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UNDERSTANDING MEANING AND LIFE SATISFACTION IN RECREATIONAL FEMALE MARATHON RUNNERS

By

Angela M. Fifer

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ABSTRACT

UNDERSTANDING MEANING AND LIFE SATISFACTION IN RECREATIONAL FEMALE MARATHON RUNNERS

By

Angela Marie Fifer

The marathon race has recently become a worldwide phenomenon for recreational exercisers of all ages, running pace, and body types. Participation of recreational runners in marathons has dramatically increased over the last 20 years (Trappe, 2007). Females in particular have made an impact on the marathon by increased participation and dramatic improvements in finishing time (Burfoot, 2007). Little research has been completed on the specific motivational factors of life meaning and fulfillment. The purpose of the present study was to understand how marathon running provides personal meaning and life satisfaction to recreational female runners. Furthermore, understanding reasons why runners participate in marathons despite knowing the physical pain and psychological anguish associated with running long distances were explored.

Phase one of the study included the collection of demographic, running history, and Motivation Orientations of Marathoners Survey (MOMS; Masters et al., 1993) data for 137 male and female runners. Descriptive statistics were calculated for all measures. Of particular importance to the current study was the life meaning subscale, which had a minimum score of 7.00, a maximum of 45.00, and a mean of 22.94 (SD = 10.58). Males and females did not differ on mean scores for the life meaning subscale (p = .223).

Phase two of the current research entailed in-depth interviews of 12 female recreational marathon runners, who scored high on the life meaning subscale of the

MOMS during phase one. An inductive content analysis of the interviews yielded 1,235 meaning units, which collapsed into 112 lower-order themes, 23 higher-order themes, and four global themes. The global themes included motives to run, barriers that threaten motivation to run, strategies to maintain motivation in running, and life meaning gained through running.

While the present study provides further evidence of previously identified motives to run marathons, new insights on how running provides life meaning and life satisfaction to participants was also discovered. Characteristics providing meaning included discovering one's capability of running, developing a mastery-oriented approach, finding inspiration, creating a sense of self, experiencing positive feelings through running, and forming a relationship with running. Participants had to find meaning in marathon running, but once they did running became an important piece of who they are. With persistence, discipline, and commitment, running long distances can be an enjoyable experience throughout ones entire life.

DEDICATION

This dissertation is dedicated to all past, present, and future runners. May you always find your way back to the pavement.

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This dissertation would not have been possible without the help of my advisor and mentor Dr. Dan Gould. Thank you Dan for pushing me when I needed pushed and helping me to finish. Thank you to the rest of my committee members, Dr. Marty Ewing, Dr. Crystal Branta, and Dr. Marsha Carolan, for your support and feedback. There were many times I came to each of you needing academic or emotional support and each of you were always ready to give a needed hug.

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I would not be finishing my PhD without the support of my family. Mom and dad, you supported me through my entire academic career always encouraging me to follow my heart. Even though it took ten years, I did it and now I get to live my dream everyday. Thank you to Emily, Zachary, and Jonathan for being supportive siblings and understanding when I could not come home or had to do work instead of have fun.

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today and inspired my study. Thank you to Sarah Carson for being my checks and balances. I never knew coding could be so much fun. Beyond your academic support, your friendship was an integral piece to my happiness and success. Thank you to Sheila Kelly for being an understanding roommate through the good times and the challenges of comps, proposal, and job search. You have always been there for me when I needed a friend. And finally thank you to Eric Bean. Eric, you have been the most important person in my life for the past six years of graduate school. Together we are better students, researchers, consultants, and people. Thank you for sharing this journey with me. Someday we will both see all of our dreams come true.

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Chapter I

INTRODUCTION

For most of my life I have been driven for success. I was a high level gymnast, involved in research as an undergraduate student, and presently work with athletes as a sport psychology consultant helping them achieve performance excellence. While I have been involved in several high achievement domains, since the completion of my competitive gymnastic experience, I have not always felt fulfilled. Following my sport experience I became a recreational runner to stay in shape and be active. I began to really enjoy running and decided to run a marathon. By doing so I felt fulfilled again in a new way. I once again had something that I could put energy and effort into a physical task, with no limits on how far, how fast, and how often I could run. I could compete with myself to push those limits further and further. This experience has been so powerful for me I wanted to talk with other women who have become recreational runners to understand their experience and see if they felt the same way. As an academic and sport psychology scholar, my questions are broader than motivation to participate in marathon running. What really intrigues me is if and how running makes an individual feel whole or self-actualized. Therefore, the purpose of this study is not just utilitarian in nature, but to explore if and how running makes life more fulfilling, meaningful, and actualized.

During a critical time to promote physical activity in the United States, an interesting subgroup of exercisers exists. While many people struggle to complete the recommended amount, type, duration, and intensity of physical activity, marathon runners go above and beyond by exercising five to six days per week, for 40 minutes to over three hours in duration at a vigorous intensity. While some of these individuals are highly competitive athletes, others are training and exercising for their own reasons, at a recreational level.

