as both an individual process and an interpersonal process. The initial data coding was done on my own, shared with my supervisors and an analytic research group (consisting of colleagues from a variety of disciplines who were conducting their own grounded theory studies), in order to ensure that I was following the method in an adequate manner. However, I found that much of the later conceptualization of theory was challenged and influenced by discussions of my analysis with this group. This group was instrumental in keeping analysis from being an isolating process, and in making sure my analysis remained grounded in the data (see Appendix H).

Criteria for Judging Rigor

Theories generated by the grounded theory method are judged by their methodological soundness and their usefulness in both practical and theoretical terms. Methodological soundness refers to judgments regarding (a) the trustworthiness of the data and subsequent findings, (b) the empirical grounding of the research findings, and (c) the adequacy of the research process through which the theory is generated (Strauss & Corbin, 1990, 1998). Lincoln and Guba (1985) stated that trustworthiness consists of credibility, transferability, dependability, and confirmability (the equivalents of internal and external validity, reliability, and objectivity), thus it refers to the level of confidence in the authenticity of the findings.
To meet these criteria of methodological soundness and usefulness, the theory should fit (be faithful to the reality of) the substantive area it was induced from (Glaser & Strauss, 1967). Because it is reflective of that phenomenon, the theory should be comprehensible to the participants and those who practise in that area (Strauss & Corbin, 1990, 1998). Further the theory should be conceptual and broad enough so as to be applicable to a variety of contexts related to that area (Glaser & Strauss; Strauss & Corbin). The resultant theory should reflect a level of abstraction great enough to explain considerable variation, be parsimonious, and well integrated (Strauss, 1987). Transferability may be achieved by providing enough *thick description* for others to ascertain whether the results of this grounded theory study transfer to their settings. Finally, the hypotheses developed regarding relationships among categories should be useful in clarifying conditions to which the theory applies, explanation of the studied phenomenon, and to guide action (Glaser & Strauss; Strauss & Corbin). The relevance of a grounded theory is derived from its analytic explanatory power of actual problems or questions and basic processes in the research setting (Charmaz, 2000).

Strategies were taken to assure that criteria for rigour was met. First, validation of the theory was elicited from exercisers, as an accurate representation of their experience of exercise. Determination of the evolving theory as a credible explanation of the experience of exercise was accomplished by explaining the major aspects of the theory to three women who had participated in the study as part of their interviews. This was done for validation or refutation of the theory, and to further their explanations of their own experiences. Further, the evolving and developed theory were further explained to three women exercisers who had not participated in the study. These women concurred that the reported theory made sense and resonated with their experiences.
Second, the adequacy and rigor of the research process through which the theory generated was supported by my training in the grounded theory method in all phases of the research process. Moreover, the analysis was supervised by a member of my dissertation committee who is an expert in the grounded theory method. Memos were written to explain decisions made to account for the research process and to ensure dependability of the study. A process of verification through collaboration or peer debriefing with dissertation committee members and colleagues occurred in ongoing data analysis. My subjectivity and bias towards developed categories was checked by the research group that provided multiple perspectives to the analysis (see Appendix H). Further, self-reflective memos were written, and conversations were had with colleagues and supervisors, describing my thoughts on the research process, effects of conducting research in this area, and my personal experiences of exercise. Questions that I asked myself and documented included "In what ways did I identify or not identify with the study participants? To what extent did these similarities or differences, for example in gender, exercise habits, age, or character, affect the interviews, and thus the research process?" By maintaining awareness of my subjectivity, and in validating interpretations of the data with the analysis group, selected participants and non-participants, the criteria of credibility, fittingness of the data, and rigor of the method was demonstrated.

Summary

Data were collected through semi-structured interviews with women who exercised regularly, and analyzed using the technique of constant comparative analysis (Glaser & Strauss, 1967; Strauss & Corbin, 1990, 1998). The underlying assumptions of this method are derived from an interactionist philosophy and perspective on human behaviour, and from
traditions of naturalistic field research. Data collected were analyzed and coded inductively in terms of recurrent themes and concepts. Logical deductions regarding the meaning and interrelationships of the data were posited, modified, or rejected in light of continual incoming data. The result was a middle-range theory grounded in the data, which described the process of change through exercise in terms meaningful both to the participants and the investigator.
CHAPTER IV

STUDY FINDINGS

Roam about until exhausted, and then, dropping to the ground, in this dropping be whole.
- ancient Zen saying

The result of this study is a substantive theory developed to explain the experience of participation in regular physical exercise by women who identified themselves as exercisers. Further, this theory may be considered middle-range, in that it "falls between the 'minor working hypotheses' of everyday life and the 'all-inclusive' grand theories" (Glaser & Strauss, 1967, p. 33). An overview of this theory is represented in Figure 1. The theory is conceptualized as a social-psychological process (i.e., a process of "shaping self"), wherein an intrapersonal process is enacted within the context of the social-cultural environment, and affected by one's personal exercise background and current life conditions. Further, understanding what the term exercise means and what it means for women to exercise, is embedded in these personal and social contexts. Participants' exercise behaviours, thoughts, and emotions interact in an oscillating manner to create two phases. These two phases suggest the "formative" (indicating the interaction of earlier "building" experiences towards change) and "summative" (indicating the cumulative action and consequence) experiences, thus highlighting the temporal dimension, or progression, of the process of change. However, because these phases are affected by the contextual factors, they interact in a recursive manner, and therefore the summative phase is not an end-point of the process—women may experience progression and regression as they shape themselves through exercise. Throughout this process women appraise their experiences. Thus, the experience of exercise for these women involves intrapersonal and person-environment transactions (cf.
Lazarus, 1999) that are constantly evolving and dynamic.

In the following sections, I first summarize the participants' understanding of being an exerciser, and what they view as exercise. Second, I describe an overview of the basic process. This is followed by descriptions of the major components of the theoretical scheme.

The theory as written alternates between the present and past tense. The language is a reflection of the method, for example, the interviews focused on the current and past experience of each woman, yet this experience was coded in the present tense to represent theoretical action. In most cases, the past tense is reflective of my interactions with the women who participated, and of my understanding of these women's experiences. However, aspects of the theory are written in the present tense in order to remain true to the women's voices (i.e., to preserve the integrity of the women's narratives of what they had or were experiencing, and described in the interview). The code names for the developed concepts and processes of the theory are first presented in single quotation marks, and later incorporated into the text. Using a practice similar to that used by other grounded theory researchers (cf. Richie et al., 1997), thematic responses of the sample are discussed according to the following descriptors: (a) Words such as generally, often, the majority, most, or many, were used to indicate the characteristic response of a majority (10 or more) of the participants; (b) the words some, several, or a number of signified responses from 4 to 9 participants; (c) a few designated 3 or fewer participants; (d) and on occasion more specific wording is used (e.g., all, one, a couple). Further, specific wording also is used to indicate exercisers, the nonexerciser, and the former exerciser. This notation is not meant to focus on frequency of shared experiences of the participants—nor imply that distribution is equated with the significance or importance of the concepts (criteria for identifying categories and
concepts are outlined in chapter three). Rather, this notation is to provide integrity to the theory, that is, that the theory be conceptually dense, accounting for a great deal of variation (Strauss, 1987), and that the variation in the dimensional ranges of concepts is highlighted (Strauss & Corbin, 1998).

With consent from the study participants, edited quotes taken from the interview transcripts are used to illustrate aspects of the theory, make note of the variability of responses (cf. Morse, 1994; Sandelowski, 1994), and communicate the participants’ perceptions in their own words. In the quotations, italics have been added to indicate a participant’s emphasis of her words. Likewise, punctuation indicates the participant’s pauses and speech inflection. Participants are identified by pseudonyms.

Understanding Exercise

Throughout the research process the questions "what is exercise," "why exercise," and "who is an exerciser" as defined by the women who perceive themselves as exercisers were considered. A delimitation of the study is that the majority of the informants identified themselves to be exercisers, thus, having this identity underlies their combined story. Moreover, all of the women were doing some type of physical activity, either incidental or purposeful, for recreation, or at work. However, from the interviews it became clear that each woman’s identity as an exerciser was something that she had developed from her own process of engaging in exercise.

What is Exercise?

For the women in this study, exercise is understood to be a health behaviour, a form of caring for oneself physically and mentally, and as a means of self-expression. The terms exercise, physical activity, and workout were used to define exercise behaviours in both
narrow and broad terms. Further, the definition of exercise was understood to change over one’s lifetime, which may be related to the reason for, or use of exercise, as stated by Niomi, "exercise has held different meanings at different points in my life and you know, I’ve done exercise for different reasons at different times." For these participants, the notion of exercising was clearly contrasted against the notion of active play in childhood. Further, there was a general understanding of a qualitative difference between exercise, physical activity, and sport, although it was difficult for these women to clearly delineate this difference in meaning. During the interviews participants were often confronted with their own contradictions in their definitions.

I know a lot of people do consider exercise as something that if you know, if you went out and rode your bike once a year you would have had some exercise, but I would never, that wouldn’t be a concept that I would grasp. It would be in a broader . . . I mean it is not exercise, it is, but in the way that I think about exercise it is more of a discipline that you do. So that of those years, [in reference to time before identifying as an exerciser] you know I would "exercise" or whatever. I mean, I remember riding my bike, but it was more a leisure activity, than a kind of an undertaking, or a commitment. Yeah. So there is probably another word that we don’t really have that is somewhere in between. Because you can’t deny that going out once a year and riding your bike is exercise, but it isn’t quite the right category? There is an element of commitment that goes along with it that keeps you doing it over many years. (Lydia)

All exercise was understood to be a form of physical activity or a type of sport, but not all physical activities or sports were considered to be exercise per se, or exercise for the sake of exercise.

For me there is [sic] basically two types of exercise. I mean there is one where I would come, you know, cycling to school, or intramural sports and stuff like that, and just kind of wander. That’s for me, kind of, general exercise. It’s just something to keep you fit, you know, along the way. But, and then there is, exercise, serious exercise, which means going to the gym, you know, three times a week, and then that is where, what you’re actually doing in physical exercise, and that’s for you. Whereas the general exercise is just having fun, well, that’s in most of it, but you bike to school because you have to get to school (laugh), and intramurals [intramural sports] . . . you are hanging out with a lot of your friends. (Corrine)
This is contrasted with Tamara's definition of exercise, a woman who was training for the Olympics:

Well, I don't look at what I do as exercise per se. I know it is and it keeps me in shape and it keeps me fit. But for me what I do for track is my job. So I don't go into thinking I'm exercising today. I go into, going "hey I have to go to practice" because this is where my livelihood is going to come from for awhile. So I don't look at it as exercise. The only time I actually do think of exercising is usually in the off-season when we are not training everyday and we are just sort of stay in shape while we are resting for the next season. Then I think of it as having to get out there and exercising [sic]. Like with [boyfriend] and I, [he] runs, he's a distance runner. So he'll run and I'll ride my bike in the off-season. So that will be exercise for me on that day. But when I'm competing or practising to compete it's not exercise, it's my job. That's the way I look at it.

Exercise was described by participants as being either incidental or purposeful. Incidental exercise includes exercise that may be had while doing something else, for example, walking required at work, running up the stairs at home while doing chores, and even participating in a physical activity or sport where exercise is not the main focus. In contrast, purposeful exercise involves the conscious doing of exercise behaviours, with "a component of discipline" (Lydia). Regular exercise carries the meaning of consistent purposeful exercise, for example, women who engage in exercise several times each week. However, the meaning of purposeful exercise fell on a continuum that is unique for each individual, and involved reasons for exercising, expended effort required, and whether it was enjoyed or not.

In terms of reasons for exercising, purposeful exercise refers to participating in exercise behaviour specifically for desired gains (e.g., physiological health benefits or illness prevention, physical fitness maintenance or gains, physical appearance benefits, and mental health benefits). Further, it may involve extrinsic (e.g., winning a race) or intrinsic (e.g., feeling of accomplishment) rewards. Purposeful exercise is viewed as expending effort in order to achieve those gains, and is indicated by the exertion, work, and difficulties involved in engaging such behaviours. For example, Linda expressed it this way: "I think exercising is
really hard. . . . it's an hour of pure work." All of the exercisers described exercise in terms of the physiological effects, for example, Linda added "I think it's more just about cardiovascular workout. . . . It's making my heart pump faster, it's making me breathe faster, it's exercising my muscle groups and stretching them." The physical nature of exertion and level of effort is apparent in Francis's description of exercising while playing basketball:

> It's high fitness and like hard, so you're running really hard and jumping and, you go for like almost 2 hours in a row. So it's like you're completely exhausted by the end. You're red-faced. You're panting, you're sweating. Versus the other workouts are just a lot easier, and not as hard on the body. . . . More taxing physiologically and well, not just aerobically but also joint-wise, like it's harder on your joints. (Francis)

Further, purposeful exercise varies along a continuum from something that is loved and enjoyed to hated and done out of obligation. This dimension varies according to the individual, the individual's interest in different activities, and often the timing of the exercise for the individual. For example, Linda viewed exercise as

> . . . something that I don't get a lot of pleasure out of. . . . It's not something that I would choose to do. I know I have to do it and I derive some enjoyment from it. But when I'm golfing it's pure enjoyment. I don't look at it as exercise.

To her, exercise is viewed as engaging in the activities that she hates, such as aerobics, cycling, and walking. However, she does not view the physical activities she enjoys, such as swimming and golf, as exercise. In contrast, Catherine stated that she usually enjoys all of her physical activities, but views activities where she pushes herself physiologically and gains aerobically as exercise. Like other participants, she stated that if she hated an activity she would not participate in it, and instead seeks out activities that she likes. Further, as a runner she recognized that she does not always enjoy each run, but knows that she has to suffer through some "bad runs" (i.e., runs that seem to require more effort) and will enjoy a better run later in time.

How the women categorized purposeful exercise was also unique. For some women,
purposeful exercise is a category of behaviour that stands alone (e.g., exercising in a gym and using weights for anaerobic exercise; or for aerobic exercise using machines such as the stairclimber, treadmill, or participating in a class such as aerobics or spinning). For others, purposeful exercise is a component of physical activity done as recreation and sport (e.g., exerting oneself while playing basketball or tennis), or transportation (e.g., cycling at a high pace and speed while enroute). For others still, purposeful exercise involves both of the above. The term *sport(s)* is differentiated to include more organized or focused individual athletics, and team practices and games, participated in by nonexercisers, recreational exercisers, and competitive athletes. Although many exercisers viewed exercise as having "a goal" or "a destination" (such as working out on a stairclimber for a certain amount of time, performing a certain number of repetitions, running to a place), this was equated more with sports (e.g., getting a goal, winning the game). Some sport was seen to require more fitness and exercising than others, for example, basketball versus baseball. Although many of these women considered their participation in sport as exercise, others, like Linda, did not; "I never considered sports exercise. I really enjoyed it." Further, purposeful exercise may or may not be competitive (at a recreational or amateur athletic level). For all women in this study exercise is described as purposeful when exercise involves a conscious effort to exert oneself to obtain benefits.

**Why Purposefully Exercise?**

For the women in this study, exercise has held different meanings at different times in their lives and has been influenced by the social-cultural environment and their exercise background. Furthermore, their reasons for exercising have changed with their changing life contexts. However, there was agreement among these women that the definition of *purposeful exercise* referred to participating in exercise behaviour for particular gains.
Whether a woman had engaged in exercise throughout her life (e.g., as a part of her recreational physical activities, skill classes), or had lived a primarily sedentary life, purposeful exercise was usually (re-)initiated for the pursuit of physical appearance (e.g., to lose weight, tone muscles) or physiological health benefits (e.g., for prevention or rehabilitation of illness or injury). This participation involved continuous physical and mental effort, although for many exercisers it had become more habitual.

Despite these shared reasons to (re-)initiate and maintain exercise, other reasons for engaging in purposeful exercise on a regular basis were very individual and dynamic. For example, women in this study suggested that reasons for exercising may change overtime as a woman experiences greater physical fitness and ability (e.g., performance, strength, endurance, speed, agility) and personal benefits from ongoing participation (e.g., experience pleasure in social interaction with other exercisers, or notice a change in mood, a reduction in perception of stress, or feel strong and capable in other activities or other areas of life).

Although these women’s reasons for exercising changed over time, they also fluctuated daily and even hourly, dependent on their needs and desires at the time. Frequently these women would know only that they felt a need or a desire to exercise, for example, Niomi described times in her life where she "need[ed] to go for a run or do something," or "sometimes there are days when I know I just want to go for a run, and it’s sheerly for the sake of having a good physical workout." Although these women stated that they usually were aware of their reasons behind their needing or wanting to exercise, some women admitted that the reasons are not always known until during or after the exercise session.

Reasons given for participating in regular purposeful exercise included (a) physical health and fitness (e.g., to maintain or lose weight, increase physical ability, decrease sense of physical tension, prevent or rehabilitate from injury or illness), (b) physical appearance
(e.g., to maintain or lose weight, tone muscles, attain a "youthful" appearance), (c) emotional (e.g., for pleasure, to feel the "adrenaline rush," to re-energize and revitalize oneself, or decrease or prevent stress and depression, ease loneliness), (d) cognitive (e.g., to problem solve, for goal setting, distract oneself), (e) social (e.g., to connect with friends, or be among other like-minded individuals), (f) practical (for transportation, or required in job tasks at work, such as walking and lifting), (g) for challenge or competition with oneself or others, (h) environmental (to be out in nature or another location where one feels at peace, or exercising as a means of transportation for environmental/political reasons), and (i) political (e.g., defying stereotypes of women such as possible physical strength, or the body shape of a fit woman; exercising for a cause, such as running in a race to raise awareness of breast cancer or multiple sclerosis).

As each woman was encouraged to consider her reasons for exercising, and her knowledge of what she experienced from exercise in the interviews, responses indicated a deeper level of understanding of their participation in exercise. The quality of these reasons ranged from those that were thought by the participants to be more obvious and expected (e.g., to lose weight, release stress, socialize with friends), to those that were more subtle, profound and personal reasons. These latter reasons appeared to occur as the experience of exercise itself became influential for their participation, with continually more personally satisfying bouts of exercise. These deeper reasons indicated these women’s experiencing of a holistic connection between their sense of self, mind, and body, with their action of exercising. Reasons given included the attainment of holistic, and to some, spiritual experiences, such as, (a) connecting with others, or getting away from others; (b) connecting with self, or to "lose oneself" for awhile; (c) having a sense of control in her life; (d) feeling an increase in self-esteem with an increase in self-confidence, sense of accomplishment, and
challenge; (e) having "an experience," adventure, or even to experience a "wildness;" (f) connecting with one's environment in such a way as feeling a part of it; (g) experiencing bodily movement as synchronous, or flow; or, (h) for joy, or the pure love of exercising and doing the activity. Both the surface and more profound reasons for exercising are further described in the intrapersonal process.

Central to answering the question "why do women purposefully exercise" is simply the love that the majority of the exercisers have for their activities, their desire to care for themselves, or both. Catherine suggests that her regularity with particular exercise behaviours (running) and not others (cycling) is aided by loving one sport and not the other. She suggests this as a reason why some people do not maintain their participation in exercise over time.

Like for me, like if I was to go for a cycle and it wasn't great I probably wouldn't go for two weeks. You know, like maybe because I don't have that, that regularity with it? And it's not something that, at this point, I love? So, but I think that's a key thing is, draws back to like, why people drop out, or, 'cause they don't find, you know, or don't exercise regularly, so they just don't find stuff that they love. It's all about what they should do, and they, you know but, whether they really like it, it's not, they don't even think about that as much?

Why these women exercise is individual and varied, but it appears that their exercise behaviour results in some of their personal needs and desires being met.

Intellectually . . . I know that it's good for me. And it makes me feel better about myself when I exercise. It's a case of, umm, trying, it's trying to be good to myself. (Linda)

Who is an Exerciser?

Identity

The answer to the question of who is an exerciser includes aspects of identity, personality characteristics or attributes, and exercise behaviours. The women's involvement with exercise and how they identified themselves in reference to this involvement was varied.
For example, the women in this study identified themselves as exercisers, a former exerciser, and a non-exerciser. Furthermore, exercisers often identified themselves according to their primary physical activity of choice or skill set (e.g., runner, marathoner, track athlete, cyclist, skier). Frequently, this identity developed through others' perceptions, as Hope describes:

I guess in the beginning it was just a fitness program, and after that umm, hmmm I guess it became a part of my identity, people were like "oh, the girl in that grade who runs track," or, you know "the track girl" or you know something like that, so it sort of became a part of me, and how I was known in the town that I lived in.

Moreover, identifying oneself as an exerciser was related to identifying oneself as fit and as having physical ability, that was earned through regular participation in exercise over time. As Catherine explains:

Maybe it's when you have a kind of, your identity is of someone who's fit? . . . I always identify with someone, as being someone who was fit, and I could go out and do most things, like keep up with most people. Like not you know, to any great level, but at least not be embarrassed, or not be kind of feeling like, like I have to say no to something because I wasn't fit enough? Like I've had that. And so, I thought like oh well I don't want that, I don't want that to ever become the case. . . . {Researcher: How much do you think does the identity of being fit really informs your picture of yourself, or your sense of self?} Umm, I think quite a bit actually. I, lately I've kind of [been] realizing, kind of more than I thought because, umm, yeah, you know like I did phys[ical] ed[ucation] in my undergrad[uate program], and then I went and continued with--and I've always kind of, all my work has been, has resolved around sports or fitness, or physical activity of some sort. So, I've always, I've kind of from a young age pretty much identified with being active and being fit. And ah, and a lot of my decisions were made for that reason, or around that reason. So it must, so it is I think a big part of my identity.

In terms of ability, the nonexerciser stated that one of the reasons she did not exercise was that she "lacked eye-hand coordination," and believed that she was "not good at" sports.

Some of the exercisers described themselves as being an athlete, or athletic, whereas others did not. For example, Linda viewed herself as athletic.

Yeah, I'd say I'm athletic, I'm coordinated. I'm not a bad golfer. I'm inconsistent but I'm not a bad golfer. I'm a good ball player. so it seems to me it means
coordinated—I don’t "throw like a girl" you know (chuckles). It’s that idea that I have a skill set.

Whereas athletic refers to ability and skill, for these women athlete connotes a serious exerciser who trains for her sport and competes. Being an elite athlete, Tamara further clarified the issue of identity as an exerciser as someone for who exercise was an important part of their life, as distinguished from her own identity as an athlete in terms of what she primarily does.

I love track. It’s what I do, it like who I am. It’s a huge part of who I am. I’m a track athlete. . . . It’s not like people who just run for the university. Those people might run for four months of the year. . . . They might call themselves track athletes but that’s probably not who they are. That doesn’t describe who they are. They are probably medical students who run track. Or whatever they might be, but they are not track athletes. That’s not who they are. It doesn’t matter what I’m doing or what I’ve taken up or whatever, I’m still a track athlete. It’s just a part of me. It will never not be a part of me. And I don’t know if it’s that I’ll go into some aspect of track to stay with it but even if I don’t it will still be who I am because it is, has just defined my life for so long, you know. . . . So right now I’m just a track athlete and I have goals that I want to accomplish and if I didn’t have track I don’t know what I would do. . . . It’s [running track, including training and competing] what I do and it’s who I am.

Attributes

The women in this study viewed an exerciser as someone who is (or is trying to be) disciplined, driven, has strength of character, and in control. As Lydia and many others highlighted, "there is an element of commitment that goes along with it that keeps you doing it over many years." Catherine further added having a willingness to pursue exercise, often from her former experience and familiarity with the activity, as having provided her with the incentive to continue.

And with running it’s an interesting thing because, of all stuff I’ve done in the past, it’s always, it seems like it’s one of the activities where it’s easiest to fall out of shape and it’s the hardest to get back into shape. You know, and . . . I’ve kind of gone up and down in that cycle where I felt in really good running shape and I’ve felt in not good running shape and I had to get back up there, you know, 'cause you can’t always maintain great great shape with running, 'cause then you’re for sure gonna get injured or whatever. So, but it’s like I’ll have a familiarity that okay, I know I have to work myself
up again, I know that the next two weeks of running are probably not going to be that pleasurable. But I'm willing to do it?

However, the former exerciser and the nonexerciser shared the opinion that these attributes, such as having discipline and being in control, may not be reflective of the truth because they felt the exercisers' goals may be somewhat superficial. The nonexerciser held the view that exercisers are those individuals who are fanatical, or obsessive and compulsive about exercise (as opposed to individuals who are physically active but not fanatical).

In contrast to the definition of an exerciser, many exercisers and the nonexerciser expressed that nonexercisers were "lazy," or "out of control." However, the former exerciser disputed the notion of being out of control. She viewed her own behaviour of not exercising as her choice, and stated that she felt more in control now than previously when she was exercising. In hindsight, she thought her exercise, driven by her pursuit of an unrealistic, unattainable, and rather meaningless goal (happiness through having an ideal body shape) attributed to her being out of control.

**Exercise Behaviours**

According to these women, an exerciser is someone who exercises in a regular and consistent manner with the expectation of receiving particular benefits from exercise (e.g., physiological health benefits, changes in physical appearance, or psychological benefits). Furthermore, some of the exercisers and the former exerciser added to this definition by also viewing an exerciser as someone who engages in physical activities regardless of the frequency of participation, reasons for exercising, or expectations, and goals desired. There is agreement that exercisers have had experience with exercise over time, although the length of time required is individually evaluated. This experience with exercise suggests that through having "put in [their] time" (Catherine), exercisers have built up knowledge of the
activity and it’s varied effects, a level of personal comfort exercising and in challenging oneself through exercise, and that it is incorporated into one’s life and seen as a priority. As Catherine states exercise is "just kind of part of my life that it’s easy to do? Like it’s not hard, it’s not an ordeal for me to have to fit it in or anything? Most of the time." As Valerie stated:

> It’s one of my top priorities, school, working out, then other things. . . . For about a year and a half now. Once I get into the routine of things it just becomes part of my life. So it’s like missing a meal, you just don’t feel complete afterwards until you finish the meal, until you eat the meal. So in that sense, working out is really important to me.

All of the participants received some exercise through physical activity, whether the goals were for fitness reasons, recreational or social reasons, or the experience of movement. Some exercisers were more focused on the activity and their goals (e.g., fitness, performance and skill, endurance) than others. However, it was also pointed out that women who engage in physical activities may or may not be exercisers, that is, a nonexerciser may engage in activities that are physical as well. For example, the woman who identified herself as a nonexerciser walked almost everywhere she went (for transportation) and occasionally went for a swim (for fun). She understood that although she was getting some exercise through these activities, she could not see herself as an *exerciser* as she did not think that this exercise (incidental in her opinion) was at a high enough intensity nor was focused enough on a particular goal--characteristics she related to being an exerciser. Further she declared that she would not participate in these activities for the purpose of exercising:

> If I had to (pause) if somebody said "you need to walk an hour a day" which is about the total [I walk daily to and from work], like half an hour [there] and half an hour home. So if I had to go for an hour long walk and just go for a walk, I would never do it. (Sara)

However, all participants expressed their belief that exercise is integral to an exerciser’s
life, and varying from being a part of one's life to being a defining factor of one's self.

Francis describes her experiencing both ends of this range:

I guess I have to say too that for years I know that a lot of my identity was wrapped in being an athlete. Because I think that's probably the first time in my life I started to feel really good at something. So, I'm sure part of that too is not wanting to give up that part even though that's changed a lot over the years. I'm not as good as I was in my early years. . . . Well now I have a life. You know, more than sports or (pause). Athletics is not my whole life. There was time where it seemed to be my entire life. Now I have more balance in my life and umm it's just one component. . . . Well seeing myself as an athlete, or slash fit person I guess you could say, would be just a component of me rather than it, before it was like a, a major part. . . . The athlete part I guess is still being involved in competitive sports. Being a fit person is somebody who if I wasn't involved in any kind of team I'd still wanna be fit and working out to keep my body in shape and mind in shape and all that kind of stuff. . . . Sort of the part that will be with me forever.

The Process of Shaping Self Through Exercise

The Basic Process

The basic social-psychological process of "shaping self through exercise" was developed to theoretically describe the experience of participating in regular exercise among these women. Shaping self through exercise transcends the implication of shaping behaviour, and shaping one's body by participating in exercise, to include shaping one's self-image or self-concept (perception of self), building self-esteem (value placed on those perceptions, including the dimension of self-efficacy), self-enrichment, and shaping life experiences. For these women, participation in exercise contributes to their identity. Through exercise these women gain knowledge (kinaesthetically, cognitively, and emotionally) of their present and possible selves. Exercise helps them to know, challenge, and often change themselves. Shaping self through exercise connotes the meaning that these exercisers are both creators (i.e., taking action by shaping themselves and their lives) and creations of their action (e.g., their shaped physical bodies, their self-awareness and sense of self as exercisers, the
expression of themselves through their physical movement, and their values by including
exercise in their way of living): Through exercise they create and recreate themselves.

The process of shaping self through exercise is influenced by the exercisers’ personal
exercise background (e.g., family influences, school sports experiences, messages received),
social-cultural environment (e.g., the influence of culture and media), and current life context
(e.g., one’s life roles and responsibilities, life events, current sense of oneself). Further,
these factors may influence the meaning (how one understands and makes sense) of exercise
and being an exerciser, and exercise behaviours and experiences (e.g., how a woman initiates
and participates in exercise). The personal exercise background (including the past and more
recent history of exercise) appears to be more influential in the shaping up phase, particularly
when initiating exercise.

The process of shaping self through exercise is conceptualized as consisting of two
phases that suggest the formative and summative experiences of a progression. The formative
phase of "shaping up" involves the continued effort necessary when initiating and maintaining
participation in regular exercise. This effort varies from the continued work involved for
some women to the enactment of an habit for others. Salient conceptual elements of this
phase are "talking to self," "experiencing exercise," "feeling good about self," and "diverting
from self." The summative phase of "experiencing self as shaped," describes the often
unexpected rewards experienced within and about the self for regularly participating in
exercise. The salient conceptual elements of this latter phase are "growing into self," "grounding
self in exercise," and "expressing self through exercise." These two phased
interact in a recursive manner, thus experiencing self as shaped is a part of this dynamic
process and not an end-point.

The recursive nature of the interaction between the phases of shaping up and
experiencing self as shaped may be influenced by change over time, that is, the ever-changing quality of the current life context and the social-cultural environment. Change over time may occur in the moment, daily, weekly, or over many years. Some personally significant changes in an exerciser's life (but not all) may be so powerful that they affect the core process. These salient events are highly individual and variable, and include personal changes (e.g., decisions made, mood, or health and fitness), interpersonal changes (e.g., roles in life, gaining a spouse or family, moving away from friends, work), and social, cultural, and environmental changes (e.g., weather, geographical location, access to exercise facilities, trying a different physical activity). With such a change, an exerciser experiencing herself as shaped may find herself returning to the phase of shaping up. Thus, shaping self through exercise remains a unique and personal process for each woman.

For the purpose of describing this theory, the process of shaping self through exercise begins with "talking to self," in which a woman engages in an inner dialogue about her sense of self, thoughts of physical exercise, and her experiences of exercise. Talking to self may be characterized as both encouraging and discouraging of her participation in exercise, or of herself.

Talking to self interacts with the woman's experience of exercise. According to these women, "experiencing exercise" involves both an acute bout of exercise (i.e., single exercise session), as well as regular participation in exercise over time (i.e., participating in exercise sessions on a regular and frequent basis). Experiencing exercise is defined as more than the physical aspects of moving one's body, but also includes having consciousness of body movements (kinesthesia and mental sensations or thoughts that accompany moving; and awareness of self while moving). The women identified three salient subprocesses of experiencing exercise, which they thought important to shaping self: (a) "being active," (b)
"accepting body," and (c) "seeking balance." Each subprocess involves overcoming personal obstacles (e.g., identity, emotional, behavioral) and social-emotional obstacles (e.g., life demands, privacy issues, access to exercise). That is, if a woman succeeds in maintaining her participation in exercise she may eventually change what is possible for her within each subprocess, or come to terms with what she can not change.

In the shaping up phase, the interaction of experiencing exercise with talking to self leads to "feeling good about self" or "diverting from self." The women describe these experiences as consequences of participating in both acute and regular exercise, and as incentives to participate again. Feeling good about self describes having personal satisfaction with one's accomplishments, decisions, and sense of self as related to one's exercise participation. Further, some women may generalize this feeling good about themselves to other areas of their lives. Diverting from self describes the negative aspects of exercise, although the exerciser may or may not be aware of these negative aspects. This process of shaping up is not static, nor final. A woman may find herself involved in an oscillating interaction between varying self-talk and her changing experience of exercise, overcoming new obstacles, including possible diversions from self-growth, and over time, more frequently feeling good about herself.

With regular exercise involvement, not unlike a practised expert effect, a women's feeling good about herself develops into a more profound knowledge and valuing of self as an exerciser, and of exercise; this has been labelled "growing into self." Beyond naming over time and maintenance of one's participation in exercise, and experiencing the physical, mental, and social benefits both expected and not, verbalization of how this change occurs remained elusive for these participants. However, for the women who identified themselves as exercisers, it was evident that this change occurred. While shaping up, these women faced
challenges such as, "letting go of the idealized self." Further, in feeling good about one's self for "caring for self" by engaging in exercise and increasing her knowledge of exercise, a woman may face and meet the challenge of "acceptance of self." It is through this change that a woman's experiences coalesce and she begins to grow into herself and experience herself as shaped.

The second phase, "experiencing self as shaped," highlights the sense of exercise as being an integral part of self, and without it one feels its loss. A woman's understanding of exercise may change in this phase to become more personally meaningful (e.g., she may begin to recognize spiritual aspects of exercising). Exercise participation becomes a means to experientially "ground" or centre herself, that is, putting self in the process, feeling in touch with and in control of one's person (body and mind). She may feel more at ease in using exercise in accordance with her needs and desires: That is, an earlier felt struggle between exercising out of obligation to herself or others (because she should, or she feels she needs to) and the desire to exercise to "just do it" and for her own enjoyment, is less oppressive. Further, exercise becomes an "expression of self," for example, through physical movement, through emotions felt during or after exercise, and through her lifestyle. Thus, in the summative phase, a woman feels that she is growing into herself. Through exercise she feels grounded or centred, finds self-expression in her movements, accompanying feelings, and lifestyle, and through this, experiences herself as shaped.

Thus, shaping self through exercise begins with the process of shaping up, the quality of which varies according to the influencing conditions and life context of each woman, and the nature of her thoughts, exercise experiences (including experience in body), and feelings. This process is marked by overcoming obstacles that lead to feeling good about self. By engaging in this process over time, the consequence may be to experience self as shaped,
which includes a profound growing into self, grounding self in exercise, and expressing self through exercise. Exercise becomes intrinsic to one's self and lifestyle.

Three points are of particular note. First, the process of shaping self involves many difficulties, is not always a positive experience, and may not always have a positive outcome. For some women, the process may involve negative experiences (e.g., struggles with eating disorders, problems with body image and self-esteem, negative involvement with the fitness industry, overexertion, exhaustion, or injury, and concerns for safety and privacy), negative feelings (e.g., guilt, disappointment, anger), and negative behaviours (i.e., diverting from self, e.g., escaping problems that need to be managed or solved by other strategies, behaving obsessive compulsively or fanatically, overtraining). It is possible that experiencing self as shaped may be at the expense of other fulfilling aspects of life.

Second, the dimensions of each concept vary in quality of psychologically healthy or positive, to psychologically unhealthy or negative for each woman. Further, exercise behaviour and experiences a woman may judge as positive or healthy for herself (e.g., daily exercise) may be viewed differently by observers of this woman (e.g., compulsive behaviour). Vice versa, exercise behaviours and experiences that society judges as positive or healthy (e.g., exercising at least three times a week for 20 minutes) may be a source of disagreement for some women, depending on their own context and experiences (e.g., hearing the above society's exercise guidelines as a source of guilt as opposed to a source of encouragement).

Third, the uniqueness of the process for each woman must be considered. Shaping self through exercise is a personal journey complete with trials and tribulations that each woman overcomes on her own. As a woman experiences herself as shaped through exercise, exercise becomes intrinsic to her; she experiences growth, feels grounded, and expresses herself
through exercise. Further, the place exercise has in each woman’s life varies. The nonexerciser and the former exerciser spoke of exercise as a very minor part of their lives, while a few exercisers spoke of exercise as life itself. However, the majority of exercisers discussed their exercise as being one part of their lives among many, although an intrinsic and enriching part.

Shaping self through exercise consists of a recursive process between the phases of shaping up and experiencing self as shaped. By participating in the former phase, one can work towards and arrive at the latter. The development from the transient state of feeling good about self to the more profound quality of growing into self is the interaction through which one arrives at experiencing self as shaped.

Influencing Conditions

In the grounded theory method there is an assumption that there are conditions that affect the basic social-psychological process (Strauss & Corbin, 1998). In the theory described here, the intrapersonal process is influenced by the personal exercise background (recent and past history with exercise), and is embedded within the social-cultural environment and current life context.

Social-cultural Environment

The social-cultural environment plays a role in influencing women’s exercise experiences and behaviour.

I think there’s a whole kind of social environment that peaks . . . that kind of influence and pressure that comes . . . be it positive or negative. And, and the interplay with that and, and the shoulds and the internal stuff that you have going on and I think that they kind of result in how you’re going to exercise or how you’re going to approach it and what you’ll do. (Catherine)

The social-cultural environment shared by all of the women in this study was primarily identified as the geographical location, the environment, and the current focus of media,
which includes the status and acceptance of women in sports.

**Geographical location and the environment.** All women at the time of their interviews were residing on the West Coast of Canada in an urban area, which has been noted for its large population of exercisers (Federal, Provincial and Territorial Advisory Committee on Population Health, 1996). Although the women's exercise experiences may have been influenced by having lived elsewhere in North America or from having travelled in other parts of the world, the participants commented on the high visibility of exercisers in this geographical location. They also were aware of the range of places to exercise, not only gyms and sports fields, but the natural environment including forest park trails, ocean walkways, and the local mountains, in addition to a climate conducive to exercise. Many women spoke of feeling nurtured by exercising in the natural environment. Lydia summed up her thoughts of the environment and its importance to her exercising (which she chooses to do outdoors) by saying "it's just a wonderful place to be."

Part of what I like about living here is that I'm so close to the beach, and Pacific Spirit Park. And that really, you know where I live really is important in terms of facilitating my access to regular exercise . . . somewhere where I can hop on my bike or whatever . . . I have one of the nicest places really in the world to ride, in this city, down to the beach {researcher: and [you had said] around Marine Drive}, yeah, and I can do road bike or mountain bike. (Lydia)

Women commented that in this location, exercise is very much available and varied in type, and accepted (and expected) as part of one's lifestyle.

**Media focus on health, beauty, sport, and fitness.** The media contributes to these women's social-cultural environment. In terms of their exercise experience, women related three (not mutually exclusive) foci of influence: health, beauty, and sport and fitness. All of these are presented in varying types of media, and promoted by their own industries. The women commented on the effect of the media by the messages relayed, for example, in
fashion and fitness magazines, fashion models and athletes/models presented as role models, advertisements seen on television and billboards for local gyms, sports equipment, diet programs, and of the small but recently increased focus on women's sports coverage (e.g., women's hockey in the winter Olympics, women's soccer).

Society's focus on health has effected these women by providing them with encouragement, and increasing their general knowledge of the physical and psychological effects of exercise.

I guess before really I had my children, the exercise culture hadn't developed. It started to develop somewhere in the mid '70s. That's when people started talking about jogging and so on. . . "Participaction" did work for me. You know it gave me the information that I needed to, you know and sort of the, I guess almost the permission to get out there, that women can run. . . So participaction really did a lot to normalize running. Yeah, I never really worried about looking silly, but I know that other people did. . . Participaction was definitely a media blitz, so that, and I do attribute that media campaign to getting from a place were running wasn't done, to it being something that you would do and this is how you do it, and this is, you know, strategies for it. (Lydia)

However, information in the media on health and exercise has also led to confusion, in providing information that is contradictory, one-sided, or incomplete. For example, Betty stated:

I also read that if you are depressed exercise also helps you to be less depressed. [But] they were saying that their research showed no indication that there were fewer cases of depression in people who exercise regularly. That was it. That was the end. You wonder who is funding the study and if it is just men [participants]. This was in the Vancouver Sun and one reporter's little blurb about it. . . I thought, I feel better when I'm running so why are they saying depression isn't affected? Do they cope with it better if they have a problem with depression? I think if I was depressed it would hard to come out of that to find time to exercise. I don't know. . . I guess there is [sic] more questions than answers when I read the blurbs.

In addition to incomplete information on health, the "hype" women receive of what "healthy" means affects their perceptions of themselves and others. Linda describes her lifetime struggle with attempting to achieve a lower body weight (which she implies is a social
construction of being healthy), and coming to terms with what health now means to her:

Well I am 39 and I have to say that I probably have a 34 years history of being trying to lose weight. So, what's important to me now is to be healthy. I don't know, I don't fall into that normalized category of health, which is certainly clear hype. But for me it's eating well, it's exercising, it's caring for myself.

These women filter through messages on health, and have assumed a sense of personal responsibility for their own health and well-being.

The participants commented on the emphasis on beauty and fashion in the media, which was seen by these women as largely focused on external beauty. Women feel pressured to have a certain appearance and body type seen as the "ideal body" or "the body beautiful."

These women have received the message, visually and otherwise that obtaining a beautiful body (as defined by the media) will lead to acceptance by others, and greater success in life (in work and in relationships). This was clearly highlighted by Valerie:

And in terms of media images, the media always tells you that you have to look skinny. You have to be attractive, if you want to succeed. Like, if you look at posters of [a] woman in power, she is always very slim, always very attractive, nice hair cut, it's very polished, and I kind of like, am drawn to that image of looking fit, looking sleek.

The sports and fitness industry has also become a large part of the context of society as discussed by these women. The women in this study observed that this industry reinforces the idea of shaping, toning, and strengthening one's body to be a noble pursuit— that this is no longer a domain just for men, or elite athletes. The sport and fitness industry is changing society's notion of beauty (i.e., according to these women, well-toned bodies are becoming "the body beautiful," more so than the wispy thin look), and affecting fashion (exercise wear has been taken into street wear, and even haute couture has been influenced by it). Alongside the sports and fitness industry selling fitness as a positive goal for all, Catherine further adds a darker side to this industry's existence:
I really think that most, like, fitness is packaged in a way that it kind of breeds dissatisfaction . . . fitness industries, fitness clubs . . . I don’t think they would be in, or at least not nearly as many would be in business if women primarily, and men, were satisfied with their bodies, and felt good about how they looked, right? . . . But a lot of the programs that are offered are kind of like "oh you can get firmer" and I just really have a problem with that? Kind of buying into people’s dissatisfaction, wanting to look differently, as a way to make money. And then, but then on the same, other side of the map saying "oh we really want to promote healthy body image and active living for everybody," which is to me, a bunch of crap. Like, that’s not really what they want to do, they want to make money, from, as many people as they can, so they’re going to try to get as many people as they can to join, and know, knowing that only 50% will stay with them. That 50% will drop out in 3 months or less, you know? So, it’s, I don’t know, I don’t think they can have both views.

Women are largely conflicted when discussing the effects the media has on them, especially the health, beauty, and sport and fitness industries. They commented on the pervasiveness of the images and messages, and were aware of the messages they have been told. For example, hearing the message that exercise (by working out at a particular gym, using a particular piece of equipment, wearing a particular article of clothing) will help you to achieve a fit, thin, toned, and youthful body that will lead to happiness in relationships and at work. They know what the messages are. On the one hand they view these messages to be "unhealthy," damaging to their self and body-esteem, insulting to women, and outdated, as Linda suggests, "I just think well, we bought into this body beautiful stuff for what? I mean this altered sense of body, body perfect." On the other hand, they also know that on some level they still buy into these messages of attaining "the body beautiful" through exercise, which will bring them success and happiness in life.

I have to admit I am a sucker of the media. That’s probably one of the things I am trying to fight. But I do feel like you know the whole image of a woman being a certain way, I try and, not conform but I like that image, and that’s what I’m trying to aim for. (Valerie)

Like, sometimes I can really look critically at, you know, women in the media or whatever and say "that’s gross," and not wanting anything to do with that. And other times, I don’t necessarily say "that looks great," but I kind of think, I think it just, it
does still affect me? sometimes? (Catherine)

Valerie commented on the effect of seeing models in the fashion magazines she enjoys reading:

Well I realize as well that these models are not the norm, they are very much an extreme form of attractiveness. So I'm not that you know warped by the media. But I am warped to a degree that I believe that if I want to be attractive I have to be a certain way.

The women attempt to resolve the conflict by reframing these messages into ones of inspiration and motivation "to get into that kind of mind frame of ... doing something healthy for [myself]" (Niomi). For example, women begin to look for more muscularly toned models, actors, and highly visual aerobics instructors who exercise as their role models, or read magazines and watch programs that provide education about exercise and inspirational stories of others whose lives have changed because of exercise. Thus, they try to discourage "unhealthy" reasons for exercise (i.e., vanity, exercising out of obligation) and encourage themselves with "healthy" reasons (e.g., physical health and strength, personal enjoyment, and goals).

From observations of the media, it appears that these industries know about this conflict. Alongside the more obvious messages [advertisements with pictures of thin or toned models displaying products for sale and accompanied by a claim, such as "The best way to lose weight to stay in shape" (Stairmaster advertisement in Shape, Harris, 1998, p. 131) to the more outrageous "Now 6 minutes to an Olympic-class stomach with synerAbsI," (advertisement in Shape, Harris, 1993, p. 158)], the messages have become more subtle. The media has been offering more motivational messages, frequently delivered by athletes, towards using exercise (and products) for gaining strength and independence of body and mind. For example, in fitness magazines for women, and occasionally on television, there are advertisements for women's running shoes, sports wear, and nutrition bars that picture
toned, active women, overlaid with inspirational messages, with the companies’ logo somewhere on the page. As an example, these are a few advertisements chosen from a random selection of *Shape* magazines: "You are a nurturer and a provider. You are beautiful and exotic. You are not falling for any of this." (Harris, 1997, p. 1); "Some people lose themselves in their workout. Others find themselves." (Harris, 1999, p. 47); "powered by ambition. power by desire. what gives you the power? [sic]" (Harris, 1999, p. 56-57, 59).

However, this may encourage a continuation of inner conflict and potentially dangerous behaviour (e.g., overtraining) because women who exercise for health and fitness several times a week are unlikely to develop the body of an athlete (a new "body beautiful") whose training is their job. The goals women set for themselves is often driven by images in the media.

But I think that as a main problem is what brings people to the gym and what they want in the first place. And where that comes from. Like where does, why do so many people want to change their bodies and why do so many people think that they can do it quickly? It's because of the advertising, right? It's like Ron Zalko or Fitness World (fitness facilities), it's you know, the billboards you see. And if you see that enough, and you see *Shape* magazines enough, and all that stuff, that you're going to start to think that that's a possibility. (Catherine)

Perhaps trying to avoid showing this conflict, advertisements have also just focused on the motivational message, with no models exercising (e.g., showing a woman holding a child), or having the images of women exercising as a small part of the picture. For example:

One more woman hearing herself think.
One more woman ignoring the word "impossible."
One more woman finding a few miles of peace.
One less woman waiting for "someday."
Achieve 'new balance' [sic] (Harris, 1998, p. 103)

A magazine is not a mirror. Have you ever seen anyone in a magazine who seemed even vaguely like you looking back? (If you have, turn the page.) Most magazines are made to sell us fantasy of what we're supposed to be. They reflect what society deems to be a standard, however unrealistic or unattainable that standard is. That doesn't mean you should cancel your subscription. It means you need to remember
that it's just ink on paper. And that whatever standards you set for yourself, for how much you want to weigh, for how hard you work out, or how many times you make it to the gym, should be your standards. Not someone else's. . . Just do it. (Harris, 1999, p. 1)

Catherine summarized the participant's thoughts on the prevalence of, and the effect of the media on their goals for beauty, health, and fitness, influenced from recent reading on the social conditions of exercise as "a moral responsibility" in which women are exercising driven by messages in the media:

The messages we have about health and fitness, they're circulating all around us. . . . and everyone is very aware of it. . . . Like just getting active, and advertising, or you know, seeing covers of magazines, and almost like any day standing at a line-up at a grocery store you're going to see some kind of exercise thing, or diet thing, or whatever? So it's just kind of there always? And I think it's a whole combination of, kind of, like the "healthism?" You know there's a whole notion of what it means to be healthy and what it means to be fit and whether . . . people are demanding, the expectation is too high, you know? Whether people just expect, what it means to be fit and healthy is that overdoing it? Have we overstated it? And do we put too much, too high expectations on people? And I know that I do that for myself, in a lot of ways, but whether that's kind of a factor of what I've read and kind of your sense of responsibility for being fit and healthy. . . . it's very much a middle class kind of ideology of what's obtainable, and . . . what's expected. And that it doesn't reflect, or . . . wouldn't even resonate with someone . . . for whom those values you know are completely unattainable?

Personal Exercise Background

Personal exercise background is an individual's history of exercise, including more recent history, and may affect the exerciser's current life context, and thus her intrapersonal process. Although women may remain affected by their exercise history (e.g., early messages), its influence may be decreased (particularly if negative) or reinforced (especially if positive and "healthy-focused") as a woman experiences herself as shaped, and experiences reinforcement from her more current experience. However, personal exercise background appears to be most influential during the shaping up phase, especially when initiating exercise. These background conditions include the multiple experiences with exercise and
physical activity throughout each woman's life, as a child, adolescent, and as an adult.

Salient aspects include (a) the messages and expectations received, and values learned about exercise, from family, friends, coaches, and others; (b) interests and experiences with being physically active and exercising throughout one's life; and (c) the initiation of, and reasons for participating in purposeful exercise as an adolescent or adult. The experience with purposeful exercise over time may have included informal or formal training, competition, goals for extrinsic (e.g., winning a race) or intrinsic rewards (e.g., feeling of accomplishment in hiking up a mountain), and the changing reasons for the maintenance of exercise behaviours.

Messages and values learned from others. The exercisers and the former exerciser in this study mentioned a variety of individuals as being influential in their exercise history, including those closest to them such as parents, siblings, friends, teachers, coaches, exercise instructors, and physicians, and those who were not personally known but whose successes made them into role models. Further, the messages that they received about exercise and physical activity from these people were influential in their participation. The messages invariably focused on the benefits of exercise, such as having fun and socializing, being healthy, losing or maintaining weight, gaining physical abilities and social skills (such as being on a team, sportsmanship), setting goals, and competition. These messages were both implicit and explicit. For example, an implicit message about the importance or value of exercise may have been received when physical activity was modelled by parents and siblings who exercised, or who encouraged spending time with family in the form of engaging in a sport or physical activity together. As Juliet states:

We grew up in a real active family. And so I think that is one of the things. If that has been ingrained in you and part of your role modelling when you were a kid, you carry that on.
An explicit message may be clearly received when encouraged or told by someone to participate in exercise for a purpose, such as to lose weight, meet friends, or learn physical skills.

There was always a lot of pressure from my parents for me to lose weight so they would put me on diets and then they decided we would exercise. . . . So my dad and I would often go running down at the park and I hated every single minute of it. (Linda)

It was more my . . . father who was originally the one that was putting a lot of pressure on me to be physically active and engage in some sports, and my mom to some degree as well . . . I think it was because they themselves knew the benefits of children being involved in sports activities, and on teams, and all the, all the sort of benefits that can come . . . from those experiences. And like I was saying, since I . . . wasn't originally inclined that way I did need more pushing into those things, than say a child who's like up and running and wants to be on every team they can come across. I needed to be sort of, mmm, I guess, pushed or prodded more into that? (Niomi)

Values about exercise that were held by these influential individuals were shared and learned through these messages. As explained by Valerie, "I think it [your current thoughts about exercise] all depends on how you were socialized, how you were brought up. Each family has their own values." During the interviews the women reflected upon the values they were taught about exercise early in life (including its role in health, recreation, and achievement), and related or contrasted them with how they currently thought about, and valued exercise.

Experiences over time. Physical activity and exercise has been continuous throughout the lives of the exercisers. However, how they define their earlier activities that occurred either in childhood, or childhood and adolescence (e.g., play, games, "just something to do," sport, physical education or gym class), and the emotions that are recalled with the memory of these activities (e.g., whether these experiences were positive or negative) varies for each woman. For the exercisers, physical activity began with childhood play, family activity, lessons (e.g., gymnastics, skating, swimming), or physical education classes in school. For example, Francis described the activity in her childhood as "building snow forts, and running
around, playing games I guess. Well, we were outside a lot, playing, kind of running around
catching and climbing, and ah, more unorganized than, rather than organized sports."

As with these women's current definitions of exercise, there is individual variation on
how this childhood play was redefined and experienced by them in their adolescence.
According to Valerie, her physical activity in adolescence remained recreational, something
to do with her parents or to pass the time:

My neighbours had a tennis court. . . . so back then it was more like "oh, it's something
to do, let's go play tennis." And go for walks as well. My mom would say to me "oh,
let's go for a walk around the neighbourhood," so I'd go with her. I wouldn't think of it
as being exercise, as getting something done, but more of going for a walk with my
mom. . . . I was just you know doing exercise just for other reasons, not because it was
exercise per se. . . . It was pretty recreational stuff.

For the exercisers, early physical activity remained a separate recreational experience from
their introduction to what they defined as **purposeful exercise** (i.e., exercising for the sake of
exercising).

**Initiating purposeful exercise.** The introduction to purposeful exercise came in either late
childhood, adolescence or adulthood. The emotional reaction to this initiation of purposeful
exercise varies among these women (e.g., whether these experiences were positive or
negative). They offered a clear memory of their recreational exercise becoming purposeful
and regular, for example Niomi's awareness of the difference occurred in later childhood:

I remember, I guess in elementary school . . . probably around grade 4 or grade 5 .
. . where we were doing a lot of those Canada Fitness Tests and things where you
get the badges, and . . . I can remember that it was starting to come into my
consciousness, and we were doing some timed runs and things like that. . . . And as
well, my family was going to these weekend . . . "Fun Runs" and . . . I was very
aware that this was not play any longer, this was exercise, and I didn't like it. So
(laughs)--but I can remember that period of time when that was starting to be, the
pressure was on to be in a sport. (Niomi)

Others, such as Lydia, made a decision as an adult to commit to regular, purposeful
exercise:
Also in ’78 I decided to go back to nursing . . . and I see nursing as very physically taxing. So I figured that if I was going to go back to nursing I needed to be strong to do that, and that was another motivation for taking up regular exercising. But I think the regular part, especially in the early period, had to do with knowing what I had to do to prevent cardiovascular disease and that’s what made it regular.

Although all of the women in this study made this distinction between their recreational physical activity and when they became engaged in regular and purposeful exercise, for many this shift from childhood play to purposeful exercise occurred through a more subtle transition into their adolescent and adult experiences. This was because of the continuity of having engaged in some type of activity, sport (e.g., school or community centre teams), or lessons (e.g., swimming, skating) throughout their lives.

That’s where the whole exercising, physical activity distinction for me comes in, because I was really active all the way through high school and university, and doing sports, and in university doing intramural . . . . But I didn’t really start regularly exercising, like, kind of working, thinking about my fitness until probably third year university, until I was probably around 20, 21. Like before that I was, like I never really had a problem with my weight, and so it was always about just enjoying going out playing volleyball or soccer or, you know, like it wasn’t about fitness per se? It was more about skills and ability? And then . . . as you get older I think you also end up just playing fewer sports and you know, I, it’s just kind of a common evolution. Ummm, because it’s not as accessible or as available. And so, I ended up joining a gym in third year . . . . and really liking the aerobics classes, like I just found them really fun . . . . and then becoming more conscious of my fitness and then started running more regularly. . . . From the time I was quite young I did gymnastics, and played soccer, and yes, I’ve been pretty active all the way through, like from the time I was 5 or 6 or 7 or so. So . . . sports came roughly easily to me.

(Catherine)

Initial encouragement for the exercisers and the former exerciser to engage in purposeful exercise came from a variety of experiences, such as having been raised in an active family who exercised, joining friends in physical activity for recreation or exercise, realising an ability or skill for a physical activity or sport and pursuing it through training and competition, desiring to improve on one’s physical appearance and physical strength, rehabilitation for one’s current physical health, fearing disease and illness suffered by other
family members and thus adopting exercise as a prevention strategy, or being influenced through school programs, the media, health professionals, and by their own personal education. For example, Corrine discusses the initial and continuing encouragement she feels from interactions with others:

I think that there is a lot of social aspect to it. I mean, like even when you start working out people, you think that people notice that you are more fit and that you've lost the weight or whatever. And I know that my ex-boyfriend did notice that I had lost a lot of weight and started having muscles and stuff. And so that, I think that kind of drove me for awhile and I still think it does. . . . But ah, they're not, like again, logically they are not really saying it, but, you know, I don't know it's just social pressures almost. {Researcher: So it's kind of feeling, feeling that other people are--kind of experiencing that other people are observing you and seeing you that you are fit?} Yeah, yeah and feeling good about yourself and having, I don't know, feeling proud of how you look, and that type of thing.

Valerie clarified that any messages received from others—in her case about her physical body, were less about her own insecurities and more about her use of these messages as encouragement for her initiation and continuation of her exercise participation:

I'm just wondering about reflecting insecurity about myself. I don't think it's that personally, but I'm not sure it, the outside observer would say that it might reflect insecurity about my own body. I don't think it does because I think we are all affected by external forces, people, our environment. I think it encourages me, more than anything else.

For the exercisers, awareness of, redefinition of, and participation in purposeful exercise as opposed to recreational activity, was encouraged externally and eventually personally committed to.

The exercisers' exercise history varies considerably from each other, but they share in common the continuity of having lived (and living) relatively physically active lives, and being committed to doing so. Their background experience of exercise over time is varied and individual, and may have included informal or formal training, competition (including school, community, university based to international amateur competitions), and set goals for
extrinsic or intrinsic rewards. Further, the notion of time (including time having been
regularly exercising, and time when began exercising combined with the social-cultural
environment) provided context to a woman’s exercise background:

It wasn’t the norm. I mean you didn’t see, you’d see one or the odd person out running. But it is quite different now than it was in the ’70s. . . . It was just starting to come into vogue. But you were still, you still, if you thought about it, would look like a rather odd soul, as a woman, running, then. (Lydia)

Each woman has had her own obstacles to overcome, and these too have varied over her lifetime. These obstacles are discussed further under current life context and experiencing exercise.

In general, purposeful exercise was initiated by the exercisers and the former exerciser for self-improvement reasons, such as for appearance, health, physical ability (skill), and fitness (strength, endurance, flexibility). It has been maintained by the exercisers not only for these reasons, but due to the unexpected psychological benefit of experiencing self as shaped that they have discovered. The majority of the women in this study have stopped exercising at some point in their lives, due to decreased interest, having too many other demands on one’s time and energy, inconvenient location, cost, or because of injury or illness. All discussed the difficulty in remaining active, or in not being able to do so. However, the exercisers have continued to engage in both recreational activity and exercise, both incidentally and purposefully, without “relapsing” for too long. For these women, remaining active overtime has been aided by finding personally enjoyable activities that had some purpose, such as to increase fitness, socialize, reduce stress, or try something new. Thus, these women believed exercise to be enriching their lives.
Current Life Context

The most prevalent influential condition of the process of shaping self is the current life context, the contemporary conditions of these women’s personal lives that are ever-changing. Here, the hindrances and aids to exercising occur in the present. The maintenance of exercise behaviours over time, the type of exercise engaged in, and the reasons for participation fluctuate, often due to the current life context. Salient features of the current life context include intrapersonal aspects, and the interaction between self and one’s environment. Examples of intrapersonal aspects include one’s sense of self, mood, and physical health. The interaction between self and one’s environment has implications for the perceptions of one’s place in life (e.g., age, current roles held, competing demands for one’s time and energy, level of emotional support for engaging in exercise), and includes practical aspects (e.g., financial support, the season, temperature, and access to facility and equipment). Current life context may change on a moment to moment basis (e.g., an event, weather), affects the exerciser (e.g., with change in mood, perception), and is influential to the recursiveness of the process of shaping self through exercise.

Intrapersonal aspects. The intrapersonal aspects of one’s current life context in which shaping self through exercise occurs are psychological and physical. Prominent psychological aspects include one’s moods and sense of self (including self-identity, self-image, and physical self-efficacy). For example, Catherine described how her fluctuating moods effects her self-image, which impacts on her experience of exercise:

If I’m feeling a little bit like not confident or, I don’t know it’s just a hol[istic]—if I’m not feeling good about something in my day to day life that’s passing then I’ll, then I think that that will play out in how I feel about my body? And that will translate into how I exercise, or, you know, approach my exercise, with a good attitude or a not so good attitude.

Perceptions of oneself are also influential. For example, if a woman perceives herself to be
an exerciser, she is more inclined to exercise to maintain her own self-identity. Despite
having an identity of being an exerciser, however, this can be complicated by a woman’s
perception of her body. For example, Linda, who identified herself as being supersized (i.e.,
200 lbs. overweight) discussed her personal discomfort with some types of exercise, "I’m
really conscious of my body, of how big my body is when I’m exercising, and biking, and
walking. I’m not conscious of my body when I’m swimming. I feel like a ballerina when I’m
in the water." The experience of exercising may further be affected by a woman’s perception
of her physical self, especially if this self-perception is reinforced by that of others in
society.

Because you don’t feel very good about yourself and it feels very unsafe to go to a
swimming pool or go exercising because you don’t feel like you are falling into the
norm. So you feel that people are looking at you and in actual fact they are, or they
are pointing at you or laughing. And umm, it just became easier for me not to do it.
(Linda)

Linda eventually returned to swimming, and has initiated purposeful exercise after "making a
commitment" to herself to do so for her health. Further, she enjoys "shatter[ing] the idea that
fat people don’t exercise." She copes with the internal and external pressures by redirecting
her anger from her own body consciousness, to others’ problem with her body:

It’s a bit of an in your face attitude that I take when I go to the pool, because I want
to say "look, you know, I have every single right to be here. I should be
congratulated because I’m here. If I’m in my bathing suit and I’m swimming, then
that’s a good thing". So it’s sort of a, there definitely is a militant, in your face idea
of "just come over and say something to me."

Salient physical aspects of one’s current life context refer to one’s current physical
health, including fitness, ability, and health status (i.e., presence or absence of injury,
ilness, or disability). Whether a woman’s health is good or poor may have an impact on her
process of shaping self through exercise. Catherine referred to the impact of fitness level on
the experience of exercise, stating "[for] people who are starting out running, it’s such a hard
activity to just take up, you know because it’s not pleasurable when you’re not that fit, you
know?” Annette, who was winning a struggle with anorexia, commented on the benefits of
having a certain level of fitness now that she has built up her strength with exercise:

I find so much joy in accomplishing things and with that, joy of the strength in my
body. 'Cause there was [sic] times when I couldn’t pull myself out of the water on a
slalom ski, you know? I didn’t have any muscles in my arms. And the joy of being
able to do that really, really kind of helps me keep focused on the healthier side.

For these women, fitness and physical ability is a means to other exercise experiences, as it
enhanced their exercise efficacy. With fitness and ability gained from participating in one
type of exercise, women feel more physically able and confident to learn new physical
activities and skills (e.g., dancing, rock climbing, snowboarding), and engage in physical
activities as part of their social lives (e.g., playing recreational team sports, hiking with
friends, running with a club). With ill health or an acute injury, a woman’s exercise
behaviours may be changed to a lighter form of exercise, rehabilitative exercise, or may be
interrupted, thus affecting the process of shaping self through exercise.

I had some knee surgery in like 1992 . . . but before that there were like probably 7
months where I was kind of like off doing most exercise, cause like my knee was quite
badly injured, but they couldn’t fit me in for surgery. And I have to say that goes down
as being like the most depressed time I’ve ever had, when I was injured and not able to
do stuff . . . I couldn’t really walk even long distances and I couldn’t, you know, a lot
of things I had to sit out of, and it just was a drag. (Catherine)

For the women in this study who had more chronic health problems, their health has dictated
the types of exercise that they could participate in. For the nonexerciser and the former
exerciser, health problems played an influential role in not purposefully exercising on a
regular basis. However, for the exercisers, chronic health problems did not completely stop
them from exercising. Instead, they sought out substitute exercise activities.

[Giving up running due to osteoarthritis in my hip] was awful, it was really horrible.
'Cause I loved it so much, it was a big part of my life, it was a big part of my social
scene. . . . I had the running club and we did all the races. You know, it was just, I
really let go of very reluctantly. But I really didn’t have any choice. There was no choice. It was just, you can’t. You have too much pain. . . . But I didn’t kayak and so now I’m kayaking. I’ve discovered something else. . . . I’m sort of thinking it’s a good direction to go in because it doesn’t bother me to sit. (Lydia)

Interaction between self and environment. The current life context in which shaping self through exercise occurs includes the interaction between self and one’s environment, including the perceptions of one’s place in life and the more practical considerations of exercising (e.g., financial support, the season, temperature, and access to facilities and equipment). Current perceptions of one’s place in life impacted on exercise largely due to the roles currently held, priorities held, the competing demands for one’s time and energy, and the level of emotional support for engaging in exercise.

Although age was an aspect of the exercisers’ perceptions of their place in life, rather than the number of years lived or developmental stage a woman was currently in, age was mentioned by the exercisers in terms of their self-perception (e.g., as being unique in their exercise habits), and in terms of their physical health and appearance concerns (e.g., weight gain, increased health concerns such as high blood pressure, cardiovascular diseases, arthritis, osteoporosis). For example, Lydia (50) stated, "I think I’m fairly rare. I don’t think there are a whole lot of us my age. I mean, there aren’t many people I know . . . in my cohort who have exercised regularly for this amount of, period of time." And Diane (60) commented "I know that at my age, weight goes on and it doesn’t go on proportionately. It always goes on my belly and my bum (laughs)."

For the exercisers, their exercise experience and behaviours seemed to be influenced more by their roles, priorities, and demands in life, than developmental age.

I think more of my changes are related to the stage of life for me. Like when I was a mother with my children at home, I was a full-time mom for 10 years, my exercise then was very different than it is now. When I was in school, I was more in competitive, like in track and field, playing for school basketball and volleyball teams, so it was a
different kind of exercise. (Diane)

These women discussed their current life context as a continual balancing act of their roles in life (including student, employee, mentor, wife/partner, mother), their priorities and responsibilities (e.g., meeting their and their families emotional, spiritual, intellectual, and physical needs), and the competing demands for one’s time and energy these roles and priorities afforded them. These may interact with the intrapersonal aspects and together impact on a woman’s exercise.

But the funny thing is that . . . the more stressed I become, the less inclined I am to exercise? I feel like I don’t have the time, and I’m "okay, well I have all this other stuff to do so I can’t afford the time to go to the gym." (Catherine)

To successfully balance these demands and desires, exercisers relied on the support of their family and friends, whether exercising with friends while their husband looked after their children, to incorporating exercise into their social time with friends.

Furthermore, practical aspects play a large role in the current context of exercisers. These aspects include having the financial means to exercise and maintain good nutrition, access to a facility and equipment that feels comfortable, and the ever changing weather and temperature. The socioeconomic status of the women in this study varied. Although the sample was comprised of women who were employed full-time, part-time, were students employed part-time or with scholarship, or were unemployed students, all noted that exercising required some income, either in terms of equipment and clothing, gym memberships, sports fees, or transportation. Many women pondered the likely difference in the exercise experience for a woman of lower social-economic status than themselves, seeing their opportunity to exercise as a "luxury" (Betty).

I feel that if I had been a single mom with no money, and I had to work to support two children, and get an education, and manage a house, I don’t know if I could have done it. I think part of why I’ve been able to do it has to do with the fact that I
have led an economically privileged life relative to other people. And I often think that it would have been, I don’t know how single moms who are living in poverty or who have to work and be the sole supporters of children, little children, I don’t know how they do it. . . . And I’m sure that there is a socioeconomic gradient, and I have always had healthful food, food choices were not a problem. You know, I’ve been a privileged person, I’ve lived in a privileged area. If I lived down in Hastings and Main [underprivileged area of the city] would I go out? I don’t know whether I would, I would be afraid. You know, here I don’t have, I don’t fear for my physical safety. (Lydia)

Exercisers had to negotiate and renegotiate when and where they could exercise, keeping in mind such aspects as convenience, time available, cost, season, emotional and physical comfort level, and sense of safety in the facility, location, or time of day. Exercisers found that their exercise, and the process of shaping self through exercise would change, dependent upon their current life context.

Shaping Up

"Shaping up," the formative phase of the process of shaping self through exercise, encompasses these women’s experience while initiating and maintaining participation in regular exercise, both during exercise and over time. This phase reveals the interactions of intrapersonal building experiences towards change; in this phase, the experience of shaping up takes form. Shaping up involves personal effort (varying from the enactment of an habit for some women to continued perseverance for others), overcoming obstacles, and achieving rewards. The salient conceptual elements of this phase, "talking to self" and "experiencing exercise" interact concurrently to result in "feeling good about self" or "diverting from self."

Talking to Self

"Talking to self" includes the inner dialogue or self-talk that these woman engage in about their sense of self as an exerciser, their thoughts about physical exercise, and their experiences of exercise. This occurs while being physically active and over time (i.e.,
between exercise sessions). Talking to self involves what women tell themselves about themselves (e.g., I don’t feel right without exercise, I am too fat, or I am a fit woman), and about the exercise experience (e.g., I feel competent doing this activity; my body feels tight running today). It involves cognition accompanied by feelings, including feelings of shame (what I am), guilt (what I do or don’t do), obsession (I need to do it), discouragement (I can’t do it), as well as encouragement (I can do it), desire (I want to do it), and accomplishment (I did it). This inner dialogue of thoughts and feelings fluctuates in quality and content from day to day, and moment to moment.

The influencing conditions are apparent in the self-talk of these women, with talking to self being influenced by the social-cultural environment (e.g., I should exercise to be beautiful), one’s exercise background (e.g., I’ve done this before and loved or hated it, or, I couldn’t do this before), and the woman’s current life context (e.g., I don’t have time to exercise, I can’t exercise due to injury, I need to improve my exercise performance for the upcoming game). Prevalent aspects of talking to self that originate from the influencing conditions include what one experiences from exercising and reasons for exercising in the areas of "health," "fitness," and "beauty."

**Health, fitness, and beauty.** Talking to self about health includes physical and mental health. Inner dialogue concerning physical health includes the focus on achieving or maintaining fitness, flexibility and strength, maintaining an awareness of one’s body (e.g., kinaesthetic sense, muscle tone) and energy levels, preventing or managing illness and injury, and personal comfort with body size and shape—such as with ease of movement or sense of clothes fitting. Aspects of the inner dialogue concerning these women’s mental health include relieving stress, and increasing one’s sense of well-being in terms of vitality and happiness.
Overlapping with the notion of one’s physical and mental health is the inner dialogue concerning one’s fitness. Specifically, this refers to these women’s perceived, actual, and desired physical ability, strength, and muscle tone (e.g., I am able to do this, I need to increase my strength to perform better, I want to tone up). For these women, fitness inner dialogue ranged from missing their former level of fitness (e.g., having lapsed in one’s physical activity levels), to wanting to increase or maintain their fitness level. Talking to self about fitness is further influenced by the social context of exercise. Specifically, this includes inner dialogue about the fitness industry as advertised in the media, the messages received from it (you must be thin to be beautiful and successful, and you can attain this through exercise), whether or not the messages are believed, and the feelings a woman may then have (e.g., obligation, guilt, or inspiration).

Inner dialogue focusing on beauty centres on one’s perception of outer beauty, and on an internal feeling of beauty. Outer beauty includes the personal view (including thoughts and feelings) of one’s physical body and "the body beautiful"—the image achieved for, both of which may be influenced by images in the media. The body beautiful involves both aesthetic and physical qualities, such as physical shape and appearance, and the stereotyped appearance of health and fitness (including muscle tone, thinness). Being concerned with this aspect of beauty is considered vain. However, some women argue for the positive aspects of vanity (e.g., as a result of the messages in our social-cultural environment first appearances do matter in meeting friends, coming across as confident and successful) as they note the negative (e.g., focusing on not having the body beautiful may hinder your self-esteem). Talking to self about inner beauty includes such aspects as the feeling of strength and confidence in oneself, feeling in touch with oneself, and "releasing negative energy" to feel calm and peaceful. An example of this self-talk is the encouragement given to one’s self to
exercise to feel this inner beauty (e.g., if I exercise, I'll feel more calm, more at peace within myself). Although inner beauty is felt internally, it affects not only how these women see themselves, but how they may be seen by others.

The dichotomy of talking to self. Talking to self is a dichotomous experience. For these women, their inner dialogue ranged in quality from encouraging to discouraging, and psychologically "healthy" to "unhealthy." This quality of healthy and unhealthy self-talk is a separate notion from the content about one's physical and mental health that is mentioned above. Healthy inner dialogue refers to talk about self and exercise that reflects "being good to myself," that is, care or kindness towards oneself. This healthy self-talk allows for the choice to exercise or not exercise without value judgments or feelings of obligation (e.g., I want to exercise, I'm not going to exercise today). Discouraging and unhealthy inner dialogue has a sense of obligation and judgment, such as feeling a "nagging need," or telling oneself that one should exercise for some reason (e.g., I should exercise to not gain weight, I have to exercise as I have not had a good aerobic workout for a few days). Not only does unhealthy inner dialogue centre on notions of beauty or appearance, but also on physical fitness, and for reasons of physical and mental health (e.g., telling oneself one should exercise and thus feel obligated to exercise in order to achieve a particular level of fitness or mental health). Most of the women spoke of experiencing inner dialogue at both ends of the dichotomy at different times. However one woman expressed that she had not experienced discouraging or unhealthy self-talk in regards to herself as an exerciser, or of her exercise, indicating the possibility of having inner dialogue at one end of the continuum.

The majority of the women in this study felt caught between the messages they received from their past histories, or the current social-cultural context (e.g., media) that they should...
exercise, and their own personal desire to exercise or not without feeling obligated. For example, Catherine describes her feelings of conflict when she becomes aware that she is telling herself that she should exercise:

You know it’s, and I know this is kind of a common thing with a lot of women where you feel fat therefore you feel, it can really really affect how you feel about yourself. And if I go through a phase where, for whatever reason I feel if, I look like I’ve put weight on or something then it brings that out . . . it makes me feel more compelled to exercise if I don’t want to, or feel worse about myself if I don’t exercise one day? Whereas . . . I’ll have . . . maybe a week where I feel like that, and then 3 weeks where I feel pretty good, and I’ve had a, I think, what is a healthy attitude towards physical activity. . . . But I always have this little bit of slump time, where I’m like, "mmm, don’t feel so good, feel like maybe I better, should go to the gym." And I hear a, have a lot of shoulds in my head? . . . It’s ironic because, I even do talks, and I’ve done quite a bit of reading on body image and avoiding those should statements and avoiding that fear, like why are we scared of being fat, and why do we think it would be so bad if you gained 5 pounds (pause). Like what would really happen? And I can really, on one level say that’s ridiculous, and know that that’s irrational and it’s really vain, and ah kind of meaningless in a lot of ways? But then, on another level, I have, I feel it as well? So, I can understand how it is to feel this way but we shouldn’t have to feel this way? And I don’t know how to make that separation between like, okay I should stop feeling this way, because it’s not right. But I don’t know how to do that?

The exercisers are very cognizant of their dichotomous inner dialogue and strive to be kind to themselves by exercising without letting it become another stressful task.

I think there is a part of me that is fearful of getting trapped into that again. Where, you know, there’s sort of a, kind of almost like a (pause) weight obsession, or something, you know, or body, or body image obsession. Like I don’t want to get into that unhealthy, unhealthiness? Or I want to stay clear of that? And keep honest with myself about when exercise is becoming more about that, than the other things I’ve spoken about . . . healthy thinking. (Niomi)

As an example of talking to self, consider a woman’s inner dialogue concerning her reasons for exercising. Purposeful exercise is first introduced in a woman’s life mainly for external reasons or rewards, which may be imposed by others (e.g. society, family) or by herself. However, she may want her reasons to exercise to remain in quality, an healthy activity (e.g., exercising for joy of movement, social connections, physical and mental health) and
part of her self-talk reflects this. Yet she also realizes that she is still "warped by the media," and finds that she is talking to herself about striving for the body beautiful, youth, or winning a race. These shoulds may be experienced as both oppressive or obligatory, and as motivational (by the same woman, at various times). That is, the catch-22 of the situation is that the inner dialogue experienced as unhealthy is also seen as a "motivator," an incentive to push oneself to exercise or to exercise more strenuously. This may be especially true when a woman perceives herself to be "slacking off exercise." This exercise relapse is usually accompanied by negative affect (which may or may not be related to physical sensations, for e.g., restlessness, feeling fat) such as feelings of guilt and compulsion, and fearing the loss of fitness levels previously obtained. Although "getting back into the swing" of exercise involves making a commitment to self of its importance, it is often the "unhealthy thinking," or the shoulds that gets the exerciser being physically active again, thus they are a "mixed blessing" (Corrine). Here Niomi describes her experience of this mixed blessing:

I know that there's something about those personal external rewards [e.g., weight maintenance] that I don't want to give up, 'cause . . . it keeps me motivated towards exercise, so, I don't want give, like, it's sort of like, well whatever it takes? As long as it's not too unhealthy, like, you know, umm I mean it's sort of, as long as I'm conscious of it I guess, or keep a close sort of, umm close eye on that thinking. (Niomi)

The women who remain cognizant of their inner dialogue believe that they are more able to challenge or confront the discouraging self-talk, and utilize or create positive self-talk for encouragement and self-care.

I counted back and realized I hadn't done anything aerobic since last Thursday, and I was kind of beating myself up for this? Like thinking "oh you lazy slob" like there was a lot of negative self-talk going on about "oh, you know, you haven't done anything, and you're just going to blimp out" and you know it's ["unhealthy thinking"] still very much there, and I . . . have to keep that at bay, and I had to consciously say to myself . . . I had to stop myself and realize that one more day wasn't going to make a big difference. (Niomi)
Overcoming obstacles. In essence, talking to self is a means through which women attempt to overcome their internal and external obstacles to exercise, being an exerciser, and experiencing exercise. Women continuously appraise or evaluate their thoughts and feelings (e.g., about what they are told by society) against their own experiences of exercise. With their awareness, exercisers attempt to keep their exercise self-talk healthy by focusing more on internalizing their desire or need for exercise and the personal rewards it brings. This involves going beyond "aerobisizing" (Niomi) themselves as machines to experiencing more holistic gains in feeling good about themselves. A woman begins to shape her sense of self through this inner dialogue, as it may lead to and interact with, her actions. What a woman says to herself interacts synergistically with her challenges and accomplishments in "experiencing exercise."

Experiencing Exercise

In talking to self a woman continuously evaluates her thoughts in light of her own "experiencing exercise." Experiencing exercise refers to both a woman's single exercise session, as well as her habitual participation with exercise over time. Experiencing exercise is at the same time physical (somatic, behavioral), and psychological (subjective, cognitive, affective), and is influenced by one's life context, exercise background, and the social-cultural environment. Together, the interactions of these aspects result in exercise being an holistic embodied experience. This embodied experience is demonstrated in the salient aspects of experiencing exercise that are important to shaping self: the fluctuating and interdependent actions of "being active," "seeking balance," and "accepting body." In experiencing exercise, being active, accepting body, and seeking balance work together synergistically.
**Being active.** "Being active" highlights the psychosomatic aspects of exercise, including the *sense of being*, and the physical *activity* of the body. The latter, the physical activity of the body, refers to *doing* exercise, moving or taking action in the form of exercise (i.e., behavioral movements involving the operation of the body, the physiological taxing of the body). The former, the sense of being, involves both the kinaesthetic (i.e., sensory experience of movement of parts of the body, such as muscles, increasing heart rate, sweating), and the affective experiences generated from physical movement. Stating whether or not the affective experiences are due to the physiology of exercising is beyond this study, although many exercisers believed that this may be the case. Some women believed that the release of endorphins or adrenalin during exercise influenced affective changes. However, these women also spoke about the process of engaging in the exercise experience as influential, which includes physical, psychological, social, and environmental aspects.

The importance of the exercise experience is clear as Catherine stated "I really like the *feeling* of exercising, and *having* exercise." For the exerciser, the kinaesthetic and affective experiences often intertwine. Feelings in the moment of being active range from exhilaration and joy, to effort and courage in facing physical or mental hardship, to difficulty or defeat. These feelings may correspond to the sensory experience while exercising. The affective experience were frequently described in sensory language, for example, with phrases such as Niomi’s "release of (nervous, negative) energy (or stress, tension)," "lighten up," "feeling strong in my body," "calms me down;" Valerie’s "off-loading," Juliet’s "boost of energy," "feeling refreshed," or Linda’s "feeling huge," and "feeling out of shape." Hope described her affective experience while running:

Sometimes just going hard just releases, for me I just find it releases a lot of the stress, just putting the intensity of how I feel into umm exercise. . . . It’s almost like I’m moving the frustrations out of me, it’s just kind of pushing the feelings out, making way
for calmer, happier feelings. It's almost like out with the old--out with the bad, and in with the good sort of feelings, about how I feel.

Although the majority of exercisers experienced a reduction in their physical or mental tension with exercise, the exercisers who engaged in competition (e.g., basketball game, distance running, track) noted that with intense training sessions, this tension is often increased.

The physiology and sense of being of exercising is accompanied by a cognitive understanding of exercise, also influenced by the social-cultural factors, personal exercise background, and current life context. This cognitive understanding includes the exerciser's personal definition of exercise, choice of activity, reasons for engaging in it, and appraisal (perception and evaluation) of themselves as exercisers (e.g., their commitment, physique, ability). Further, being active includes the exerciser's somatic awareness, their consciousness of themselves, their bodies, and parts of their bodies moving in space while exercising. This awareness may be focused on experiences such as effort expended, and difficulty or ease of movement. For example, Linda stated "I'm really conscious of my body, of how big my body is when I'm exercising, and biking, and walking." As an example of the kinaesthetic, affective, and cognitive aspects of sense of being while active, Catherine describes her sense of being while running:

It [exercising] unites me with my body more than it helps me escape it. I never feel like I escape my body when I'm exercising. Sometimes I'm in more of a struggle with my body than others, like sometimes exercise feels like it's just a challenge. You know like, like you go for a run and you're like, each leg feels like it weighs like 400 lbs (laugh) you know so it's not easy. . . . But then other times you can go for a run and it feels like you're--you can run forever. You know and, but both times I'm very aware of my body, whether it be in a positive or negative way? . . . I can't say that I'd ever really lose sight of like, for me it's very physical so I don't, I can't, I wouldn't lose kind of sight of, like what I'm feeling physically.

In speaking of their awareness of their discomfort while exercising, many women often
attempted to distract themselves from this awareness with thoughts of other things, music, or by engaging in social interaction. Others however, sought to focus on what they were experiencing somatically. For example, Niomi had endured exercise in her youth largely through dissociation from her somatic experience, and recalled learning about being somatically aware during exercise:

I remember hearing a story about one of these top runners who, umm, would monitor his body very closely when he ran. Like he wouldn’t just try to disassociate from his body and pretend he wasn’t in pain or whatever, he would, he would actually go the other way and be very closely monitor[ing] his breathing, and how his body felt. And I guess this kind of fascinated me, because up until maybe that point, I often did disassociate myself, like I’d try, because exercise did hurt, and I would try to not, I would try to think about other things and distract myself away from the pain of exercising.

An example of somatic awareness of ease of movement is clear in Catherine’s description:

It’s almost like a, like synchronicity, or just some like, everything’s working. . . and it’s so enjoyable, that’s the thing, as well. I would choose to do this over anything, at this very moment. You know so it’s really like living in that moment? And it’s also like my mind is on what I’m doing. So it’s not like, it’s not focused on pain or discomfort, it’s focused on like the fluidity of my movements? And just like my body’s just working really well. And for some reason I can just focus on that. And I can’t always, you know, so.

**Accepting body.** While shaping up, a salient aspect of experiencing exercise for the exercisers is meeting the challenge of "accepting body." Accepting body includes the struggle to accept the reality of one’s physical body (e.g., size, shape), as well as physical ability (e.g., fitness, skill) and mental ability (e.g., commitment, focus, enjoyment) of participating in exercise or types of exercise. Once accepted, then one can appreciate being active, and enjoy the challenge of meeting and pushing past one’s physical and mental limits.

The majority of the exercisers, with very few exceptions, expressed having a dislike for their body and idealizing a body they did not have and that was usually unreasonable for them to achieve, especially in the early stages of shaping up. These exercisers have gone
through, and revisit (dependent on current life context) periods of disliking their bodies or parts of their bodies. They viewed this body dislike or low *physique self-esteem* as both a hindrance to exercise, and as a feeling that encouraged them to initiate or continue exercising. Exercise may be hindered by feelings of self-consciousness while exercising, often reinforced by mirrored gyms, styles of exercise clothing, and lack of privacy in changing rooms. Further, Linda added "I think that is a real barrier for women, any size woman, I guess, to be observed exercising." To exercise under these conditions when one hates her body is a difficult task. Moreover, accepting body may be stalled by the exerciser not seeing immediate changes to one's body by exercising. As Valerie explained:

One of the biggest hindrances to me working out initially was that it was hard to see improvements very quickly. And I'd think to get done right away. {Researcher: You wanted to be sculpted pretty quickly?} Yeah (laughs) but it takes time. I think he [friend] told me how long it took him and it kind of made me realize okay, I can't expect results that quickly... but at least I can expect some kind of results in the future.

However, the majority of exercisers initiated exercise as a means to an end in their striving for the body beautiful, their desired physical ideal. Thus, desiring a different body image was a key "motivator," an influencing factor in initiating exercise, as Niomi stated:

I think I was trying very hard to fit into a certain body type or umm be skinny or thin, and there was sort of umm, the reward was that by exercising I could do that. But it was sort of in the pursuit for an ideal, an ideal body that I was after...

For many of these women, striving for an improved body in terms of appearance remains a goal for their maintaining their participation in exercise.

The challenge of accepting body is influenced by one's current life context. This includes momentary or daily fluctuations in one's acceptance, and may focus on separate body parts at different times. Further, accepting body may be dependent upon one's current sense of self-esteem and accomplishments. The experience of these women suggest that an exerciser's
sense of self may be influenced by such events as one’s personal history with exercise (e.g., having felt mocked for one’s appearance while being in a bathing suit, believing oneself to be uncoordinated due to prior inability to perform a physical activity), current events in life (e.g., being pregnant, getting a new job), the seasons (e.g., wearing less clothing in the summer and desiring to look thin in them), woman’s mental health (depression, eating disorder), and physical health (e.g., feeling "betrayed by the body" due to injury or illness).

As one example of the effect of one’s current life context, Betty discussed having a different awareness of her physical self while pregnant, and having to moderate her exercise:

I wouldn’t work as hard, I wouldn’t get my heart rate up as high. It was moderate. I would still do it, the same class. They knew I was pregnant so it was like "you do this exercise, don’t lie on your back too long, roll over on your side, let the blood flow," and all that kind of stuff.

A different example of the impact of life context on one’s acceptance of body is when Catherine spoke of the effect of being "off doing most exercise" for over seven months with a knee injury while awaiting surgery:

It [being injured] just made me feel, like it was, it fed into everything, my whole self-image. It just made me feel umm really out of control. Like I felt like I just couldn’t manage. I, yeah, like for some reason, I don’t know why, but I just felt like, like it was out of control. And [it was] the first time I really had a bad injury so I felt like "oh my body has totally let me down."

Through being active regularly and over time, women who began to exercise in adolescence or adulthood with a goal of making bodily changes, began to see some physical changes in their bodies. In seeing this change occur—even if the change is not as dramatic as expected, or producing of the results desired--talking to self took on a more positive and encouraging quality, and these women came to know and accept their physical bodies, and physical and mental abilities. As with these exercisers, this acceptance may be achieved by a woman experiencing her physical sense of being through physical activity for the first time,
or hearing comments from others about her shape, therefore becoming aware of her physical self. For example, Valerie describes how she became more aware of, and accepting of her body:

Well initially I was really wrong to draw myself, to draw this image was the fact that you have to be really, really skinny, like a waif. . . . the Kate Moss look, exactly. I realize no, that I have a very curvy body and I have, like boobs, so I cannot look like her (laughs). I will never look like her. But I realize that I have to work with like this curvy body and actually I like that look now. I prefer to have that Tyra Banks look. She has like a big chest and she’s really curvy. That’s what I’m striving for, to just tone up a bit. . . . I had to come to that realization that I was not waif-like in physique, that I’m more curvy in physique. . . . I have to admit all though high school I wanted to be really skinny and along the way I started realizing--wow, I’m not like that. It was partly what people told me. One day I remember in high school a friend of mine said "oh, you have really nice legs" and from that point on I realized that I had nice legs and I started to pay attention to my legs. And then umm, somebody said "oh you have a really big chest" (laugh). I didn’t realize that I had one until somebody else told me that, you know.

As stated earlier, accepting body includes the acceptance by these women of their own physical and mental ability to participate in exercise. This acceptance may be challenged by one’s exercise background and training, as well as the fluctuations in one’s exercise participation in general, and in different activities in particular. Many women change the activities that they are involved in over time. For example, at different times in her life, Andrea has downhill skied, ran, played tennis and basketball, weight trained to the extent of body building, and is now a personal trainer and windsurfer. Her physical body and skills have changed with the varying activity, although most dramatically with body building. Continuous participation throughout one’s life appears to be due to what Andrea called "passion. . . possibly a little obsession . . . [and] determin[ation]." However, many women have found it difficult to maintain continuous participation in exercise over lengths of time due to changes in environmental factors such as the seasons, and in their current life context; such as changing personal interests, getting injured, being ill, having young children, or
getting married and now having a spouse.

...you can't be fit without the discipline. And I wouldn't have known that before I started. But you know very fast that if you lay off your exercise for a couple of weeks, or when I haven't ridden my bike as much in the winter, I can't do the hills nearly as easily as I could in the summer...it's shocking how fast it goes (laugh) darn it! (Lydia)

Thus, many women may experience becoming in and out of shape for exercise in general, or for particular activities. Although they regret any loss in fitness and still desire to be active, many acknowledge the difficulty to re-initiate exercise if stopped. This difficulty has been attributed to shyness (e.g., in joining a gym or club), lacking information and support of others (e.g., being new to a location such as a city or campus), desiring inspiration (i.e., feeling bored, on an exercise plateau, or not liking a particular activity), not having a meaningful purpose to do so, or as Niomi succinctly expressed "I think the less I do, the less I'm inclined to do too." In experiencing exercise, the challenge of accepting body interacts with being active. Thus, accepting body may be achieved in varying ways, for example, a woman may realise that she has learned a certain physical skill, feels accomplished in having met exercise goals, or appreciates her ability to participate in sports and activities. For example, Hope realized that despite lacking fitness, she had an ability to run, which she eventually returned to when she desired to get in shape:

When I was about 14 or so, we had the 12 minute run in the fitness test? And I wasn't very fit, and I was always one of those kids where, you know, you'd have captains pick the team and people pick each other, and you're the second last or the last, and going "ohhh" (laughs) and that was one of, always one of those sort of not very agile kids. And when we did the 12 minute run I was way ahead of everybody. And the coach said "well you should come out for cross country." And she said "well we train at 7 in the morning." And I said "no way" (laughs). But then the next year, or that spring, I thought--in the fall and then in the spring there was track training and there was a workout program--I just didn't feel very fit, and sort of self-conscious, and I wanted to just get a bit fitter. I wasn't very overweight, but just a bit, you know, not toned. So I went to the training program and really liked it. And did very well and made it to the provincials [provincial competition] in my first year in track and then did cross-country and just carried on from there.
As happens to others, seeing herself do well in running led Hope to improve her fitness level and ability to do other sports and activities, which then led to her appreciating and thus accepting her body. Only a few of women expressed having an appreciation for their bodies throughout their lives, however they indicated that this was primarily due to their ongoing participation in exercise and sport. Through exercise the women in this study came to appreciate what their bodies could do, and to enjoy other benefits and challenges they received from exercising.

I suppose over time when that ideal body never really came to be, and yet I knew I was physically fit and in shape and everything, I realized that there was something about being strong physically, and toned, like having I guess, muscle tone and just knowing that, umm I hadn’t just sort of sat around all week eating potato chips on the couch. That I had pushed myself physically to be, ummm, I don’t know, it’s like I got rid about not just the weight, like, I’m not sure if I’m explaining this but it’s not just the physical weight, but it’s like a release of energy, umm heaviness or something. It allows me to "lighten up." (Niomi)

Seeking balance. Living a life that is balanced and satisfying, yet alone active, is not a matter of chance; it requires periodic examination and fine-tuning. "Seeking balance" refers to the psychosocial goal of maintaining a balanced sense of self and a balanced life that incorporates exercise as one of many activities that enriches the lives of the women in this study. These women, whether they were exercisers or not, were living fairly active lives. They all struggled with "prioritizing life," that is, choosing the types of activities to engage in, and fitting (or not fitting, as in the case of the former exerciser and nonexerciser) exercise into their lives, when faced with factors such as time, convenience, weather, finances, feeling safe and comfortable, desiring social interaction or time alone, and having other interests and priorities or responsibilities (e.g., children, spouses/partners, and work).

Seeking balance is aided or hindered by the interaction of talking to self with experiencing exercise. For example, the exercisers described that if they thought they had not
been exercising enough, which was often accompanied by feeling a physiological sense of "sluggishness," a fear of losing fitness levels obtained, guilt, and they felt unbalanced within themselves and within their lives. If left unaddressed for too long (which is a very individual measure), they occasionally "relapsed" in exercise, and "getting back into the swing" of exercise was made more difficult. However, if they promised ("making a commitment") themselves to exercise in the near future, they believed they were seeking balance in life and self again.

It seems that the feeling of balance in life and self is maintained by participating regularly in exercise and thus maintaining balanced exercise habits. For example, Niomi discusses her understanding of maintaining the balancing of exercise itself:

> There are times like, say if I go for a week without exercising, I notice that I do feel kind of umm, a little bit guilty, about that, and ah . . . it's almost like, I need to go out and go for a run or do something, to sort of umm, feel on top of it somethings [sic] again. [Researcher: And that, that usually helps? By just getting back into it?] Yeah. But I don't like to go for too long without it for some reason, then I sort of get, start to feel kind of "cloudy" and, I think the less I do, the less I'm inclined to do too. It's that old saying, umm "the body in motion tends to stay in motion, and the body at rest tends to stay at rest," or whatever, that sort of thing where, you know, the more active I am the more I want to be active, so it's better, it's easier if I just keep the momentum going, but if I have to stop, sometimes things are beyond your control, like you, you know, you're too busy, umm, you're too tired, you don't get enough sleep, you know, things like that, then I start to feel sluggish, and you know, there's some nagging need or urge to go out and exercise.

Seeking balance in the exercise itself also included the balancing of one's reasons for exercising, maintaining a healthy focus on this and other behaviours, and interacted with accepting body. Catherine explains this,

> I think I went through a few years where, you know, if I felt like I over-ate one day then I'd feel like I'd have to do more exercise the next day, or the next week, or whatever, to compensate, like, that energy in energy out kind of belief . . . . I felt like it just became kind of a different form of a disorder, like disordered eating, or you know, really skewed body image type thing where, where it was like this ultimate control over what you do with your body, like in terms of what you eat, and then how you exercise it off. And I don't really feel, 'cause I don't think it's a very
healthy approach. So I'm just trying to really focus on the enjoyment of doing things and the pleasure of it? And not having feeling guilted [sic] into doing something, because of something I've eaten. And I'm just trying to find a balance in terms of what, you know, what eating, and my healthy diet, and my exercise, physical activity.

In terms of seeking balance, the exercisers were on a continuum from those who were working towards a sense of balance, to those who sought to maintain the balance that they had achieved. The latter spoke of their exercise as routine or habitual, echoing Francis's experience:

"It's just such a natural part of my routine that ah I just I mean when I'm working I exercise when I get home from work. Umm, it's the first thing that happens when I get home. . . . 'Cause it's too much habit for me now. It's just a part of, a part of me.

For the majority of these women, incidental and purposeful exercise was simply "a part of life," which translated to "a part of self." Their challenge was to attain a balanced life and self in developing interests other than exercise or athletics, as Francis reflected:

"Well now I have a life. You know, more than sports or (pause). Athletics is not my whole life. There was a time where it seemed to be my entire life. Now I have more balance in my life and umm it's just one component. It seemed to be a major component back in the early days.

Although many of these women had participated in exercise, a high level of sport, or competitive athletics for years, there were others who spoke of it as a habit who had only been exercising for a few years for personal fitness or recreation, and often in a gym. However, the challenge for balancing life remained the same.

On the other end of the continuum however, women spoke of making a conscious effort to set aside time to fit (or push) more formal or purposeful exercise into their lives. "Finding the time" seems to be a key challenge to incorporate exercise into a balanced life, as stated by Diane, "timing is usually the main motivation whether I exercise or not. Whether I do formal exercise. That's my biggest one there is--time." Although many women have
developed habitual exercise participation over time, it appears that consciously prioritizing exercise is something that is intermittently necessary to do--this shift is often dependent on the changes in one’s current life context. Juliet’s daily responsibilities dictate when she finds time to exercise:

Well I do [exercise] on the weekend for sure, because I make my husband go [to the gym] with me because he needs it too (laugh). So we definitely go on the weekends at some point and I, because of the work week here, and it varies, umm, I try and go for sure once during the week, in the morning before work. Or depending on the week, and the meetings and the teaching schedule I sometimes can get two mornings in, before I come to the office. . . . Yeah, I would much rather get up and do it, shower and then you are kind of done for the day. . . . And plus with the kids, you know, once my day is finished at work it is nonstop until 10:00 at nights, 9:00 at night, with the kids and activities and driving and back and forth, help with homework and projects and dinner, and preparing my own lectures and that kind of stuff.

Furthermore, these women’s current life context changes over time (e.g., in terms of health, developmental maturation, roles, responsibilities, interests, relationships, finances, and access to facilities and equipment) and affects a woman’s exercise routines, and thus her seeking of balance. For example, many women expressed that feeling stressed (defined by many as the pressure of having too many responsibilities and obligations to fulfil in too little time, feeling anxiety about a personal situation, or becoming irritable) or depressed (for the majority of women this referred to feeling blue, and for a few women this referred to their recognition of a more serious mood disruption), as interfering with maintaining regularity in purposeful exercise. Catherine comments on the "catch-22" of interference with her exercise--when exercise is hindered or interrupted is when its’ benefits would be most appreciated:

The funny thing is that, it’s sort of, like where, the more stressed I become, the less inclined I am to exercise? I feel like I don’t have the time, and I’m "okay well I have all this other stuff to do so I can’t afford the time to go to the gym," but then, so what usually happens is I’ll go two or three days without going, doing anything, but sitting at my desk and trying to just do lots of work, and then all of a sudden I go "okay, like I have to teach a[n aerobics] class" because I’m scheduled to teach. So I go teach a class and I feel great afterwards, like way better than I felt in the last
three days, and then I realized, oh, if only I had exercised even for a half hour each
day, I would have felt way better. . . . It’s not the first thing I’m inclined to do, but
then it’s probably the best thing I could do?

How the exerciser defines exercise may also determine where she is on this continuum of
seeking balance. For example, Linda may place her exercising in her exercise class, which
she defined as "exercise" and stated that she does not enjoy but does it anyways, on the very
conscious, making time for it, end of the continuum, whereas she may place her golfing or
swimming, which she enjoys and does not define as exercise, at a point midway on the
continuum, perhaps labelled something I enjoy doing often. At the same point Valerie may
place her walks with her mother around the neighbourhood, but places her workouts on the
stairclimber at the gym at the routine, or habitual end of the continuum. Where a woman
places her exercise on the continuum from very conscious behaviour to habit changed over
time, and may depend on her thoughts about, and definitions of exercise.

For these women, seeking balance interacts in a reciprocating manner with being active.
That is, these women may focus on their experience and the effects of acute bouts of
exercise, often receiving from a single exercise session a sense of returning to a state of
balance in life. Some women have explained this as having distanced themselves, or re-
experienced their whole self as complete and working while exercising. This result of feeling
balanced is discussed further in later components of the theory.

Meeting challenges. Each subprocess of experiencing exercise involves challenges and
accomplishments. That is, being active, accepting body, and seeking balance involve
overcoming intrapersonal challenges (e.g., working within and challenging one’s comfort
level, privacy issues, perceived competence, physical ability and health), interpersonal
obstacles (e.g., being chosen for a team or not), and challenges met in interaction with one’s
environment and life context (e.g., finding the time, having access to a facility to participate
in an activity). A woman needs to learn how to maintain her regular exercise, whether it be through finding the activities she enjoys, learning new skills and participating in new activities, making the time for it, and setting immediate goals (e.g., running for 30 min, working through an unpleasant workout) or long term goals (e.g., training for a 10 km race, staying fit for an active vacation). Further, key challenges for many women include coming to terms with whether their reasons for exercising were personally realistic or not, and in being able to choose to exercise or not to exercise, for themselves. If a woman succeeds in maintaining her participation in exercise she may eventually change what is possible for herself within each subprocess, or come to terms with what she can not change.

Feeling Good About Self

For exercisers, the interaction of talking to self with experiencing exercise creates "feeling good about self."

I feel good after I have done it [exercise]. Not only because I see my friends and we go and have coffee afterwards but I guess it's a lasting thing that I accomplished it. It's something that I said I would do and I did better than I thought I was going to do... It's just a good feeling. (Betty)

This affective and cognitive experience was described by the exercisers as a consequence of participating in both acute and regular exercise. That is, this experience may occur through participating in a single exercise session, between sessions, or over time when exercising regularly. Here, the affective experiences result from one's appraisal of self for engaging in exercise behaviour, which differs from the affective experiences generated from physical movement itself (included as a part of experiencing exercise in "being active"). If exercise is not maintained, neither will this experience of feeling good about self (in regards to exercise). This experience of feeling good about self encourages exercisers that their exercise behaviour is a means of self-care, or self-nurturance, as Linda states:
I know that it's good for me. And it makes me feel better about myself when I exercise. It's a case of, umm, trying, it's trying to be good to myself.

Thus, it provides a key incentive for the exercisers to exercise again. In the process of shaping up, the oscillating interaction between the dialectical inner dialogue and an exerciser's changing exercise experience is constantly evolving, and with regular or increasing exercise participation may lead an exerciser to more frequently feel good about herself.

The cognitive quality of feeling good about self refers to a woman's appraisal of experiencing exercise (and affects the quality and content of her self-talk), and appraisal of whether experiencing exercise is beneficial to her and by her (i.e., self-caring behaviour). Feeling good about self describes having personal satisfaction with one's accomplishments (e.g., overcoming obstacles), decisions, and sense of self as related to one's exercise participation. Further, some of these exercisers generalize this feeling good about themselves to other areas of their lives. For example, Valerie stated "it gives me the confidence in my ability to finish things and get them accomplished."

The appraisal of one's experience of exercise, and whether or not the exerciser is meeting her personal needs and desires being sought through exercise (e.g., meeting goals of developing body, fitness, health, or social interaction), influences feelings such as pleasure in pushing her body physically and mentally, satisfaction and pride in caring for her health or appearance, accomplishment in meeting goals, delight in learning new skills or increasing her endurance, or relief in releasing physical tension or "negative energy" and sensing that she is "clearing her head."

I feel good that I have done something good for myself at the same time? Both cleared my mind and exercised [i.e., body changing, reacting differently because of exercise]. Killed two birds with one stone. (Corrine)
Women describe that it is rare to exercise and not feel good about themselves during, or at least after the workout, game, or physical activity. The rare instances discussed by these women are due to fatigue or a health concern, that may or may not be related to the exercise itself (e.g., brought on by overtraining). A further reason offered is feeling frustrated with experiencing exercise, due to struggling with being active (e.g., not performing to one’s expectations or desires), seeking balance (e.g., making the time for exercise), and accepting body (e.g., feeling physically tight, becoming injured). Thus, undesirable feelings from experiencing exercise may then affect how one feels about oneself. However, with increased experiences with exercise, the exercisers knew that all bouts of exercise are not always enjoyable or satisfying:

And then when, if you do have a run where just every step is just an effort, it’s like okay, well I always kind of think of it as, okay this is you know, putting in my time having a bad run. And then, the next, chances are that then my next run will be better. . . . But then the great runs are what makes everything else worth while. . . . I think that it’s a familiarity with it, in a way. And it’s like a certain experience. Like if you’ve done a lot of cycling, then you know that sometimes you’re not going to have, like you can’t always expect to have a better cycle. Like not every, or not every run gets better than the next, you know? Like it doesn’t happen that way. So you have your ups and downs. And you have like a week where you have great runs, and week where you just can’t move, you know, but, but you just know that you’ll get through that. And you have to do that, you have to get through it? And I think . . . in a lot of ways it’s not that closely, tightly under your control because sometimes you don’t know why you have a bad run or a bad cycle, which is maybe something you ate, or who knows. (Catherine)

However, more often there is contentment, pride, and peace with self (with acute exercise, overtime, or both) for engaging in exercise as a means of caring for self.

**Diverting From Self**

The caveat to feeling good about self is exercising when it proves unwise to continue to do so, such as in the case of exercising despite physical harm (e.g., with injuries, becoming seriously underweight), or negative social or psychological consequences. An example of a
social consequence is using exercise to avoid other responsibilities or issues, such as a replacing relationships (and possibly the benefits from those relationships) as Valerie asserts:

But most of my really close friends are at home, I have a really tight connection of friends, and family ties at home, in [another city], really close ties. I don't have the same kind of ties here. So working out has been a way to replace those ties, to some degree. . . . I don't like going there [to the gym] to socialize, or to like, you know, mingle.

An example of a psychological consequence is feeling so pressured or obligated (often self-inflicted) to exercise that it becomes a stressor, as opposed to a means of stress reduction and enjoyment. Another example, is becoming dependent on exercise and its physical and psychological effects, based on an individual meaning such as self-value, or as a means of self-care (e.g., stress reduction). Relapse, or an inability to exercise (e.g., due to injury) may give rise to a deprivation crisis, where the exerciser misses the exercise and its benefits, but also loses what the exercise means (e.g., her value to herself, her means of coping), as Corrine states:

If I don't [exercise] I feel very lethargic and I start feeling like fat and lazy, and I just have to get to the gym. . . . I just go crazy, I just (laugh). No. It's I just, I get anxious. . . . It's terrible (laugh). It's not healthy for someone to feel like that. But it's hard to get rid of by just sitting down and telling yourself, you know, you're not fat. So I just go and workout.

With a loss of exercise women described that they may feel somehow separate from themselves (i.e., unbalanced, not whole), or like a different person as Hope explains, "if I don't run, I'm just not the same person." They describe feeling less happy and less positive about themselves and their lives. Moreover, they may avoid people who may not understand their unrequited desire to exercise, and feel separate or different from their exercising friends who they are not currently exercising with:

So it is part of my identity and part of how I know certain people, and when you can't respond to that part, you don't feel like you're the same person. Not doing the race, is you're not part of the same group. (Hope)
A further negative side of exercise, is exercising to experience feeling good about self. In the following quotation, Catherine describes having witnessed this form of dependency while working in the exercise industry:

It's that whole compulsion. . . . When you would work out through injuries. You may see people who are, who have stress fractures and they just keep on going. They just can't stop. Or people who, you know would sacrifice oh, like other major things in their lives to exercise? Like they just, they can't conceive of taking a day off because they have a major event. . . . they come in at 5:30 in the morning first before taking a day off. Which to me is pretty troublesome. Totally. . . . And a lot of people are kind of, you know they kind of flirt with that? They kind of get there, and they think 'okay' and then they pull back. . . and I think that it's becoming more of a problem. Like it's being used as a purging? People don’t want to . . . throw up, so they end up going to the gym for 4 hours, and you know, want to see the Stairmaster readout that says they burned 500 calories and they feel better . . . I think that exercise is dangerously close to that for a lot of people.

In this regard, exercising may be a reaction to the social-cultural environment and current life context. However, many of the exercisers were engaged in efforts (including talking to self) to remain honest with themselves for their reasons for exercising, and to exercise for healthy (i.e., as a form of self-care, or simply because they want to) reasons. The majority of women demonstrated recognition of societal influences on them, and despite these influences, strove to exercise for intrinsic personal reasons.

Women either love or hate purposeful exercise, but all value the benefits achieved. Through the interaction of experiencing exercise and talking to self, women appraise and feel good about themselves in regards to their participation in exercise. Unfortunately, they may also find themselves using exercise as a diversion (from themselves, their lives, and possibly issues that should be addressed), feeling oppressed by internal or external pressures to exercise, or becoming dependent on it to the possible detriment of their physical and mental well-being. However, with increased positive feelings and self-talk from exercising to meet one’s personal needs and desires, exercise use may become a means for personal change
towards self-knowledge and self-acceptance.

Summary

Time spent in the phase of shaping up varied for each woman. Some women went through this process fairly quickly, whereas for others it took more time and effort. Further, due to the influencing conditions such as changes in the current life context, most women have revisited this phase often, whereas few have experienced this phase only once—although it can not be foretold if they will revisit it in the future.

Moreover, this phase appears to be revisited before, during, and between exercise sessions for the majority of women. For example, a woman who is a regular exerciser and experiences herself as "shaped" may still feel hesitant to exercise on occasion prior to her workout. She may combat her excuses to not exercise by either telling herself that for some reason she "should" exercise, or that she will feel better afterwards as it has happened before in her exercise past, for example:

Because there’s no question . . . like it’s exactly what I want to be doing, there’s nothing no should about it, it’s like I completely choose it. So, but sometimes . . . with running . . . maybe what gets me outdoors is a "should." Right? But then, as soon, sometimes just for whatever reasons, I don’t know why but there’s like, my pent up energy or something, but my run ends up being like that, and then I’ve forgotten about the should and I’m like "oh wow, that was amazing." . . . I think it has to do with, partly, and it’s not like I’m a really good runner, but it’s just that I’m an experienced runner, and that, and that I know that feeling of not wanting to go but then having a great run and then being so glad I went. So that’s what gets me out the door sometimes, like, "okay I’m I’m still in that mode, I don’t feel like I want to go, but I’ll probably be happy I did." (Catherine)

To highlight revisiting the shaping up phase between sessions, a woman may engage in talking to self in a consoling manner if the current life context (e.g., she becomes ill, has an acute injury, or other life interests or responsibilities interfere) dictates that she cannot exercise at this time for her to be successful in "seeking balance." Fearing effects of not exercising, she reassures herself of future exercise through her inner dialogue.
I suppose it depends on what it is that's stopping me. Umm, if it's a question of time, or maybe fatigue, I make a promise to myself that "okay, today, like let's face it, I'm just not going to have the time or not going to have the energy," and I tell myself, it's quite a conscious, sort of a, process, umm, I'll tell myself "well, you know, you're not, your body isn't going to turn into a (laugh) blob, you know, you're not going to become really out of shape in just one day or one week, umm so today's just not the day, so maybe tomorrow, like or whenever." I try to sort of make a promise to myself to get exercise at such and such a time. So that, that way, somehow just knowing that I'm going to have that chance to exercise in the near future, helps me. (Niomi)

Furthermore, knowing that she will exercise in the near future, and preparing herself for it to be difficult after a time away from it, initiates shaping up and may prepare her for the experiencing exercise part of the shaping up phase when she does exercise. In contrast, an exerciser may start out in the shaping up phase, and yet change to the phase of experiencing self as shaped during the exercise session. During a run a woman may, for example, encourage herself to continue running by talking with herself in a manner that convinces herself that she is not as tired as her body might be. As Catherine states:

... and like after 10 minutes saying "oh maybe I should turn around and walk back," like, you know that's really common because the first 10 minutes are so uncomfortable like, "no, this always happens" or, you know, "I can get through this, it'll be fine, it'll just be 10 minutes I have to kind of suffer (laugh) minutes to feel, to have, to feel much better later?"

In the process of shaping self through exercise, talking to self interacts with experiencing exercise. According to the women in this study key themes appear to be discovering exercise that meets their various and personal goals, and encouraging themselves to exercise because they want to. With exercise, women report feeling good about themselves. This feeling is reflected in their self-talk and reappraisals of their exercise experience. Most women realize that on experiencing self as shaped (the consequential phase), revisiting the experience of shaping up on occasion (if not all of the time) is just part of the whole exercise experience.
This interaction could be seen as a "snakes and ladders" relationship wherein exercisers make personal gains (climb up the ladders), but can easily slide back down. With this expectation, these women find *shaping up* to be more manageable, and can even use it to their own purposes for self-encouragement and motivation by maintaining a *healthy* focus in talking to self, having an increased understanding of experiencing exercise, and knowing that exercising results in feeling good about self.

**Experiencing Self as Shaped**

The summative phase of "experiencing self as shaped" describes the often unexpected rewards an exerciser experiences as a consequence of participating in sustained and regular exercise (the cumulative interactions). Affected by the contextual factors, this phase interacts recursively with shaping up, and therefore is not an end-point of the process. The women in this study usually initiated purposeful exercise with the goal to achieve certain results in mind, such as pursuing the body beautiful. As the exercisers maintained the regularity of exercise over time they gained further unexpected benefits that were internal in nature. For the majority of these women, these latter benefits became and remain more valued than the original goals sought, and prove to be self-motivating. Similar to "shaping up," experiencing self as shaped refers to more than physical shape. That is, it refers to the coalescing of internal knowledge and valuing of self as an exerciser from experiences of shaping up, and

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1The board game entitled "Snakes and Ladders" is used here as a metaphor. The board drawing appears as a snake-like progression of "squares," progressing from "start" on the bottom of the board, to "finish" on the top. The squares provide directions for the players such as "take an extra turn" or "miss a turn." Each player moves a game piece forward on the board according to the role of the dice. Several of the squares are joined with images of ladders or snakes. If a player lands on a square with a ladder, he or she can move up the ladder to the square on the next level, therefore avoiding many squares up until that point and moving closer to "finish." However, if a player lands on a square with a snake, he or she must slide down the snake to its adjoining square, thus moving further away from "finish."
the corresponding expression of self in one's lifestyle. Moreover, it also refers to the recognition of oneself as worthy, apart from being an exerciser. This construct implies that there is an internally known quality of "shapedness." Being influenced by one's current life context, experiencing self as shaped is not stable. Experiencing self as shaped is strengthened by revisiting the phase of shaping up--although at a different level than when the exerciser was a novice. Once an exerciser has experienced herself as shaped, it is hard to be without exercise as it becomes intrinsic to one's sense of self.

The salient conceptual elements of this latter phase are "growing into self," "grounding self in exercise," and "expressing self through exercise." Growing into self is reflected through the internal process of grounding self in exercise and the more external expressing self through exercise. The change to experiencing self as shaped occurs through the action of growing into self, so that exercise develops from an extrinsic activity to become an intrinsic part of exercisers' lives.

What separates the women who identify as exercisers from the nonexerciser and the former exerciser is that the exercisers have continued to pursue regular exercise for various yet specific purposes, remain conscious of their exercise behaviours, are gaining or have gained personal and practical knowledge of exercise, are committed to, and value exercise and themselves for exercising, and understand exercise to be an integral part of their lives. It appears that this participation is maintained due to the reinforcing aspects of feeling good about self due to exercise and experiencing self as shaped, and the current life context remaining relatively stable. These exercisers have found their way into the "positive cycle of exercise," that is, they exercise to feel good about themselves, and because they feel good about themselves, they exercise: exercise has become self-propelling. The consequence is then the integration of exercise into one's life as an enhancement to one's lifestyle. Niomi
both clarifies this cycle but also poses a key question of this process:

... feeling good about yourself would induce you to exercise more, or, that by exercising more you would begin to feel better about yourself. But what, you know, it's kind of like how do you get someone to that place where they feel good enough to exercise even though the exercise itself may make them feel good. Like it's sort of a, how do you get them into ... that positive circle, cycle, of exercising ... how you would get people who have a negative self-image to start exercising--and yet they don't want to--eventually reap the positive effects to the point where they can't but not exercise anymore, you know?

Over time, and with continued bouts of exercise, feeling good about self is experienced.

Through one's continued experiences in shaping up, learning and growth of self as an exerciser occurs.

Growing Into Self

"Growing into self" describes the changes a woman experiences over time with regular participation in physical exercise, and through which she begins to experience herself as shaped. Growing into self involves the culmination of knowledge and appreciation for self and exercise, that includes physical, cognitive, and emotional aspects. The exercisers are encouraged to exercise more for internal desires, than external "motivators." Through increasing knowledge and acceptance of themselves, they become committed to exercise as a means of self-care and as a means to other experiences. It is a process of broadening and growth.

Involvement in elite competitive sport seems to be an exception to this notion of intrinsic exercise, as it appears to be a more focused activity--and as the athlete said, it was her "job." From discussions with the elite athlete, the few women who had been more competitive in their past, and the few who competed recreationally (distance running) at the time of the interviews, it appeared that external motivators remain as key incentives to their participation while still competing. However, the few women in this study who had formerly
been more elite athletes and remained exercisers seemed to have experienced growing into self (with exercise as intrinsic) since ending their participation in elite athletics. As with all exercisers, their personal experience background—with these women, having been elite athletes—certainly contributed to their process of growing into self. Moreover, the few women who competed recreationally were able to remain focused on their goals in their sport and still experience growing into self, often through reaching these goals (e.g., attaining a "personal best," running for a cause, being a part of a team). As Betty states,

The t-shirts, this 10 km run, the money is benefiting some sort of charity too. . . . You are running for yourself but you are also [in] an event that you are making a statement. Actually one of the women I run with, her sister has MS, so that was one we were going to do for sure. So that's another part of it too I guess. You can't argue when it’s healthy and for a good cause.

For these exercisers, reaching external goals appeared to help maintain participation, and to satisfy intrinsic desires, thus exercise is integrated with their sense of selves.

Knowing, valuing, and becoming internally motivated. Growing into self highlights the knowledge an exerciser gains about herself—mind and body, about exercise, and about herself exercising, through the process of shaping up. The exercisers in this study have learned practical information such as the types of activities that they enjoy and do not enjoy, how to do the activities including the skills required or the rules of the game, equipment needed, finding sports attire that fit (e.g., concerns particular for women include sports shoes fitting a narrow foot, sports bras for the larger breasted woman), requirements for effective performance (e.g., nutrition required to work one’s body, social and emotional support), and where and how to safely exercise and be physically and emotionally comfortable. These women also came to appreciate the act of exercising itself, and enjoy the feeling of being alive in moving, having fresh air and enjoying nature, of participating in social activities that are also physical. They further learned (are learning) about their personal level of skill,
physical fitness, and endurance, and the effort required to improve in these areas. They have been faced with whether or not they are able, or desire to put in that effort or not. The exercisers came to know the physical effects of exercising (e.g., noticing the quality of pain as being "good" indicating working one’s muscles, and "bad" indicating harm done) and not exercising (e.g., quick loss of fitness level), and increased their body awareness (e.g., physical shape, bodily changes, and kinaesthetic sense). They learned about their emotional reactions from exercising (e.g., struggle, joy) or not exercising (e.g., nervous energy), as Betty states "I think as I get more in shape, I am more aware of what I’m feeling. You feel better immediately [with exercising]." Further, many exercisers developed or realized their personality characteristics (such as determination and strength), personal limits, goals, and desires related to their exercise.

One of the things that I have come to appreciate, and because it has been so long [length of time having exercised], you change I think as a person, you kind of grow into yourself. You know the first few years that you run, you know, you are so focused on just the pain or whatever, because it really it took a lot of years to build up to a point where it was just very, that I know a lot about it and I know how to do it, so that I’m not having any negative symptoms, or whatever, negative effects. {Researcher: Do you mean while you are running?} Running or cycling or--I mean I know how to do it. I know how to make sure I have enough water and food, and you know, and stretching, and all of those things. You have to learn all of those things. But now that I have learned all those things, you know, I see myself as having quite a strong body, but I see that as something that contributes to something both emotional strength and also character. I, you know, it’s a strength of character.

(Lydia)

This process of learning about one’s self and exercise is appreciated and valued. These women described their appreciation for learning what they were capable of doing, feeling good at a skill and sometimes receiving recognition for having it, reaching or surpassing their potential, and thus felt a sense of accomplishment and gained confidence in themselves. For example, Catherine tries to describe her appreciation of what she perceives she has learned that exercise does for her:
Like I know a lot of people who would say, "oh I don’t think I could run through the trails, it’s too hard, or it’s too hilly," or something, and you know, not comfortable. But for me that’s a benefit? And a motivator?—is to be able to do that. And to go for like an hour through the trails and feel fine about it, you know, be pushed, but not feel like it was completely going to kill me. . . . I’m taken to a different sense of what my body is able to do, capable of doing? And, it’s hard to articulate (quiet voice). But, and then it kind of just, it affects my, how I feel about myself, as well, on a, a kind of more just mental level. Yeah, it’s like "oh yeah, I’m able to push this, I’m able to, you know." (Catherine)

Some of that sense of accomplishment was experienced in achieving set goals such as playing a sport better, learning a new skill, running a certain distance in a particular time, or training to cycle or kayak for an active vacation. Achieving this goal was seen as a measurement of one’s current "self-growth," and acts as a reinforcer to continue exercising and setting new goals.

I usually try to, you know, attach certain goals with it, like running 10 km or, or some kind of, you know? Some kind of achievement that, that’s umm kind of a measure of having pushed myself. But the, there’s other activity-related kind of goals that are just like I want to learn to do this, or I want to be able to snowboard on a black diamond or something like that. . . (Catherine)

The exercisers enjoy the continuing process of maintaining, gaining, or regaining their fitness, strength, and endurance, and for many, increasing in aggressiveness or competitiveness in sport against others or one’s self. Many will experience themselves growing in social skills, and expanding a social network. The exercisers appreciate the feeling of progress through exercise; observing the physical changes in their bodies, as well as mental and emotional changes within themselves. The majority of these women value their knowledge of themselves as skilled. That is, knowing that they have enough fitness to do other activities, lends confidence, comfort, and willingness to try them and "have those experiences" (Catherine).

I thought that, you know, if I can do well at this sport why not give these ones a go, and I saw that training could increase my skills in running so why not try that in other things? I think the willingness to try [was increased]. (Hope)
Further these women expressed that they have become more aware of what they are feeling. Thus, through their participation in purposeful exercise these women now have access to "feeling more, seeing more, and experiencing more" from other physical activities.

Other things are like taking up new sports, so like this year I took up snowboarding. But, and knowing that, that I can't take up snowboarding and not be fit? You know, so kind of realizing well it makes it so much better to learn something if you’re falling down constantly and trying to push yourself up, but if you’re not fit--because it's just going to be that much more painful? (laugh) So . . . those kinds of things? Like I've learnt, you know, playing Ultimate frisbee last summer . . . I had to learn the skills but it helped that I was able to run, you know, and have the endurance? So it was kind of like those little kind of like little rewards? . . . And it's kind of catch-22, 'cause the more fit you get even if you’re doing something you don't like, the more opportunities you have to find a sport you love because you're, it gives you that confidence of the saying "well I won't be embarrassed by doing something, I can give it a go." (Catherine)

The majority of these women expressed satisfaction that in gaining physical strength they felt stronger in themselves--a "solidity" (Lydia). A few exercisers discussed this strength as instrumental in terms of feeling in greater control and ownership of their bodies. This was true for the two women who disclosed historical abuse, and for many women who were dealing with long-standing health concerns. Although it is interesting to note that the former exerciser has felt in greater control and ownership of her body since deciding to not exercise regularly. Further, the exercisers appreciated that through gaining emotional strength (e.g., learning to remain positive, determined) from their activities, they generalized this to other areas of their lives.

The physical thing builds up your ability to, for me, it has built up my ability to keep going when it's hard, you know? . . . I figure that the exercise has helped me train to keep positive through the hard times. Because you, you know, you do hills, and you know that if you think negative you will never get to the top of that stupid hill. So you train yourself, or I have trained myself so that when the going gets rough you start thinking positive. . . . But I have learned that through my activity. (Lydia)

With the perception of one's body and mind as stronger, capable, and more confident,
exercisers come to value themselves. This appears to be beyond the immediate "feeling good about self," to a more profound appreciation of self for engaging in exercise behaviours. As Linda expresses, "I do feel good about the fact that I exercise. I do feel good about the fact that I eat relatively well. I do feel good about the fact that I am athletic."

However, growing into self is also about valuing self as a person, regardless of exercising. This construct describes the exerciser's process of learning to accept herself, as the intrinsic rewards and self-appreciation become more valued over the external "motivators" (e.g., prizes, competitions, the body beautiful). (The exception to this may be for those exercisers who are also elite competitive athletes.) This transition may be instrumental to these women's continuing participation in exercise, as Niomi suggests; "I think the internal motivations to exercise, for me, has kept me exercising longer than my siblings who were more externally motivated to exercise." Although exercisers continue to exercise for physical and mental improvement, these goals may become more attainable, and are usually focused on self-care and self-improvement. For example, the exercisers still exercise to tone up or maintain body weight, or even to run 10 km at a certain time, but they also express an acceptance for who they are, and of what they have to work with (i.e., a particular body type, current time able to run 10 km, or even a chronic health concern), as Juliet states,

I've never really been skinny, I'm not that body build to be skinny, as some people look at what the ideal is today is this lanky skinny women [sic]. I'm never going to be like a skinny, I'm 5'4", it's not me. It's not my heritage.

A woman learns about who she is, and what her body type, abilities, interests, life context, and physical health dictate is possible for her. In general, through growing into self the exercisers express appreciation for, and acceptance of, themselves. In the following dialogue, Linda asserts her position on exercising as a means to, and expression of self-acceptance
(here I paraphrase previous dialogue to make sure I understand her);

Linda: To me it’s about acceptance, and going to my exercise class, going to the "Y"[WCA], being in this class with these women, makes me feel accepted. Not because I’m there exercising, but because I’m there as a person. So it wouldn’t matter if I’m 800 lbs or I’m 80 lbs, I’m just accepted for no matter what. So if it was a perfect world, that’s what a perfect world would be, it wouldn’t matter. The whole idea would be that you feel good about yourself, you feel healthy. . . .

Researcher: To understand you, it’s like you’ve had so many years of your life not accepting yourself, and so now you are finally saying "well this is who I am [Linda - right] so how can I accept myself?" [Linda - right] and part of that is exercising?

Linda: Yeah. It is. That’s exactly right. Yeah, that’s exactly right.

**Making and keeping a commitment.** With self-acceptance, the exerciser makes a commitment to herself that exercise is important, and in time discovers ways to keep her commitment. She may believe exercise is important for various reasons, such as for physical and mental health; satisfaction with one’s appearance and comfort in, or fit of clothing; to participate in activity for social reasons; or to model healthy behaviours for others, such as one’s children or patients. In many ways, "making a commitment" to exercise helps her to find balance in her life (resolving "seeking balance") as she prioritizes exercise as a means to care for herself.

In making a commitment, exercisers may become more aware of staying disciplined with their exercise participation. This refers to remaining conscious or aware of keeping their purposeful exercise regular. Lydia explains having learned the importance of maintaining regular participation in exercise:

And that I have learned from my exercise. The regularity is really, you know, when I do things sporadically I just, you don’t get the benefits. If you want to have the benefits you have to commit to it and you have to do it regularly.

Once made, keeping the commitment to oneself involves the challenges provided in experiencing exercise, such as seeking balance. As Betty articulates, keeping the commitment
is dependent upon herself,

So exercise is like a challenge. I can have that as part of my life and know that I am going to get myself to that and better myself. There is nobody stopping me from doing that.

For many women, however, the intrinsic benefits of exercise are not enough to maintain their regular participation in purposeful exercise. And after exercise relapses, some women need to re-commit to exercising. As Lydia expresses,

It is a problem, staying motivated. I mean I have told you all of the benefits, but motivation is another issue. Just knowing what the benefits are don’t seem to be enough, doesn’t seem to be enough to keep you motivated.

With their learning and appreciation of self, and with support from fitness magazines, gym staff, and friends, these women have discovered personal ways to keep their commitment. Many women shared ideas such as developing a daily or weekly routine by scheduling their exercise sessions, making a commitment to exercise with a friend, joining a community or university sports team, and setting larger goals that will lead to feelings of achievement (e.g., running 10 km to raise money for a charity, running a marathon) or of pleasurable reward (e.g., taking an "active" vacation). Two examples are:

My neighbour across the street, we both go to class. So she is expecting me to pick her up. So it’s like an exercise buddy who is expecting me. It’s like with running at 7:00 in the morning, if it’s raining out you have to get out of bed because you know there are these other people waiting for you. So we have made this commitment. I don’t know if I would have done this on my own. I wouldn’t see myself running as far and I don’t see myself doing it on my own. (Betty)

When I was running it was planning for races, training for races. . . . And the other thing that I built in is "active holidays." So right now I’m thinking about what riding trip I’m going to do in the summer and then I know that I will have to train for it so that will keep me up on my bike. . . . Because I just got back from kayaking and so my motivation was to train so that I could do this kayaking trip. So I go from kind of one trip to another now. . . . I enjoy it, but it also gives me something to work towards and keeps me motivated. But it has taken a long time to figure that, like it took awhile to figure that out. But I think it’s a cool strategy. (Lydia)

Through the process of shaping up with continued participation in regular exercise, these
women experience growing into self. This beginning to their experiencing self as shaped involves the culmination of knowledge and appreciation for self and exercise. Reasons for exercising are more intrinsic, and these women become committed to exercise as a means of self-care and as an expression of self-acceptance. These women’s identities as exercisers increases, as exercise becomes more and more intrinsic to their lives.

Grounding Self in Exercise

The exercisers both reflected and increased the experience of growing into self through "grounding self in exercise" and by "expressing self through exercise." Grounding self in exercise connotes the experience of listening to one’s inner self--body/mind, and centering oneself in that somatic/mindful awareness. This construct describes the continuum of working at putting self in the process of connecting mind and body to experience the initially unexpected and elusive benefits, including "centering self" and "finding self in the process." With regular exercise, and with the increased understanding of exercise and appreciation of self as exerciser gained through growing into self, exercise becomes a means of self-care and getting in touch with oneself. That is, grounding self in exercise can become a personal resource--a means of self-management.

These women describe centering self as both an action and as an effect of exercising. The action is seen as being self-initiated, a resource these women know they can access, as Lydia describes:

The emotional strength I think comes from the fact that you, that I’ve done, that I know that if I’m under stress I know what to do. I know that I can get out on my bike and I’m not, you know, I can stabilize myself or I can settle myself down, or whatever, I can collect myself and so on. You know I don’t fly off the handle or whatever. It’s a good coping mechanism for keeping me emotionally strong, if that’s, or stable, or not strong--it’s being emotionally grounded, emotionally grounded. It grounds me emotionally. So that if the stress builds up, I can go out and cycle. (Lydia)

One way some of these women believe that they are able to ground themselves through
exercise is by using what Lydia called "mental imaging" or thinking positive, and that many of these exercisers described having learned through exercise from challenging themselves. Another way that these women appear to experience grounding self through exercise is with "changing the focus" onto their exercising behaviour, the immediate environment in which they are exercising, and towards their sense of self (body/mind). Here, Catherine describes how changing her focus by exercising helps her gain perspective on what has been stressful for her, and increases her self-confidence in managing it:

It helps, it just provides perspective, I think, is probably the biggest thing. It kind of, it is grounding, in a way, it just makes me kind of, okay, especially with, if I'm feeling stressed, like it definitely helps so much with any kind of stress, it just dissipates that. And it [helps me] say okay this is manageable, I can do this. You know, as opposed to sometimes it can just kind of, stress can build and build and build until the point where your life just feels completely out of control? And then, for some reason, going to the gym and doing something completely separate, and completely unrelated and being physical helps to bring it all into perspective for me.

As an effect of this action, grounding self has been described by these women as feelings: feeling balanced or settled, energized, calmed down; cognitions: problem solving, clearing my head, diffusing stress, gaining perspective; and mental, physical, and spiritual states: of enjoyment, freedom, perspective and clarity, and peace within oneself and one's environment. For example Lydia describes a meditative effect exercise has upon her:

So some how or another just the whole process of running or cycling is kind of a meditative state in a way? And cycling is very meditative, more so than running even I find. And I really enjoy that place, that place of peace and clarity. (Lydia)

Finding self in the process. Finding self in the process of grounding self through exercise clarifies understanding the effects of this experience further. These women described finding self in the process as a feeling beyond enjoyment of bodily movement, or of the activity. It may include, but goes beyond awareness of one’s body exercising, to one’s rhythms of movement, one’s emotions. For many, exercising on occasion has elicited a feeling of
synergy between body, mind, and soul. For many, it is experienced as a "withdrawal into self," or being "unconscious" of one’s body--only knowing it is working efficiently. Women used the words "synchronicity," "flow," "getting in the groove," or "the zone" to describe this connection of oneself with exercising. Often there is a sense of connection or disconnection to one’s environment. The occurrence of this feeling of synergy was described as a rare and unexpected event that could not be worked purposefully towards, however, once experienced, it was said to add to the feeling of love for the activity. Two examples of finding self in process follow:

It’s amazing. It’s like, I ah, I ran a half marathon in the fall and that was definitely one of my best races. And for that reason. Like I just felt so strong, and I felt like running was so easy, and it was like a very hilly course, it was a really hard course, and it was raining, and it was like not pleasant. But, for some reason I just felt like, like I just had such a right, like my attitude about it was so good and I just felt like my body was just, like a perfectly functioning machine or something, I don’t know, it was just a, it was amazing, it was like a great great feeling. Like I was on a high for like 2 weeks afterwards, that was how good that felt. (Catherine)

Swimming is, umm, I get lost, I can get into the groove and everything is working but I’m thinking about other things. It’s sort of like altered consciousness. Once you get into the groove. . . . I’m not conscious of my body when I’m swimming. I feel like a ballerina when I’m in the water. (Linda)

One’s self is felt as whole, exercise is intrinsic to self.

Expressing Self Through Exercise

"Expressing self through exercise" denotes the externalization of the internal process. This involves the active externalization of one’s identity as an exerciser by enhancing one’s lifestyle with the integration of exercise; giving an outward expression to growing into self and internal feelings such as being grounded through one’s physical movements; and accessing new life experiences through exercise, sport, and fitness. In considering her personal meaning of exercise or it’s importance to her, Catherine responded,

Personal meaning or importance (pause) I guess, umm (long pause). Actually exercise is,
for me like a, a self-expression, in a way? It’s a form of expression . . . and a, and kind of a means to certain experiences or certain kind of levels of awareness, physical awareness, and mental awareness.

**Incorporating exercise.** To the exercisers, it was evident that exercise had shifted from being an extrinsic activity that they participated in, to being an intrinsic part of their life and an expression of themselves. As Niomi explains:

> It seems I go from an external thing where I didn’t really have much of a connection to it [exercise], it was sort of externally imposed on me. And then eventually, I somehow internalized the need to do exercise, for whatever reason, whether it was social, social rewards, physical rewards, sense of accomplishment, whatever, those things became stronger, and I think that those things have remained a stronger part of why I exercise than the external pressure to exercise. Like instead of exercising because I feel I should, I do it because when I exercise I feel better about myself, I feel like I have more energy, it allows me to participate in some social activities that require a certain degree of fitness, such as hiking with friends, or cycling with friends.

However, many exercisers recognized the difficulties and obstacles women may face in integrating exercise into their lives. Further, they pondered the role one’s personal exercise background may play in the ease or difficulty of transition from being externally motivated to internally driven.

> I think that [people who don’t exercise] could become motivated to exercise if it was, if they had a positive experience of exercise, and learned how to integrate it into their lifestyle. And that might take a lot for some people, they might have to get beyond a lot before they get to that place, like especially I think for people who are really overweight or have had very negative experiences of exercise and have felt maybe intimidated or, umm, just for whatever reason felt that they, they umm don’t belong in that, that type of lifestyle. (Niomi)

Many women also discussed the aspect of changing their lifestyle as something either they--or if working in the fitness industry--their clients have not necessarily acknowledged. This may result in struggles, and possibly dropping out, in the phase of shaping up, as Catherine describes:

> Because they go in with wanting to change their bodies, and saying "yeah I want to look this way, I want to be fit and blah blah blah" and ah, and then it doesn’t happen. You know, they don’t change their bodies, and they, they don’t like it, they don’t enjoy what
they’re doing. And they go there, and they don’t see any changes and they say "forget it. Don’t have the time and." People don’t have realistic goals. Like they go in thinking that they can always sort of start working out 4 days a week when they haven’t done anything, before that. And I think like that’s a huge change to your lifestyle?

According to these women it appears that exercise has become intrinsic to their lifestyle by way of it’s self-reinforcing tendencies, that is, by having found their way into the "positive cycle of exercise." For individual reasons and goals, these women were motivated to maintain regular participation in exercise. For some women it became a habit in pursuit of these goals, an activity that becomes easier over time, such as going to the gym on scheduled days. For others, it became a means of transportation, work or area of study, or a form of entertainment (i.e., activity enjoyed alone or as social interaction with others). Regardless of the reasons why, which are as unique to each woman as the activities she enjoys participating in (or does not enjoy but participates in nonetheless), exercise was maintained. Eventually the women enjoyed the action of caring for self--physically, mentally, spiritually, socially--through exercise, and the consequential effects of experiencing self as shaped.

Through growing into self, and interacting with grounding self in exercise, reasons for exercising becomes more intrinsic in the lives of exercisers, and these women became more committed to it as an expression of self-acceptance and as a means of self-care. The internal and personal motivation or reasons for exercising outweighed in importance the external reinforcements to exercise. There appears to be an interaction between these women’s exercise behaviours, and the strengthening of their identities as exercisers, with exercise becoming more integral to their lives. Exercise has been incorporated into their lifestyle--that is, it is seen as an important part, and an enhancement to their lives and way of living.

I’m the one that’s more active [in the family] . . . I believe the reason for that is I had at a younger age integrated the concept of a lifestyle, like exercise for lifestyle enhancement, whereas they [my brothers] . . . were always looking for external reinforcements to exercise such as winning a, winning a race, or you know something on
a more external level, even though they had to have personal motivation and internal motivation to do all that. Once they stopped competing, once they stopped having those external sort of reasons to exercise, they themselves really stopped exercising. . . . So, I think that umm, the lifestyle, the intent to exercise for lifestyle, has a stronger, or longer lasting effect than just exercising for the sake of gaining in competitions and looking for like prizes, and those sort of things. (Niomi)

Expressing identity. Living an active lifestyle with regular participation in exercise reinforces one’s identity as an exerciser (a part of their total identity). For the few women who engage in mainly one sport or activity, their exercise identity revolved around that sport (e.g., runner, snowboarder, cyclist). Moreover, for all of the exercisers, their identity as such seemed more influenced by their behaviours (exercise) than gender (being a woman who exercises). Maintaining an identity in exercise or sport is seen as personally empowering by these women, for the sense of freedom, confidence, accomplishment, independence, and sense of self procured through activity, and the values of commitment, determination, and goal-direction their participation demands. A few exercisers, and the former exerciser, discussed a more unsavoury side to having an identity as an exerciser. For example, as Andrea discussed her competitiveness and desire to win in sports, and to lift increasingly heavy weights while building her body in weightlifting, she commented, "and I know in umm, you know in maybe analyzing it going back, I guess it was all about you know, getting recognition, getting attention, being somebody, being somebody more special than other people or something." Further, when injured or unable to exercise, many exercisers like Hope, expressed having had difficulty in that they no longer felt like they were the same person. The exercisers know themselves, and become known by others, for their exercise participation.
Accessing experiences. From growing into self these exercisers gained physical fitness, body awareness, enjoyment from exercise (unique to each woman), and athletic ability or skill. This self-knowledge, skill, and knowledge of exercise has provided them with a means to other experience, that is, they have increased opportunities to experience feelings such as synergy and groundedness, to challenge themselves further in their sport, or to participate in other physical activities, or active social events. Accessing these other experiences, and participating in them, are an aspect of expressing self through exercise. For example, Catherine’s fitness and practice led her to experience an aspect of grounding self in her new sport:

Like it’s kind of a bit of a zone thing. . . . I really felt that this weekend when I umm I went snowboarding. Like all of a sudden I got into a groove and . . . I felt like I was just able to do what I want to do? Finally. And then, and I kind of knew that it probably wouldn’t have been as easy had I not been strong to be able to do that. You know, or maybe take me longer to get there, or whatever, like. But that was also such a neat, such a neat experience that it just kind of, now I thought like I’m like, yeah, it’s not like really known, like I want exercise so I can do this, but it just--it all kind of fits together.

Finally, these women express themselves through the act of exercising. Exercise may be an experience in and of itself, even if only for a short time--whether one is kayaking or windsurfing in the ocean; cycling in the trails or along the city dykes; running along the beach, or in a 10 km race with thousands of others; skiing or hiking in the local mountains; or pushing through a step class with friends or as part of a crowd of strangers. For example, Catherine describes her feeling and perception while running through the trails of a city forest, something she "loves to do:"

I have a sense of being, like a wildness? It’s not like "I’m so wild," but like almost animalistic? Or like that you’re just kind of running through the trails and there’s no one around you and, and I feel like for some reason, I step into the trails and I’m running way faster than I normally do, when I’m probably not. But just the sense I have? . . . I just really feel like this is a different experience. You know it’s not, and I feel like I’ve really removed myself from like my daily like, kind of domestic existence, like of living in a house and you know, kind of walking down the street, and going to the store, and
then all of a sudden I'm in the trails, and it's just a different feeling. . . . In the trails like it's exercise, but it's also like an *experience*.

**Summary**

This substantive theory describes the social-psychological process of shaping self through exercise for women who consider themselves exercisers. The maintenance of exercise behaviour is shown to involve a complex process of change on an individual level with broader social-environmental influences. For many of these exercisers, the ease with which exercise was maintained over time varied, but they were all passionate about maintaining it as a part of their lifestyles and identity; exercise has been a socially acceptable way to shape themselves and their lives.

For the participants in this study, the process of shaping self through exercise involved the reciprocal interaction between the phases of shaping up and experiencing self as shaped. Throughout this reciprocal process women appraised, and were mindful of, their experiences, they encouraged and discouraged themselves with inner dialogue, and they experienced physical and psychological effects of exercise that helped them to feel good about themselves. As these women maintained the regularity of exercise over time they experienced "growing into self" while gaining self-knowledge; and learned to care for and express themselves by incorporating exercise into their lifestyles with "grounding self in exercise" and "expressing self through exercise." For these women, exercise changed from an activity for achieving extrinsic rewards to become an intrinsic part of their lives.

The process of shaping self through exercise is influenced by the personal exercise background, and enacted within a context including the social-cultural environment and current life context. Due to changing life circumstances and personal obstacles, many of these exercisers frequently re-experienced the two phases during both acute exercise sessions
and over time. Thus, the experience of exercise for these women involved intrapersonal and person-environment interactions that were constantly evolving and dynamic.
CHAPTER V
DISCUSSION

The final step in generating grounded theory is to determine its relevance and usefulness (Glaser, 1999). Two issues that warrant highlighting are (a) the effectiveness of using the grounded theory method in developing a substantive theory that extends existing theoretical perspectives in the area of exercise psychology, and (b) the theory itself, developed to elucidate the basic social-psychological process of regular participation in exercise. In order to examine the contribution of this project with regard to the existing knowledge about the experiences of exercise, and more specifically, the process of change through its regular use, I examine study findings, and compare them to relevant literature in the areas of counselling and exercise psychology. Literature that addresses the main aspects of this theory, including the extant literature previously reviewed in Chapter II, has been considered and reinterpreted in light of this study's theoretical findings. Chapter II introduced the reader to literature reviewed prior to, and in the early phases of data collection and analysis. This literature reflected my familiarization with information (research and theoretical ideas) pertinent to understanding women's experience of exercise. As grounded theory method is discovery-based, it was inevitable that new ideas and connections to other areas of research would be made from the resulting theory. Connections to other theories in psychology (particularly about the process of change) that were not previously a part of the exercise psychology literature, or were not apparent before data were collected and analyzed, could be made only after theory development. Therefore, in this discussion some connections to previously reviewed literature from Chapter II are highlighted; however, new literature is also introduced as being relevant to the theory of shaping self through exercise. This is followed
by a discussion of the strengths and limitations of the study. Finally, implications for research and intervention are discussed.

Effectiveness of Grounded Theory Method

In this study, I explored the social-psychological process of the experience of regular exercise for women who consider themselves exercisers, and developed a substantive theory to explain how these women described this phenomenon. Thus, the aim of this study was to develop a theoretical model of the experiences of women who regularly exercise, considering the process of change through its use and maintenance, and the contextual factors that may have influenced their participation. The experiences and practices of women, as described by women, were undertaken as the starting point for theory development (Fasting, 1994). The broad questions were, "what is exercise about for women," and "what is exercise doing?" The findings—a process of shaping self through exercise—are an initial answer to these questions.

At a conceptual level, this study demonstrates the usefulness of the grounded theory method for the development of a substantive theory of women's experience of regular exercise. Through the use of this method, the theory addresses some of the limitations of extant knowledge by (a) asking questions about exercisers' experiences in the natural environment (i.e., not in a research setting), (b) recognizing the importance of contextual factors, and (c) explaining participation in regular exercise as a process, thus fostering the identification of connections between variables and events. The results illuminate women's experience of regular exercise as a purposeful human endeavour, a social-psychological process or journey, and a more complex process than is evident from previous research. This theory is broad enough to recognize individual differences, yet it clarifies the occurrence of
the phenomenon and the general process of change through the regular use of exercise. Furthermore, the theory highlights how women experience exercise (including feelings and cognitions about themselves and about exercise), thus increasing our understanding of feelings, needs, and attitudes towards self in relation to exercise. Interactions between the perception of exercise, its effects, and a woman's sense of herself are outlined. Moreover, the intrapersonal and environmental influences and supports—many of which may be unique to women—for maintaining exercise as a regular and continuous aspect of life, are considered (e.g., personal exercise history, social-cultural environment, and the current life context). Interactions between these influencing conditions and intrapersonal variables or self-experiences (e.g., sensory, behavioral, cognitive, affective) of regular exercise are explained as a part of the process of change.

Contribution to the Extant Literature:

Regular Exercise as a Social-Psychological Process of Change

The resulting theory is consistent with the view of participating in regular exercise as a process (cf. Sonstroem, 1988). This theory helps to clarify the complexity of the social-psychological experience of exercise for women; the social environment that is ever-changing in which exercise takes place, and women's intrapersonal experience of shifts and changes in light of their exercise. In this discussion, I highlight three themes resulting from the theory of shaping self through exercise, which are: (a) An interactionist perspective is necessary in order to understand the experience of exercise. (b) Women's exercise experience is more than physical movement in reaction to environmental and personal influences, but also about taking action (often a best effort in light of physical and social limitations) that creates personal and possibly environmental change. (c) In order to understand the experience of
exercise, including its interaction with the social-cultural environment, we must first understand the intrapersonal processes (cognitive, affective, experiential). Finally, I focus on an important finding of this study—the potential for changing self at a psychological level through regular exercise. The theory demonstrates that for these women, as exercise became intrinsic and a self-determined action, it also became a means to knowledge, acceptance, and growth of self.

The Person-Environment Interaction

Similar to the hypothesis put forward by Leonard and Schmitt (1987) that "sport is interaction" (p. 115), the process of shaping self through exercise is shown to be a product of a unique person-environment interaction, rather than solely as a function of either one or the other. This theory is consistent with the theoretical model of individual change proposed by Brower and Nurius (1993) wherein the person-environment interaction is described as the joint influences on behaviour from environmental influences and private experiences. That is, women exercise not only because of their situation (past exercise history and present life context, social-cultural environment) but because of who they are. Further, Brower and Nurius argue that "the person shapes the environment through his or her presence while at the same time being shaped by it" (p. 6), which is mediated by his or her intrapersonal reactions (cognitions, feelings, experiential aspects). Thus, if their model was applied to exercise, both the intrapersonal experiences with exercise and the social-cultural environment concerning exercise would influence women's exercise behaviours, and in turn, by exercising, women influence their environment and intrapersonal experiences. This process is consistent with the present theory.

In the process of shaping self through exercise, there is a reciprocal influence between the individual exerciser and the environmental influences. The women in this study
experienced and made sense out of exercise within the social-cultural environment, and were influenced by their current life context, and their personal historical and ongoing experience with exercise. These contextual and intrapersonal factors provided a context within which they understood exercise. Further, the contextual factors offered either motivation and support, or set up barriers to exercise--through life events, significant others who modelled behaviour, and messages received and interpreted. These women interpreted (and often struggled with) the messages they received from their environment as either relevant to themselves and their exercise experience, or not. These results are consistent with Dean and Choi’s (1996) preliminary research findings of the "sociocultural embeddedness of meaning" of exercise (p. 33). Consistent with the present theory, Dean and Choi found that individuals evaluate the influence of culture and media against their own self-perceptions and experiences. Moreover, similar to Brower and Nurius’s (1993) model, results of the present study suggest that by perceiving and appraising the cultural notions of exercise, individuals in turn influence the social-cultural environment. Thus the women are not just reacting to environmental forces and influences from past and current experiences, but they are active in further shaping them, both personally and socially. Personally, the exercisers are receiving and perceiving information from the social-cultural environment about exercise, evaluating and comparing these notions to their current experiences, and behaving (i.e., while exercising they are learning, challenging themselves, overcoming obstacles, and building active lifestyles). For example, as a woman experiences herself as shaped, she may evaluate media messages about body image (e.g., buy this product and you will be slim and successful) as less important for herself. In turn, as more women evaluate these messages as irrelevant to their experiences, it is possible that they effect changes at the social and environmental level (e.g., newer advertisements that reflect women’s images of themselves
as strong, powerful, and of rejecting former notions of exercise and body image). However, the extent to which women shape their environment on a social-environmental level requires further investigation. The person-environment interaction involves more than just "piecing together parts of a puzzle, with a static person finding his or her place within a static environment" (Brower & Nurius, p. 6), but conceptualizes the process as much more dynamic.

Furthering an Understanding of Exercise

Participants in this study were physically active women, with all but two having described themselves as current exercisers. The exercisers were participating in exercise on their own, and had done so for some time, within the natural environment (i.e., not in a research exercise training program). Although "the extent to which situations [i.e., exercise] are commonly viewed is the extent to which members of society can agree on the meaning that we place on the situations;" at the same time, the situation is amenable to the individual meanings placed on it (Brower & Nurius, 1993, p. 34). Through exploring these women's definitions of exercise, beyond the social discourse, exercise is found to be viewed as more complex than simply behaviour and physiological consequences, but as a means to personal growth, self-expression, and self-maintenance or care, with the potential to be intrinsic to an exerciser's sense of self.

In the extant literature, exercise has been defined as a subset of physical activity that is structured, repetitive, and has the objective of improving or maintaining aerobic or anaerobic physical fitness (with physical activity defined as any bodily movement produced by skeletal muscles that result in the expenditure of energy; Caspersen et al., 1986). Consistent with this definition, exercise was viewed by the participants as a form of physical activity involving repetitive movements, but was further delineated by them as either incidental or purposeful.
Purposeful exercise is the closest in meaning to the definition of exercise used in the literature, because it involves the conscious participation in exercise behaviours specifically for desired gains and physiological effects (e.g., physiological health and fitness benefits or illness prevention, physical appearance benefits, and mental well-being). Although it has been previously suggested that definitions of exercise may vary widely among the general population, and range in meaning from any form of physical exertion (including walking to work and gardening) to vigorous aerobic or anaerobic exercise (e.g., Rejeski & Thompson, 1993), all participants in this study—regardless of their perception of self as exerciser or not—shared this understanding of purposeful exercise.

However, the connotations of exercise were not shared by all the women in this study and offer a more complex perspective on this definition. Some of these women saw it as play, others as competition, others still as work; whereas for most women exercise was recreational, and for a few it was their job. Furthermore, for these participants, exercise was understood to be not only a health behaviour, but also a form of caring for oneself physically and mentally, and as a means of self-expression. Exercise was not loved by all exercisers, although they all expressed love for some form of physical activity, and for its benefits. Thus, although there was a shared definition of purposeful exercise, individual meanings of exercise remained and involved (a) personal reasons for exercising, (b) expended effort or exertion required, (c) type of activity engaged in, and (d) whether it was enjoyed or not. In addition, the personal meaning of exercise was understood to change over one’s lifetime. For these women, regular purposeful exercise was initiated for particular reasons, which changed as it became an intrinsic part of their lives. These findings provide support for the suggestion that factors that enable women to initiate exercise may differ from those that help them to sustain that behaviour over a longer period of time (Rothman, 2000).
Although researchers who studied the psychological effects of exercise have separated variables such as type (aerobic, anaerobic), mode (running, cycling), frequency, duration of session or training period, and level of intensity of exercise, few women from this study narrowed their exercise experience in this manner. For the majority, exercise varied in frequency, type, location, and was done both alone or with others at various times. Most of the exercisers participated in several physical activities of infinite variation. They participated in different activities daily, seasonally, or over the years due to changing interests, availability of the sport or facilities, weather, injury, etc. Over time these women stopped and started exercise, often due to intrapersonal variables (e.g., due to boredom), changes to their current life context (e.g., due to a move somewhere with no exercising friends nearby), or due to social-cultural context (re-initiating exercise inspired by a fitness magazine or bulletin board advertisement). In addition, although a few women exercised either alone or with others, most expressed that they have done both, depending on personal or external factors. Furthermore, the ease with which exercise was maintained varied, but all were passionate about having it as a part of their lives and identity. Thus, this theory adds to the knowledge of women’s personal and changing experience of exercise participation over time.

The Intrapersonal Process of Change in Self

Affected by these social-cultural and environmental influences, participation in regular exercise over time involves a complex process of change on the individual level of self. In this theory, the self referred to is the self as discussed by the participants, that is, the common understanding of self. As defined in Webster’s dictionary (1983), the self is the "entire person of an individual" (p. 1064), encompassing elements that constitute the person’s individuality and identity (such as characteristics, behaviours, thoughts, emotions, sensations, and body). Therefore, in this study, self refers to both the psychological sense of self (which
includes one's conceptualized self, and one's experiencing or observing self), and the physical self (sensory awareness of physical body, experienced as either separate from one's psychological self, or as a way of cohering the self as an integrated whole). That is, self is both a cognitive-affective representation of one's identity and an experiential sense of being. Furthermore, many of these women knew their selves through prior experiences and conceptions, and held ideas of themselves in the future--both images of who they wanted to be or did not want to be (including appearance, thoughts, sensations, and feelings). Their understanding of self corresponds to the notions of the present or working self, the past self, and the possible or future self (Markus & Nurius, 1986). This notion of self in the past, present, and future, is how women identified themselves and expressed their self-knowledge. They described this sense of self as changing through their experience of regular exercise.

For these women, the process of shaping self through exercise involved the reciprocal interaction between the formative or action-oriented phase of shaping up, and the summative or consequential phase of experiencing self as shaped. Throughout this process women appraised, and were mindful of, their experiences. They both encouraged and discouraged themselves with self-talk; experienced physical and psychological effects of exercise that led them to feel good about themselves; struggled with negative or diverting aspects of exercise; grew into a sense of self that involved mind and body, while gaining knowledge of exercise and themselves; and learned to care for and express themselves by incorporating exercise into their lifestyles. Influenced by the social-cultural environment, personal exercise history, and current life context, and involving struggles against personal obstacles in order to push past prior limits, many of these exercisers frequently re-experienced both the formative and summative phases of shaping self (although a few remained in the summative phase). Thus, the experience of exercise for these women involved intrapersonal and person-environment
interactions that were constantly evolving and dynamic.

The findings outline the experiential process from shaping self through exercise, through to experiencing self as shaped. Shaping self through exercise transcends the implication of shaping behaviour and shaping body by participating in exercise, to include shaping self-perception, building self-esteem (i.e., value placed on those perceptions, including the dimension of self-efficacy), and self-enrichment through shaping life experiences. Seen as a nonlinear progression and recursive process, the theoretical process helps to clarify how the experience of exercise may change over time, the process of personal change through regular exercise, and how exercisers make sense of these changes.

Shaping self through exercise connotes the meaning of exercise as re-creation. These exercisers were both creators (i.e., taking action by shaping themselves and their lives) and creations of their action (e.g., their shaped physical bodies, their self-awareness and sense of self as exercisers, the expression of themselves through their physical movement, and their values by including exercise in their way of living). Through exercise these women gained knowledge (kinaesthetically, cognitively, and emotionally) of their present selves, and created realistic goals of their possible selves (e.g., Kendzierski et al., 1998; Markus, 1983; Markus & Nurius, 1986; Ruvolo & Markus, 1992). The experience of exercise helped them to know, challenge, commit to, change, and accept themselves. Exercise became an intrinsic part of their lives, and a means of caring for and expressing oneself.

**Shaping Up**

The phase of shaping up describes the women's experience of initiating and maintaining participation in regular exercise over time, involving personal effort (varying from the enactment of habit to continued perseverance), overcoming obstacles, and achieving rewards. The salient conceptual elements of this phase, talking to self and experiencing exercise,
interact concurrently to result in feeling good about self or diverting from self.

Talking to self. Talking to self is the inner dialogue, or conversations exercisers hold with themselves throughout the process of shaping self through exercise. In general, talking to self is not a new concept and has been mentioned in sports psychology research, that emphasizes its use as a cognitive strategy to improve athletic performance and overcoming difficulties (e.g., Mahoney & Avener, 1977; Orlick, Power, & Partington, 1979, 1980a, 1980b; Sachs, 1984). Athletes’ inner dialogue has been compared to strategies used in cognitive-behavioral therapy (Buffone, Sachs, & Dowd, 1984). In the clinical psychology literature, Meichenbaum (1985) discussed the importance of positive and negative self-statements in regulating behaviour, whereas Beck (1976) pointed out the effects that positive and negative automatic thoughts have on emotions. They both argued that the content and quality of these self-statements or messages we give ourselves is a factor in determining our moods and behaviours. Emphasizing that this inner dialogue is often automatic and out of conscious awareness, clients in therapy are taught to pay attention to self-talk, and to replace negative or maladaptive self-statements with positive or adaptive ones. Self-help exercise books (e.g., Douillard, 1994; Gallwey, 1997: Huang & Lynch, 1992; Jackson & Csikszentmihalyi, 1999) and recent magazine articles on exercise (e.g., Bauman, 2000) reinforce the value of paying attention to self-talk and applying these therapeutic strategies in order to increase exercise adherence, motivation, and performance. Self-talk is thus discussed in terms of teaching clients or athletes these "techniques" to create desired change.

In both cognitive-behavioral therapy and sports psychology literature, self-talk has been associated with techniques such as affirmations, positive thinking or mindset, and cognitive reframing, and reflect the view that it is largely a cognitive phenomenon. Cognition is certainly one part of talking to self for the women in this study. They engaged in inner
dialogue about their sense of self as an exerciser (belief in being an exerciser), thoughts about physical exercise in general (e.g., thinking it difficult or easy), and thoughts of their experiences of exercise while active (associative thinking—maintaining a focus on bodily sensations and staying aware of physical factors important to performance vs. disassociation—thinking of anything but bodily sensations). In addition they reflected on these experiences, and the impact on identity (e.g., I am a runner) over time. The women’s description of self-talk was similar to that found in the sports psychology literature: (a) for monitoring their own experience (e.g., immediate bodily sensations, or participation and progress over time), (b) providing self-instruction (e.g., reviewing skills, telling self what to do next), (c) giving reinforcement to themselves (e.g., providing encouragement to begin or to continue, making promises for future exercise if relapsed or missed a session), and (d) for enhancing their performance (e.g., cognitive rehearsal, offering self-challenges). In addition, these women used self-talk to care for or be kind to themselves, that is, to accept themselves regardless of whether or not they have exercised. This self-talk moved beyond cognitive reasoning with oneself, to involve emotions such as struggling against irritation with oneself, to caring and comforting oneself. Thus, this theory contributes to the extant knowledge that self-talk is a co-occurrence of cognition with emotions. Talking to self involved the occurrence of both ever-fluctuating cognitions and affect, such as shame, guilt, obsession, encouragement, and discouragement. In contrast to the theories of Meichenbaum (1985) and Beck (1976), the present theory does not suggest that thoughts affect feelings, because for these women, thoughts and emotions were not easily separated.

Talking to self appeared to be dialectical, and occurred naturally or spontaneously. The majority of women were able to judge for themselves whether their self-talk was positive or negative, healthy or unhealthy. Those who felt that their inner dialogue was too negative or
unhealthy, consciously took steps to challenge these messages because they believed this was more useful towards their goal of sustaining exercise participation. Frequently, the thoughts and feelings of talking to self were evaluated against personal experiences. Thus, talking to self was seen to be very much influenced by the social-cultural environment, the exerciser’s past history with exercise, and her current life context. The messages these women told themselves were frequently influenced by what they had heard elsewhere, and whether or not they had incorporated the message into their own values and beliefs. For example, many women discussed struggling with exercise shoulds (that they should exercise, why they should exercise, and what exercise should be doing for them), versus their desire to exercise for intrinsic reasons (i.e., just doing it for its own sake). The synergistic interaction of talking to self, experiencing exercise, and environmental influences, suggests that the construct of talking to self may be a mediator of the person-environment interaction of individual change, as proposed by Brower and Nurius (1993).

**Experiencing exercise.** The notion of "experiencing exercise" contributes to the extant knowledge of exercise because it describes more than the behaviour of exercising and its psychological effects, but also explores the human experience of moving one’s body in the context of one’s physical and psychological sense of self. Experiencing exercise is a holistic embodied experience, wherein the contextual factors interact with the intrapersonal processes (e.g., talking to self, physical sensing, behaviour) of exercising over time to encourage the process of change. Experiencing exercise may incorporate what has previously been referred to as "felt sense" (Gendlin, 1981) or "somatic awareness" (Bakal, 1999). This construct includes the psychosomatic aspects of exercise (being active—sense of being, kinaesthetic awareness, and physical activity of the body) that are accompanied by a cognitive understanding. This cognitive understanding includes the exerciser’s personal definition of
exercise, choice of activity, reasons for engaging in it, and appraisal (perception and evaluation) of themselves as exercisers (e.g., their commitment, their physique, their ability). Further, the construct of experiencing exercise involves meeting the challenge of accepting their body (physical body, and physical and mental ability) and seeking balance in exercise behaviours and life in general, in order to continue to experience more activities with greater ease. Thus, women may experience both joy and hardship initiating and maintaining their exercise, developing skills and fitness, discovering how to keep exercising (e.g., finding time, juggling responsibilities and roles, fighting inertia), and learning about themselves through exercise (e.g., creating realistic goals, observing what their body can do or still needs to practice). The "shaping up" phase connotes the snakes and ladders effect of initiating and maintaining exercise; the effort required to succeed, and for many women, the inevitable "fall-backs" (see Footnote 1). Women who were successful in shaping up had managed to overcome personal obstacles and meet challenges, and increased their self-awareness in a holistic manner. Thus, experiencing exercise extends the view of exercising as not only comprising behavioral and experiential components (e.g., Marcus & Simkin, 1994), but as a challenging learning experience influenced by social-cultural forces, and one’s current life context. Understanding all aspects of experiencing exercise has implications for helping someone adapt or maintain exercise, and for interventions that rely on exercise for aiding change in self.

Feeling good about self. The construct of feeling good about self involves the cognitive appraisals of experiencing exercise (acute and regular participation) that result in positive affect about oneself. This feeling reinforces the notion that the exerciser is caring for herself by engaging in exercise. On the one hand, this may reflect feelings of personal worth and pride for participating in an activity valued and deemed healthy by the society in which these
women reside. However, on the other hand, for many women this construct also includes personal agency, and reflects findings from research on mastery (e.g., Ismail & Trachtman, 1973), coping (Berger, 1994; Long & Haney, 1988b), and self-esteem (e.g., Sonstroem, 1984), which hypothesize self-efficacy as a mediator between exercise and psychological benefits (e.g., Bandura, 1997; Sonstroem & Morgan, 1989). The exerciser may feel satisfied in accomplishing goals, experience pleasure from taxing her body physically and mentally, and feel relief in releasing physical or mental tension. Thus, for many women, feeling good about self is more than feeling worthy because she has engaged in a socially sanctioned activity, but because she has taken responsibility for herself and has purposefully engaged in an experiential activity to create positive and valued consequences.

**Diverting from self.** The construct of diverting from self describes the use of exercise that diverts the exerciser from shaping self in a personally or socially perceived way that is healthy. This includes exercising for psychological benefits when it has negative physical, social, or psychological consequences. This construct has similarities to "exercise as diversion from authentic self" as discussed by Fahlberg (1990) in his phenomenological and hermeneutical study on the meaning of exercise. However, Fahlberg explored existential meanings of this construct that were not as apparent in the present study (i.e., subtypes of diversion from self were "repression of existential concerns" and "oppression of relational exchange"). Consistent with Fahlberg's results, diverting from self is not necessarily an endpoint of women's exercise experience. The present study adds to this understanding by illustrating the interactions through which diverting from self remains a part of the process. Those women who recognized the restricting and oppressive influences of their behaviour were engaged in efforts to change the intent behind their behaviour, although not necessarily to change the behaviour. For example, many women made the effort to change unhealthy
self-talk to healthier self-talk (e.g., "it is okay to not exercise while injured") in their attempts to become self-accepting.

Summary. The formative phase of shaping up subsumes aspects of the transtheoretical model of behaviour change (Prochaska & DiClemente, 1982, 1983; Prochaska, DiClemente, & Norcross, 1992), including the latter’s focus on initiation and change of behaviour, inclusion of experiential (cognitive and affective) and behavioral factors, and allowance for forward progress and relapse in the process of behaviour change. However, the theory of shaping self through exercise provides support for Marcus et al. (1992) who have challenged the structure of the transtheoretical model as limited. For the women in the present study, many experiences thought to occur during the contemplative stage of the transtheoretical model occurred for the women who were maintaining regular participation in exercise. Further, the theoretical model of shaping self through exercise considers the complexity of maintaining exercise behaviour, highlighting intrapersonal and environmental factors, as opposed to viewing it as simply "action sustained over time" (Rothman, 2000, p. 65). Shaping up through exercise is viewed as a nonlinear and experiential process during the initiation and maintenance of regular exercise; and consists of interactions among cognitive, affective, and sensory experiences (encompassing the synergistic interactions of talking to self, experiencing exercise, feeling good about self, and diverting from self). The experience changes over time whether one is initiating, resuming, or maintaining exercise. Further, exercise is understood to be a more complex experience than simple behaviour, and is influenced by one’s life experiences embedded within a social-cultural context. Through one’s continued experiences in shaping up, learning and growth of self as an exerciser occurs.
Experiencing Self as Shaped: Exercise as Intrinsic to Self

In the summative phase of experiencing self as shaped, the exerciser may experience a culmination of unexpected benefits as a consequence of having maintained participation in regular exercise. Experiencing self as shaped refers to gained knowledge and valuing of self as an exerciser, use of exercise for self-maintenance and self-care, and the corresponding expression of self. Thus, exercise is self-fulfilling, and a creative outlet. For the majority of the exercisers in this study, these benefits became more valued than the original goals sought, and proved to be motivating. This phase is not stable as it is influenced by current life context, but it may be strengthened by revisiting the formative phase of shaping up. Once an exerciser has experienced herself as shaped, exercise becomes intrinsic (i.e., it belongs to the essential nature) and an integral part of her life (i.e., it is essential to completeness). The salient conceptual elements of this phase are growing into self, grounding self in exercise, and expressing self through exercise.

The theoretical model of shaping self through exercise highlights exercise as a complex process of change on the individual level of self. The subjective experience of exercising is important and variant, and involves intrapersonal and person-environment interactions that are constantly evolving and dynamic. Exercise is more than body-work, but includes cognitive-work and spirit-work.

The results of the present study contribute to the domain of positive psychology (e.g., Seligman & Csikszentmihalyi, 2000) by focusing on the valued subjective experience of exercise, well-being, and personal growth, and the development of exercise as intrinsic to one’s life. Exercise can become a means to positive experiences of emotions, challenges, self-knowledge and acceptance, self-maintenance, self-expression, and discovering possibilities. Salient findings of this theory include, (a) exercisers are actively engaged in
exercise and working towards personal change by their own choice; (b) exercise is shown to become intrinsic to the exerciser's sense of self and life, and this seems pivotal to experience exercise as self-propelling, and experiencing self as shaped; and (c) the social-cultural environment and the exerciser's personal history of exercise and current life context affect the intrapersonal process of change. Thus, an interesting comparison can be made with research on intrinsic motivation and the self-determination theory (Ryan & Deci, 2000), which may parallel the experience of the exercisers in this study. Self-determination theory guides research in the area of people's inherent growth tendencies and innate psychological needs (competence, autonomy, and relatedness) as a basis for self-motivation, optimal functioning, psychological well-being, and the influence of environmental factors.

The development of theory on the experience of exercise, and in particular, the phase of experiencing self as shaped, relates to research on motivation and adherence, including the self-determination theory, which was not considered pertinent before data collection and analysis. The motivation research has largely focused on identifying the personal, situational, and exercise program determinants of exercise behaviour adoption and maintenance (e.g., Dishman, 1988b; Dishman et al., 1985). That is, this research was seeking an answer to the question why people do or do not exercise (Leith, 1990), but not what are people experiencing from exercising. The focus with which I approached this study was on what women were experiencing from their regular exercise participation, rather than on finding out why they exercised or how they remained motivated. Moreover, research on exercise adherence suggests that it is easier to motivate people to initiate exercise than to maintain exercise (Dishman), and while dropout rates remain high, long-term adherence to exercise remains poor (Berger & Owen, 1983). As well, the majority of these studies focus on fitness program exercisers as opposed to autonomous exercisers (for an exception, see Gauvin,
I questioned the traditional notion of "dropout," which implies quitting exercise completely. It may be that individuals considered exercise dropouts in fitness program studies, temporarily stopped exercising, switched to a different type of exercise that may have been more appealing or personally appropriate, or became more autonomous in their exercise by choosing to exercise on their own rather than with the study program (Leith). Therefore, this body of research did not seem to be relevant. I was interested in the experience of women who had been regularly exercising over time, on their own.

Unexpectedly, however, the women in this study spoke of staying motivated to maintain their exercise as an aspect of their experience. Whereas physical reasons (e.g., health, fitness, appearance) were cited by these women as important motives to begin purposeful exercise; personal variables, and the intrinsic nature of exercise encompassed in experiencing self as shaped were related to their ongoing exercise participation. This finding parallels results of prior research: reasons of health improvement were cited as motives for initiating exercise (Olson & Zanna, 1982; Ryan, Frederick, Lepes, Rubio, & Sheldon, 1997); and personal, social, and environmental variables were cited as motives for exercise adherence (Dishman et al., 1985; Ryan et al.). One personal characteristic that has begun to receive attention in exercise behaviour studies is *intrinsic motivation*, which has been investigated as both a stimulus to initiate exercise and a reinforcer to adhere to exercise (e.g., Markland, 1999; McAuley, Wraith, & Duncan, 1991; Oman & McAuley, 1993; Rutherford, Corbin, & Chase, 1992; Ryan et al.). This research area is of interest due to the comparison that can be made between intrinsic motivation, and the finding in the present study of exercise becoming intrinsic and self-motivating for women who experience themselves as shaped.

According to self-determination theory, intrinsic motivation is just one type of motivation on a continuum of distinct types, from amotivation, to extrinsic motivation, to intrinsic
motivation (Ryan & Deci, 2000). Distinctions between intrinsic and extrinsic motives were also clarified by a few participants in this study. Intrinsically motivated behaviours are those that are performed for the inherent satisfaction gained from engaging in the activity itself, that is, in the absence of a reward contingency or control (Csikszentmihalyi & Rathunde, 1993; Deci & Ryan, 1985; Oman & McAuley, 1993; Pelletier, Fortier, Vallerand, Tuson, & Blais, 1995). The primary satisfactions associated with intrinsically motivated behaviours are perceived competence (the desire to engage challenges, practice, and expand skills), effort-importance (the amount of effort felt to be expended in the activity, and the importance personally given to it), interest-enjoyment (desire to have fun, pursue interests, be stimulated), pressure-tension (the extent to which pressure or tension is experienced during the activity), and perceived choice of activity (McAuley et al., 1991; Rutherford et al., 1992). In contrast, extrinsically motivated behaviours are those that are performed in order to achieve rewards or outcomes separate from the behaviour itself, and thus has an instrumental nature (e.g., body-related motives, such as the desire to improve appearance or fitness; or motivated to win a race or competition, improve a personal record; Ryan et al., 1997). There is nothing inherently negative about extrinsic motives, as they can be highly externally driven (e.g., to gain approval or avoid punishment) or volitional (e.g., in pursuit of a personally valued goal; Ryan et al., 1997). Extrinsically motivated behaviour can be either self- or nonself-determined (Rutherford et al), whereas behaviour that is intrinsically motivated is highly autonomous and invariantly self-determined (Deci & Ryan; Oman & McAuley).

According to self-determination theory, the more valued the goal, the more the action is accepted or internalized as personally important, and assimilated to the self (Ryan & Deci, 2000). In general, research based on self-determination theory in the area of health care has found that the greater the internalized motivation, the more positive the outcome (measured
by behavioral effectiveness, persistence, subjective well-being, and acceptance in one's social group; for a review see Ryan & Deci). Moreover, consistent with self-determination theory, the context in which exercise occurred was found to foster or thwart motivation becoming intrinsic in the process of shaping self through exercise. However, it has also been suggested that for many individuals it is unlikely that the activity in and of itself is satisfactory enough for continued participation (McAuley et al., 1991). This was certainly the case for many of the participants in this study who expressed that they had discovered for themselves ways that would keep them motivated for this reason (e.g., planning active trips, training for a 10 km charity race). The findings of the present study confirmed that regular exercise entails time commitment, effort, persistence, and the tolerance of discomfort and pain (McAuley et al.). Unlike the extant research, the present study demonstrates that this effort and discomfort occurs beyond exercise initiation and throughout maintenance. It has been suggested in the research literature that as physical fitness and skills improve, intrinsic motivation is enhanced. In keeping with the social cognitive perspective, cognitive processes such as perceptions of high self-efficacy, perceived mastery, and self-evaluation of the attainment of goals or perceived success is implicated in the development of intrinsic motivation (Bandura, 1986; McAuley et al.; Oman & McAuley, 1993). This implies that the continued interest of exercisers is cultivated by their beliefs in their abilities, and with time, personal efficacy promotes mastery experiences that lead to positive self-evaluations, and in turn enhances intrinsic motivation (Bandura). In support of this thesis, McAuley et al. found that highly efficacious individuals were more intrinsically motivated than those less efficacious. However, these researchers noted that differences in intrinsic motivation were not due to variations in individual experience or ability, as denoted by beginning, intermediate, and advanced exerciser status. Further, Markland (1999) found that when self-determination was
high, perceived competence seemed to have no effect on intrinsic motivation, suggesting that when individuals are engaging in an activity because they choose to, perceptions of competence are not an issue. Clearly there are relations among self-determination, perceived competence, self-efficacy, and intrinsic motivation, but the interactions among these constructs remains unclear.

The theoretical model of the process of shaping self through exercise may help to shed light on exercise as an intrinsically motivated behaviour. This model suggests that the cognitive structures of self-determination, perceived competence, self-efficacy, and intrinsic motivation, may play a part in the process of exercise becoming intrinsic to oneself. Further, it provides support that change over time is involved in building intrinsic motivation (as suggested by Bandura, 1986), although it remains individually variable. However, this model also suggests that the structures of self-schema (e.g., possible self; Markus & Nurius, 1986), self-knowledge (e.g., of physical and emotional self as an exerciser), as well as emotions (e.g., commitment) and sensory experiences (e.g., feeling of vitality, strength) are also a part of this process.

Growing into self. The change from shaping up to experiencing self as shaped occurs through the action of growing into self, that is, the meaning of exercise changes from an extrinsic activity to become an intrinsic part and an enhancement of exercisers’ lives. This construct involves the culmination of knowledge and appreciation for self and exercise from shaping up, and includes physical, cognitive, and emotional aspects that were not experienced separately by these women (e.g., self-confidence was experienced by these women emotionally and cognitively, and expressed physically).

Prior research has suggested that incorporating physical activity into one’s life may indicate one’s perceived commitment to the activity (Kendzierski et al., 1998; Scanlan,
However, the women in this study perceived themselves as having become committed not only to exercise, but to themselves. These women expressed their commitment to exercise as a means of self-care and as a means to other experiences, through their enhanced knowledge and acceptance of themselves. In many ways, making a personal commitment to exercise helped these women to feel balanced in their lives, as they met challenges in prioritizing exercise. With making and keeping their commitments, they were then able to incorporate exercise into their lives.

The majority of the women stated that they became more intrinsically motivated than extrinsically motivated to maintain their exercise. Further, they believed that being intrinsically motivated was related to their adherence, ability to overcome difficulties of resuming exercise after a relapse, and to participate in new activities (despite feeling less skilled or less fit for the new activity than for their regular activity). The exercisers appreciated the feeling of progress through exercise by observing the physical changes in their bodies and their abilities, feeling an increase in fitness and health, and noticing mental and emotional changes within themselves. Their self-awareness and increased confidence with physical activity lent a willingness, and frequently eagerness to try new experiences such as a new activity or sport. Growing into self describes an action of broadening and growth, wherein the identity as an exerciser increases as exercise becomes more and more intrinsic to their lives. This aspect of identifying as an exerciser with growing into self suggests a potential route for the development of an exercise self-schema (Kendzierski, 1988, 1990b). The construct of growing into self helps to explain, in part, the nature of the relationship between exercise and psychological health. That is, through the process of purposefully engaging in exercise and attaining acute benefits (and struggling against "negative" effects), a woman may eventually integrate exercise into her sense of self. As exercise becomes
intrinsic, women exercise more, and thus may experience greater well-being.

**Grounding self in exercise.** With regular exercise, and with the increased understanding of exercise and appreciation of self as exerciser gained through growing into self, exercise becomes a means of self-care and *getting in touch with* oneself. Grounding self in exercise connotes the experience of listening to one’s inner self--body/mind, and centering oneself in that somatic/mindful awareness. This construct describes both an action of grounding or centering self, and the consequence of finding self in the process, that is, experiencing the initially unexpected and elusive benefits (a feeling of synergy between body, mind, and soul; and states of being such as *freedom*). The majority of the women in this study described experiencing this synergy of self, or *zone*, as a rare, yet special occurrence. For the exerciser, grounding self in exercise can become a means of self-management or self-care, in which one’s self is felt as whole. Grounding self in exercise is both an action and a consequence of experiencing self as shaped.

Grounding self relates to the concept of *flow* in exercise and sport (Jackson & Csikszentmihalyi, 1999). The flow state has been described as an optimal psychological experience that typically occurs when a person perceives a balance between the challenges associated with a situation (e.g., exercise task) and his or her capabilities to meet those demands (Csikszentmihalyi, 1990). It is a complex experience that is performed for its own sake, and is beyond the individual’s usual subjective experiences (Csikszentmihalyi, 1990; Jackson & Csikszentmihalyi; Kimiecik & Stein, 1992). Grounding self was described as a continuum, from feeling *centred and balanced* to experiencing a *synergy of self*. This may be qualitatively similar to the continuum of flow: Csikszentmihalyi (1992) stated that flow is a continuum of *microflow events* to the memorable *deep flow*, of which sports provides
opportunities of each. Moreover, the subjective experience of growing into self is consistent with the conditions suggested to increase the possibility of achieving flow—an intrinsically rewarding experience, a challenge-skill balance, merging of action and awareness, clear goals and unambiguous feedback, concentration or focus on the task, sense of control, loss of self-consciousness, and time transformation (Csikszentmihalyi, 1990; Jackson & Csikszentmihalyi; Jackson, Kimiecik, Ford, & Marsh, 1998). Further, the focus on the positive subjective state of grounding self in exercise contributes to the literature, as little attention has been given to the positive subjective experiences of exercisers (Jackson, 1992).

Expressing self through exercise. For the exercisers, exercise had shifted from being an extrinsic activity that they participated in, to being an intrinsic part of their life and an expression of themselves. The construct of expressing self through exercise denotes the externalization of the internal process of experiencing self as shaped: expressing emotion through exercise movements; regularly exercising for intrinsic reasons; integrating exercise into one’s life; and accessing new life experiences through exercise, sport, and fitness. Thus, living an active lifestyle with regular participation in exercise reinforces one’s identity as an exerciser. For a woman who has not been active throughout her life, to express self through exercise signifies the challenges she had to overcome in changing her lifestyle, and her motivation to do so.

The construct of expressing self through exercise is consistent with Fahlberg’s (1990) finding of a similar theme: "creative expression of the self." Fahlberg associated intrinsic meaning of a behaviour (exercise) to the existentialist notion of authenticity, and stated that "exercise, as an authentic behavior, is an expression of one’s being rather than a result of social conditioning or compliance" (Fahlberg et al., 1992, p. 180). The theoretical model of shaping self through exercise complements and extends this research because expressing self
through exercise is further described, placed in context, and is a part of the process of shaping self.

**Summary.** The theoretical model demonstrates that through growing into self and being able to ground self in exercise, reasons for exercising become more intrinsic in the lives of exercisers. Women become more committed to exercise as an expression of self-acceptance and as a means of self-care. Moreover, intrinsic and personal motives or reasons for exercising become more important than the extrinsic motives to exercise.

Recent research demonstrates that personally significant goals are not simply thoughts, statements, or abstract ideals, but take the form of envisioning possible versions of self that are composed of cognitive, emotional, and experiential factors (Brower & Nurius, 1993; Cantor, Markus, Niedenthal, & Nurius, 1986). These possible selves may be positive (I am strong and healthy) or negative (I fear losing mobility), and motivate us to emulate the positive images, or avoid the negative ones. In support of prior theory (Cantor et al.) and research (Kendzierski, 1988) on the links between self-schema and action, the present study indicates that there is an interaction between exercise behaviours and the strengthening of the women’s identities as exercisers, with exercise becoming more integral to their lives. Exercise had been incorporated into these women’s lifestyle, and was seen by them as an enhancement to their lives and way of living.

Initially, exercisers may hold personal goals that are not clearly formed or are unrealistic (e.g., desire to be very thin), largely emotional or symbolic (if I become thin my life will be better), or may be clearly motivated but lack information on how to proceed. Until a woman experiences possibilities for personal growth and change, this may not be a concern, thus her goals may be limiting her potential. She may be acting the best that she can, regardless of whether exercise is healthy for her or not (i.e., diverting from self). Further, exercisers may
hold diverse goals that may or may not be in conflict (Brower & Nurius, 1993). For example, one set of goals may be related to achievement and advancement (indicating training and competing), whereas other goals may be related to acceptance and affiliation (from others, from self). Moreover, goals held in different areas of life may compete with exercise goals as women strive for a balanced life (Brower & Nurius). However, as a woman experiences growing into self, self-valuing is enhanced, and her goals are readjusted to become more attainable and in line with her current life context and her personal strengths and limitations (e.g., toning muscles rather than changing body shape, running in the morning before work while her partner stays with the children).

This change of goals with experiencing growing into self, may be similar to the notion of being aware of one's present self and the development of a future or possible self (Brower & Nurius, 1993; Cantor et al., 1986; Markus & Nurius, 1986). With self-knowledge and acceptance—and in response to personal experiences, desires, and environmental influences—there may be a readjustment in the envisioned possible self. For example, the process may appear as follows: The majority of the exercisers in this study realized that maintaining purposeful exercise was a continuously difficult task and that their "hoped-for" quick results (e.g., weight loss, increase in fitness) were not happening fast enough. However, they still were satisfied with other benefits of exercising (e.g., decreased tension, joy of movement, knowing they were caring for themselves). In becoming aware of and learning to appreciate these benefits, they felt better about themselves and made a commitment to continue regularly exercising. With time and further experiences (accomplishments, challenges) through which they learned about themselves as exercisers and exercise, they readjusted their goals to be more intrinsic. Furthermore, as exercise became inherent to their lives, the women could not imagine not exercising. As theorized by Cantor et al., self-knowledge is
shown in the present study to regulate ongoing exercise behaviour. Through growing into self, self-knowledge is constructed from previous experiences of exercise (including shaping up), and guides future goals and behaviours. Thus, a dynamic process towards growth ensues that is based on experiences and self-knowledge. Possible selves and goals to be attained through exercise are continually created, modified, and leading to action (Brower & Nurius)—exercise is reinforced as valuable and intrinsic to self.

Limitations and Strengths of the Study

Although theory generated on women's experiences of shaping self through exercise should apply to other women within a similar context, it may not be representative of all women's experiences. Instead, the theory tends to offer a "look at slices of social [and psychological] life" (Charmaz, 2000, p. 522). Working within the grounded theory method, I specified the context and conditions of the substantive theory presented. Thus, both the research methods and my involvement as the researcher create limitations and strengths.

Sampling

This study has limitations in relation to the sample that affects the transferability of the theory. The sample size did not allow for all possible variations that could occur, and that if accounted for, may modify the originally generated theory (Strauss & Corbin, 1990). Further, in grounded theory method the researcher samples for the phenomenon from various sources that may increase the opportunity to build variation among categories and densify concepts. Although an effort was made to broaden the theoretical categories and concepts by sampling participants who heard about the study through various sources (posted notices at gyms and community centres, word of mouth from other study participants or colleagues, and those who were sought out for theoretical sampling purposes), the sample may not
represent women of more varying personal and social-cultural characteristics (e.g., women of minority cultures, lower social-economic status, with lower levels of education, more varied sexual-orientation, and facing greater physical challenges), and women older than 60 and younger than 20 were not interviewed. Moreover, the women who agreed to participate were comfortable discussing their experience with a stranger and able to articulate their thoughts, beliefs, and feelings about the phenomena of interest. In fact, these women were insightful and articulate about the phenomenon under discussion. Further, the majority of these women volunteered for both personal (e.g., they loved exercise and had not had an opportunity to discuss it previously) and altruistic motives (e.g., sharing their experience for my benefit as researcher; for the benefit of other women because they thought their experience to be unique; or that they had learned something they wanted to pass on). Throughout data gathering and analysis, I attempted to select data sources that represented attributes to challenge and confirm working categories and provisional hypotheses. Thus, the concept of "shaping self" may be applicable to any woman who exercises, but the actual experience may vary among women of different backgrounds, physical abilities, sexual orientation, and ethnic and cultural norms.

All of the women in this study were living in an urban, West-coast setting at the time of their interview. This region is noted for its high population of exercisers compared to the rest of Canada. Several women commented on the prevalence of exercisers, the acceptability and expectation for living an active lifestyle in this location as compared to other places in which they have lived, the ease of access to beautiful outdoor locations in which to exercise--both in and out of the city--and the temperate weather that facilitates a variety of activities throughout the year. Given this, the experience of exercise (particularly the personal and external obstacles encountered) may vary in locations that are more rural, have a harsher
climate, provide less opportunity and access to a variety of activities, and where exercising is more of a rarity.

With the exception of the nonexerciser whom I purposefully sought out, the delimitation of seeking women who identified themselves as exercisers would have excluded those who exercise--either purposefully or incidentally--but who do not perceive themselves to be exercisers. Therefore, this delimitation may have contributed to a gap in the detail and depth of information gathered, limiting theory development. Further, variables that may have influenced women in their self-definitions as exercisers may not have been accurately reported, as people are not always aware of influential factors (Nisbett & Wilson, 1977). However, by sampling self-defined exercisers the findings broaden the meanings of exercise and exerciser from previous researcher-imposed definitions.

Data Collection

Study findings depend, to some extent, on the method of data collection. Interviews were the primary source of gathering data in this study. Although casual observation and conversations with other exercisers--some of which took place in the field (i.e., while exercising)--offered supportive information, rigorous field study data were not collected. Furthermore, I did not typically return to participants for further interviews, returning to only one woman for clarification and feedback through her preferred means of electronic mail.

Another aspect of the interviews was the reliance on retrospective data. However, the focus concerned women's experience of exercise over time as opposed to their experience during an acute bout of exercise. It is likely that how a woman perceived or made sense out of her past experiences contributed to her present experiences. Moreover, the retrospective nature of the data allowed for the investigation of experiences that remained salient to these
women. Further, some participants had exercised immediately prior to the interview, and other contributing conversations were held during exercise, which aided descriptions of women's experiences. It is also of note that many women found the interviews unique, and until the interview, had not spoken of their exercise experiences to such an extent. It may be that these women constructed their perceptions of these experiences during the interview. Nonetheless, contemplative thought, self-corrections, and additions during the interviews, as well as detailed descriptions of experiences suggest that questions were answered honestly and thoroughly. Furthermore, six exercisers, three who had participated in the study (one who worked as a personal trainer and thus could comment as a professional) and three who had not, were consulted on the trustworthiness of the generated theory, and all concurred that the model resonated with their experiences.

Researcher Bias

As with any study, the data collection and analysis may be compromised by the researcher's biases. With the theoretical foundation of grounded theory method in symbolic interactionism, the interview process is recognized for its interactive nature. Charmaz (2000) has argued that "data are reconstructions of experience; they are not the original experience itself" (p. 514). This statement not only refers to the participants' reconstruction of their experience, but of the co-construction between the participant and the researcher in the interview (i.e., social construction of data), and the researcher's interpretations of data throughout analysis. Thus, I sought to understand both the participant's portrayals of their experiences of exercise, and my own; keeping in mind that the aim of the interviews was to help clarify a more or less informed construction of women's exercise experience. Reflexivity or self-reflection in the form of (a) observing the nature of the relationships developed in the interviews, and (b) examining my effect as a researcher on the research
process through memoing and discussion with the analytic group (of own experience, and of what I attributed to participants), were important aspects of the method.

The rapport built between myself and the participants may have influenced the type of information that was revealed or concealed. As a member of the group I was studying (a woman who identifies as an exerciser), but not taking a participant-observer role, "gender centricity" is an issue (i.e., whether I was able to "step beyond" my experience in order to hear the experiences of participants). Seeing this similarity may have given participants the perception that I would implicitly understand their experiences, and thus limit their explanations. However, being a fellow exerciser, and a woman, aided the building of rapport and the depth of information that I received (e.g., frank discussions of eating behaviours, body image, vanity, sexual benefits of exercise). Furthermore, during the interviews, participants learned that I was trying not to make assumptions of their experiences by my questions (e.g., when a woman stated that exercise relieved stress, I asked what "stress" was, or looked like on her).

Although questions were open-ended, it is possible that not all aspects of women's experience of exercise are included in the resultant theory. The initial questions asked, questions that were not asked, and clarification sought of participants' statements during the interview may have narrowed responses. Use of initial questions is debated in the grounded theory literature. Glaser (1978) argued that initial questions force data by influencing what a participant will say. However, others suggest that these questions initiate data collection by asking questions that are believed pertinent to the phenomenon of interest (Strauß & Corbin, 1998). As well, the act of "not asking" may have hindered women in bringing up other topics for discussion, if they believed that I thought them irrelevant or that I was uncomfortable with them. For example, as no explicit attempt was made to ask about
exercise in relation to sexual identity until I theoretically sampled for it, some women may not have disclosed their sexual orientation with me for this reason. However, at the end of each interview I did ask if there were any questions that the participant thought I should have asked, or might have asked, but did not. With the exception of one participant, all stated that they felt the interview had been thorough. The one participant who was the exception had thought I might have asked her weight, and then stated she would not have told me even if I had. According to her, although her weight was relevant to her experience, the actual number was not.

I tempered the concern that I was relying on myself as the source of inquiry by initially using a semi-structured interview as a guide. Nonetheless, due to the individuality of each interaction, lines of questioning in the interviews varied between participants, and is an essential component of theoretical sampling. Further, potential biases in interpreting data were held suspect until further evidence was found to support or reject them. Interpretations were also shared in consultation with the analytic group. Through the process of joint open coding on segments of transcribed text, ongoing review, questioning, and discussion of the development of codes, categories, analytic memos, and hypothesized interactions, the analytic group provided feedback on the quality and accuracy of my interpretations in relation to the data. Furthermore, working hypotheses were shared with later participants as a stimulus to extend their own exploration, and whose own experiences helped to further clarify the developing theory. As the theory evolved during analysis, participants were asked increasingly refined questions to test hunches and check whether the theory being generated was a valid representation of their experience. Their reactions, feedback, and elaborations ensured that the theory was representative of, and grounded in, their experience.
Findings

Finally, the experience of exercise (including use of exercise, benefits experienced, and meanings of exercise) that was expressed by participants reflects North American and Western social-cultural biases, popular views, and possibly reflects exercise myths. Moreover, some women in this study commented on the possibility of their experience differing from others with less economic or social support. Thus, their views may represent values of their own past or present social and economic class. It is impossible to separate these women’s experiences from the values of the social-cultural context within which they have taken place. Even the theoretical notion of "shaping the self"--perhaps similar to the ideas of discovering, actualizing, or transforming an independent construal of self--is a distinctively Western and modern concept (Baumeister, 1992; Kitayama, 1992). However, I have included the social-cultural environment and life context in the theoretical model to the extent that they were experienced by the women in this study.

Implications for Research

Although the development of the theoretical model of the social-psychological process of exercise for women represents an important contribution, further research is needed to refine theoretical boundaries, explore specifics of the theory further, and lead to the development of further theory. Theoretical boundaries may be refined by increasing variation in both the participants and the sources of data. As it is difficult to separate these women’s experiences from the environment within which their exercise has taken place, it may prove useful to reflect on the potential impact of changing environments on exercise experience. For example, researching women’s experience of having been exercisers in a Western, North American culture, and then having moved to a quite different culture (or vice versa).
Further, comparisons with women from other regions of the country, and from rural areas, would contribute to our knowledge of how geography, climate, and social environment may affect women's use and experience of exercise. The experience of women who have been marginalized in the extant literature (including women of colour, lesbians, women with disabilities) may further add to and refine the theoretical limits.

Varying sources of data may prove fruitful, as data in the present study had largely been gathered from personal interviews, conversations, and casual observations. More detailed or rigorous field study data (e.g., spending more formal research time in the field to speak with or observe exercisers while they exercise, or providing exercise journals for participants to record their experiences over time) would provide rich sources of information, and the opportunity for triangulation of data. Finally, it may prove useful to compare experiences of exercisers to nonexercisers in greater detail, or experiences of women to those of men. Because an initial exploration of the experiences of women exercisers has been enacted in this study, recognizing shared experiences and differences among other groups (e.g., nonexercisers, men exercisers) in further studies is possible (Wheaton & Tomlinson, 1998).

The process of personal change in self through exercise is an area requiring further research. In particular, greater attention is needed to further explore the constructs and interactions of exercise experience identified in this theory. For example, the basic social-psychological process proves interesting as a potential mediator of the reciprocal interactions between people and their environment (i.e., the extent to which people shape their environments, and environments shape people). Moreover, constructs in this theory such as "growing into self" may provide an interesting focus for future research. If growing into self aids exercise in becoming intrinsic, it behooves researchers to explore its dimensions and how it might be facilitated in order to contribute to our understanding of this complex
behaviour, as well as making suggestions for exercise adherence or therapeutic intervention.

The present study highlights the intrapersonal process (and it being affected by social context) more than the social process. Further research is necessary to extend theory to the interpersonal, and address the social process of women's exercising. Field work may prove appropriate to investigate more fully the social environment and women exercising within it (e.g., gym culture, outdoor individual/team sports, media).

Finally, this theory focuses on the process of shaping self through exercise; this leads to asking the questions, What other substantive areas may provide a similar experience of "shaping self?" Through what other activities may women experience themselves as shaped? Initial research may begin by exploring other behaviours that are personally valued and provide a sense of self-growth and creative expression (e.g., expressive arts, such as music and dance; craft work and hobbies, such as woodworking or auto restoration; and work). Further, this research may prove valuable for clinical intervention: for example, in guiding exercisers towards other means of self-expression and self-growth when exercise becomes contraindicated (e.g., due to injury, illness). Through exploring the process of shaping self in other substantive areas, the development of grand theory may be possible.

Implications for Practice

In terms of counselling practice and intervention, exercise may prove useful for women who seek personal change in the form of self-growth, self-care, and self-expression. Knowing that women experience a fluctuating and complex experience of exercise, create meanings of this experience for themselves, and use it as "self-help" for personal benefits, provides a basis for intervention. Further, understanding what it is that allows women to perceive themselves as regular exercisers and how women use exercise and incorporate
regular use of it into their on-going lives has implications for how exercise may best be used for therapeutic benefit. Knowing that maintaining exercise is difficult for the majority of women, but is eased once it is experienced as intrinsic, may provide encouragement for women to continue to exercise and meet challenges. With this knowledge, a health practitioner may then be in a better position to help a client understand the phases of shaping up and experiencing self as shaped to incorporate exercise into her lifestyle. For example, the practitioner may be able to reinforce an exerciser’s healthy self-talk, setting of realistic goals and expectations, and becoming aware of and appreciating the small changes and the experience of being active earlier on. As well, the model may be found useful as a guide for a woman contemplating exercising—she could then expect certain struggles and benefits, and may thus be more likely to stick through the hard times, or resume exercise after an interference in her life context. If women are made aware of the unexpected benefits and the process needed to attain them, they may be more inclined to persevere until the benefits are reached. The theoretical model may provide a greater understanding for how and why women make the choices they do in regards to exercise, and thus more adequately meet the needs of women.

The theoretical model has important implications for well-being, personal growth, and taking care of self (including physical health and emotional distress). Further, it may provide a means to know and appreciate self, a way to feel strong physically and emotionally, and a resource to centre and ground oneself and to express self and guide lifestyle. However, the woman’s social-cultural environment (e.g., the messages that she hears and believes), historical exercise experiences (including the appraisal of these experiences as good or bad, important or unimportant, or ambivalent), and current life context (e.g., competing roles and responsibilities, social-economic status, social support) need to be taken into consideration
and explored as potential hindrances and aids to exercise. Until we address these influences on exercise, exercise may remain a difficult behaviour to maintain. Helping clients to understand that the process of shaping self through exercise is a way of life, and to help them pursue exercise for its own sake as opposed to gains to be made, the physical and psychological benefits may occur as a by-product.

Some cautions are indicated by the present study. Findings indicate that simplistic conceptualizations of (a) exercise, (b) initiation and maintenance of exercise behaviours, (c) the status of exercise as a panacea for many physical and emotional ailments, and (d) the societal messages for individuals to exercise; differ from women's own conceptualizations, and may hinder their self-growth and self-expression. Given individual variations, such as exercise history and life context, reasons and affect influencing behaviour, and personal challenges and goals, it may be presumptuous for health practitioners and educators to assume how a client will go through the process of exercise. As women define exercise and what is healthy (e.g., behaviour, thoughts) differently, and at different times during their lives, attention to individual meanings is indicated when exercise is prescribed or suggested. Further, if health practitioners and educators force their valuing of exercise on their clients, they may either provide aid (i.e., model, guidance) or be a hindrance (i.e., another source of oppression and obligation) to their client's exercise experience. As women already experience the impact of media messages that often encourage a sense of guilt (i.e., I should exercise), steps should be taken to eliminate moral overtones in education or therapeutic prescription of exercise: This would help to limit basing self-acceptance on whether or not one exercises (cf. Fahlberg, 1990). Although the model may help to guide an exerciser through the process, her individual journey needs to be respected.
Concluding Remarks

The contribution of this study is the development of a substantive theory of the experience of regular physical exercise by women who consider themselves exercisers. The theory explains the social-psychological process of "shaping self through exercise," wherein exercise is identified as a complex process of change and self-growth. Salient findings of this theory include: (a) exercisers actively engage in exercise and work towards personal change by their own choice and commitment to self-care; (b) exercise is shown to become intrinsic to the exerciser's sense of self and life, and this seems pivotal to experience exercise as self-directed, and to experience self as shaped; and (c) the social-cultural environment and the exerciser's personal history of exercise and current life context affect the intrapersonal process of change. By focusing on the experiences of women who perceive themselves as exercisers and who regularly exercise, further knowledge has been attained about exercise as a purposeful human endeavour: a social-psychological process towards self-growth, self-care, and self-expression. Staying close to these women's shared experiences revealed that the subjective experience of exercising is variant, involves intrapersonal and person-environment interactions that are constantly evolving and dynamic, may eventually be intrinsic to one's life and a form of self-expression and self-growth.

For some women, sport has become a means to realize their energy, creativity, and potential. . . . Through the bodily practice of sport some women have come to reclaim and re-experience their selves. (Theberge, 1991b, p. 129)
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Background of the Researcher

Strauss (1987) argued that "analysts bring experiences of various kinds" (p. 10) to their research, including their knowledge, thoughts, and personal experiences. He further stipulated that this "experiential data are essential data" (p. 11) and provide theoretical sensitivity, and a useful source of analytical ideas, elaboration, and verification. To this project I bring experiences that include being a student, a researcher, a counsellor, and an exerciser.

I began my research experience while an undergraduate student investigating the relationship between stress and personality in men. Intrigued with the research area of stress, I wondered about the relationship between the effects of physical fitness on stress, and about the experience of women. Therefore, for my Masters thesis, I conducted a quantitative study in the area of women, fitness, and heart rate recovery from stress (Flood, 1991; Jamieson, Flood, & LaVoie, 1994). Questions that arose for me from this research experience led to the development of the present study.

I have been a part-time counsellor and therapist for several years in the field of health psychology. Working with several community agencies, I have counselled adolescents and adults who have been diagnosed with illnesses (such as cancer, HIV, and AIDS), disability, chronic pain, depression, and anxiety. In this role as counsellor, I have also been a witness to my clients' experiences of exercise; from clients learning to exercise and making time for it in their lives out of necessity, desire, or both; to exercisers who have had to limit, or change the nature of, their exercise.
I have been physically active for the majority of my life (with periods of occasional inactivity), from active play as a child, to high school sports and a provincial team, to current participation in recreational sports and activities. I have mainly been inspired by those closest to me, the physical activity of my sisters, my friends, and a high school coach who emphasized having fun. I have used my exercise for work (teaching swimming and lifeguarding), for transportation (walking, cycling), for recreation, and for health and fitness. Although my exercise activities have always varied, the themes driving my participation have largely remained the same: feeling happy, fit, and in tune with myself, for the exhilaration of movement, enjoyment of nature, socializing or time alone, and occasionally for a challenge that pushes myself past physical and mental constraints.

My experiences do have a bearing on this study. I have no doubt that my clinical experience has influenced my interpersonal style of interviewing and making sense out of the experiences of others. Moreover, my research, clinical, and personal experiences have created personal biases that I had to rigorously challenge, while at the same time understanding that they have provided me with theoretical sensitivity with which to approach the data collection and analysis.
Appendix C

Initial Contact Study Summary

The purpose of this investigation is to build psychological theory of women’s experience of regular use of exercise, in order to gain a deeper understanding of the complexity of the activity. Women who identify themselves as exercisers, or as being regularly physically active will be interviewed. Topics addressed in the interview include, but are not limited to: thoughts on exercise in general and more personally, personal history of ongoing experience of exercise use, perceived psychological benefits and negative effects experienced from exercise, and possible influence of regular exercise on personal change over time. The outcome of this research has implications for the therapeutic use of exercise by women.
A. PURPOSE AND BACKGROUND

Karen Flood, PhD candidate, under the supervision of Dr. Bonita Long, PhD, is conducting a research study focusing on perceptions of the experience of regular physical activity of women, in partial fulfillment of requirements for the PhD degree. I am being asked to participate in this study.

B. PROCEDURES

If I agree to participate in the study, the following will occur:

1. I will be asked to participate in one interview lasting approximately 1½ hours. During the interview I will be asked questions about my experience and perceptions of physical exercise.

2. I understand that I may be contacted for further interviews (no more than four) to be conducted either in person or over the phone, to provide clarification of the earlier interview, or new insights into my experience of exercise. Further, I may be contacted to participate in a discussion group (lasting approximately 2 hours) to provide input into the research findings. The maximum amount of time that may be requested of me is 5 hours. I understand that I may decline to participate in these interviews at any time.

3. The interviews will be audiotape recorded. Interviews, phone conversations, and discussion groups will be done at my convenience by pre-arranged appointment at the University or at a field location more convenient for me.

C. RISKS/DISCOMFORTS

1. Certain interview topics may be distressing to recall or to answer. I am free to decline to respond to any question, and I may stop the interview at any time.

2. Confidentiality: Participation in research may involve a loss of privacy. However, procedures will be followed to protect the confidentiality of the information I give. Research study information will be coded and kept in a locked file at all times. Only the investigator and her supervisors will have access to the files and audiotapes. Transcriptions of the tapes,
without any identifying information, may be seen by both research assistants for analysis purposes, and by a supervised study group for the purpose of research training. Quotations from transcriptions may be used in reports and publications of this study. No individual identities will be used in any reports or publications that may result from this research. After the study has been completed, the audiotapes will be destroyed.

D. BENEFITS

There will be no direct benefit to me from participating in this study. However, I may find that the process of discussing my experience of exercise may be beneficial and interesting in and of itself. Further, the information that I provide may help other women, and counselling and health professionals, to understand with greater clarity how regular physical activity impacts women.

E. QUESTIONS

I have spoken with Karen Flood about this study and its procedures, and have had my questions answered. If I have further questions about the study, I may call her at [phone number]. Dr. Long may be reached at [phone number].

F. CONSENT:

I will be given a copy of this consent form to keep.

I consent to participate in this study. I understand that PARTICIPATION IN THIS RESEARCH IS VOLUNTARY. I am free to decline to be in this study, or to withdraw from it, at any point.
SEEKING VOLUNTEER PARTICIPANTS FOR RESEARCH ON
WOMEN AND EXERCISE

• Do you see yourself as an "exerciser"?
• Are you regularly physically active?
• Do you exercise for psychological benefit?

If so, researchers in psychology at the University of British Columbia would like to hear about your experience with exercising. We are conducting 1½ hour interviews with women to explore their experiences of participation in exercise over time.

• To participate, or to find out more about the study, please contact:

Karen Flood
Telephone: [phone number]

Dept. Counselling Psychology
2125 Main Mall, UBC
Vancouver, BC, V6T 1Z4
[Fax number]
Appendix F

Interview Schedule

The following topics are to be addressed, but not necessarily in this order or verbatim.

1. How did you find out about this study?

2. How did you know that you fit into the group of women with who I wanted to talk?
   • Do you see yourself as an exerciser?

3. Whether answer is yes or no, seek an explanation, with:
   What does that mean for you?

4. How has being an exerciser/fit/athlete/active (use participants’ words) informed your picture of yourself?

5. Would you tell me about your experience of exercise or physical activity (use participant’s words) and exercise behaviours?
   • Clarify definitions of various terms participant may use: physical activity, exercise, athletics, sport, training, play, recreation, exerciser, active person, athlete, jock, etc.

   Explore topics such as:
   a. Types of physical activity or exercise engaged in, when, where, etc.
   b. Length of time participant has been exercising regularly, and what this looks like.
   c. Reasons for exercising.
   • Has participant tried other methods or sought professional help for similar reasons, or to achieve similar benefits/results?
   d. What does exercise do, what does participant experience (i.e., do not ask what it means)
      • How does exercise make participant feel, think, behave?
      • What kind of impact does exercising have on participant (perceive, experience, about self as exerciser, body, mind, social, spiritual)?

   e.g., If it reduces stress, ask how does stress feel to participant, look on participant? How might exercise be reducing that stress?
e. Importance of exercise in participant’s life.

6. How do you fit exercise into your life?

**Explore**
- work, relationships, time
- motivation to exercise
- location while exercising
- exercise alone, or with others (strangers, friends, trainer)
- preparation for exercising
- other activities done for similar reasons
- hindrances, aids

7. I’m wondering if you could think about your experience of exercising over periods of your life, and if you would share that experience with me. For example,

a. Do you remember your experiences when you first started exercising, and could you tell me about that time for you? or, How did you begin to become physically active?

b. Have you encountered any difficulties initiating or staying physically active (involved with exercising)?

c. How were you able to remain physically active? What were your reasons for doing so? Do you (have you) receive(d) help in doing so?

d. What changes, if any, have you experienced over this time that you relate to your physical activity or exercising? or

Some women have told me that over a length of time, they have experienced certain changes (changes in self, foci of exercise), is this true for you? and

- Could you tell me about some of those changes that you have noticed? *(Possibly identify salient periods in their life, explore specifics.)*

  - as a child, in teens, as young adult, in mid-life, etc.
  - in school, separate from school
  - without versus with children
  - illness or injury
  - biological development, changes in body, e.g., menstruation, pregnancy, menopause

8. What have you heard as reasons for these changes occurring, or,

What is your theory or understanding of how these changes are occurring?

- What have you been told about exercise by others (physicians, media, others)? How does your experience relate to this?
What thoughts do you have about exercise?

9. Do you have anything to add? Are there any questions that you expected or can think of that I have not asked?

The following are examples of additional questions that arose during interviews:

1. What is the difference for you between physical activity and exercise?
2. Talk to me about that *movement* experience, of body through space.
3. Tell me more about *balance*.
4. What is the emotion of *struggle* (with what you hear about exercise and with what you want for yourself)?
5. Tell me more about *the need* to exercise, what that is, and what that feels like for you.
6. Some women have told me that exercise unites their mind and body and that they feel more whole, others have told me that exercise helps them to disassociate, or distance their mind from their body, can you tell me more about this experience of being separate/being whole while exercising?
7. Tell me more about that experience of "synchronicity."
8. Talk more about self-expression.
Appendix G

Interview Schedule for the Non-Exerciser

1. On my poster I asked for the participation of women who see themselves as *exercisers*, so based on that, I am curious as to why you would not participate.

2. I am curious about your initial reaction to me when I asked you if I could talk to you about *exercise*, and your response was "you are not going to try and convert me are you," could you tell me more about that . . .

3. How do you define exercise, physical activity, sport?

4. What are your thoughts on exercise?

5. What have you been told about exercise by others (physicians, media, friends, etc.)? How does your experience relate to this?

6. What are your reasons for not exercising (injury, illness, biology? -- explore childhood, adolescence, adulthood)?

7. Were you ever someone who exercised? Tell me about that . . .
   * or, Have you always been a nonexerciser?

8. How has exercise made you feel? What have you experienced about exercise? *Explore importance, or lack of importance of exercise.*

9. What do you do for your recreation/play?
   * Explore any physical activity done (e.g., for recreation, at work).

   e.g., You have told me that you walk everywhere, how do you see your walking? How is it that some women see their walking as exercise, and you do not? How does walking making you feel?

   * Other physical activities, e.g. swimming?

   * Reasons for being active?

10. Women have told me that we frequently receive the message to exercise not only for improving or maintaining our physical health, but also to help us feel good about ourselves (e.g., decrease stress and depression, etc.), how do you hear these messages? What do you do with these messages? What do you do to attain similar benefits?

   a. Have you ever felt a struggle between having knowledge that "exercise is good for me" and yet wanting to just either be able to exercise "because it feels good" or not exercise because you don’t want to? How has that been for you?
b. Some women have told me that they have strong "exercise shoulds" and have to force themselves to be physically active, whereas others have achieved a state where exercise becomes self-motivating and enjoyable. Do you ever feel these shoulds? What do you do with them? Have you gone beyond the shoulds in another direction?

11. Some women have felt that exercise either helps them to feel separate from their bodies, or more in tune and whole as a mind/body - have you had any of these experiences? when?

12. How has being a nonexerciser informed your picture of yourself, of your body?

13. One woman told me that along with exercise, she filled her life with other "sedentary activities," and then mused that the phrase sedentary activities seemed to be an oxymoron, what is your reaction to that?

14. If you could put yourself on a scale of exercise being intrinsic or essential to you feeling complete, to exercise being completely external, irrelevant, or outside of your being or your life, where would you be on that scale?
Appendix H

The Analytic Group

Through ongoing consultations with the analytic group, personal accountability and maintenance of the integrity of the analytic process and its resulting product were achieved. The analytic group consisted of a core group of five doctoral candidates familiar with the grounded theory method. It was headed by a knowledgeable methodologist who is an expert in the grounded theory method, and who has 25 years of personal experience in conducting, publishing, teaching, and reviewing grounded theory research. The student members brought their own research and experiences with the method to the meetings, and each member's work was intensely focused on in turn by the group. Thus, the analytic group was viewed as a source of fairly "objective" intellectual, practical, and emotional support in doing grounded theory research.

The group meetings were instrumental in exposing the analysis and writing of my research to the detailed scrutiny of others. This process was an important aspect of the research process as it (a) furthered my knowledge of the method and its technical features, (b) encouraged my analytic ability by enabling the testing of concepts and their relationships with colleagues in an ongoing collaborative, team-work setting, (c) guarded against my potential biases and selective inattention, (d) created opportunities for the development of new insights and enhanced theoretical sensitivity, (e) encouraged and maintained the integrity of the data, and (f) aided the verbalization and documentation of an audit trail--an outline of the research process, and the evolution of codes, categories, and theory development.

Working within the group (and with members on an individual basis when life circumstances dictated that the meetings end), helped the transformation from description of individual and
collective experiences of participants, to *analysis* and generating theory. The analytic group was found to decrease isolation with one's own data, cathartic for the analysis, and to be inspiring in furthering the research.