Marathon runners are an interesting subgroup of recreational athletes because of the long months of training required and the grueling pain of the race itself. Marathon runners must train for months before each race, and such training requires complete adherence. Understanding the motivations and experiences of marathon runners, or

"super adherers", has potential to provide a greater understanding of exercise adherence for other individuals who struggle with exercise adherence (Masters, Ogles, & Jolton, 1993). Other exercisers could learn from the specific motives of marathoners that help them to continue running despite physical, emotional, and psychological roadblocks. Marathon runners are also a group of interest because of the importance placed on the race event itself. Completing a marathon for many is viewed as a life goal, consistent with earning a degree, having a child, or getting a job. Finally, the number of recreational participants has dramatically increased (Burfoot, 2007; Trappe, 2007), as median finishing times have also increased (Masters, Ogles, & Jolton, 1993).

Female runners are an even more fascinating subgroup, as they have only been officially running the marathon since 1980 and are just over 11 minutes off the men's record (www.marathonguide.com). The impact that female runners have had in the marathon event can be seen in women's only races, such as the San Francisco Nike Women's Marathon, the New York City MORE marathon for women over 40, and the large percentage of women participants in the 1998 San Diego Marathon (55%; Jenkins, 1998). A need exists within the literature to focus on female marathon runners, as the majority of previous research has either focused solely on males or a disproportionate number of males to females (Deaner, 2006; Masters & Ogles, 1998; Ogles & Masters, 2000; Pierce, McGowan, & Lyon, 1993).

Motivation is clearly important for anyone considering training for and completing a marathon. While the goal of most exercise programs is to adhere to the program, lose weight, and increase fitness, health, and wellness, marathon runners commit to a four-to-six month training program, building from low mileage up to 40-90

miles per week. Understanding the motives behind such extreme exercisers may offer important recommendations to help novice exercisers adhere to their program and also strive to reach their potential within that program. Sources of motivation specific to marathon runners have been identified and include health and weight control, goal achievement, affiliation, and psychological well-being (Masters et al., 1993). The Motivations of Marathoners Scale (MOMS; Masters et al., 1993) is based on those four broad motives for running and include nine subscales of life meaning, self-esteem, psychological coping, personal goal achievement, competition, recognition, affiliation, health orientation, and weight concern.

Masters and colleagues (1995) completed a study assessing the level of experience of marathon runners and motivation orientations. A sample of 472 marathon runners were divided into three groups based on level of experience including the rookie group (first marathon), mid-level (two-three marathons), and the veterans (three or more marathons) and completed the MOMS (Masters et al., 1993). Two factors emerged from a discriminant function analysis. Factor 1 (Marathon Identity) explained 65.8 percent of the variance and included competition, recognition, and health subscales. Function 2 (Internal Focus) explained 34.2 percent of the variance and included running and personal performance variables. The veteran group highly identified with the Marathon Identity factor, mid-level runners were most motivated to improve on their first marathon time and factored mostly into the Internal Focus factor, and the rookie group was more concerned with health and weight, self-esteem, and goal achievement variables, representative of the Internal Focus factor. The study did much to identify psychological

explanations of running and also showed that those motives were related to level of experience.

In a cluster analysis study using the MOMS scale, data from 1,519 male and female runners coalesced into five clusters of motivational profiles (Ogles & Masters, 2003). Each cluster was named based on the running characteristics represented. The first cluster was called running enthusiasts, who were characterized as older, completing more marathons, more likely to run another marathon, and were primarily female. Lifestyle managers were runners more likely to train alone at a slower pace, trained less miles, and were typically female. Personal goal achievers were typically younger males who trained more miles. Personal accomplishers were mostly males, and finally, competitive achievers were characterized as younger, faster, males, who train more, and often twice a day. Interestingly, for all clusters health and esteem motives were more important than social or competition motives.

Despite the increased number of female participants today and decreasing times of women racers, research has not focused on the experience of the marathon for women specifically. Some researchers included women or conducted gender analyses. Leedy (2000) found gender differences in motivation to be significantly different. Women had higher scores of commitment for both stress relief and training adherence than men. Ogles, Masters, and Scott (1995) also described gender differences in commitment to running, potentially resulting from pressure and time constraints women typically face if they have children and/or a career. Yates (1991) also identified women to be more committed to their running program, because of their competing roles in family, work, leisure time, and running. Women who lack commitment typically dropout of running

because they do not have the time to dedicate to training and racing, while fulfilling their other commitments. Because of small sample sizes of women in the studies that did include both genders, accurate comparisons between males and females were challenging to make. Future research needs to focus specifically on the women who participate in training and racing, while juggling other commitments to understand their motives and experiences.

While previous research has focused on general motivations for running marathons (Clough, Sheperd, & Maughan, 1989; Crandall, 1980), few studies have explored motivational differences between subgroups (i.e., age, gender). For instance, Johnsgård (1985a, 1985b) studied older adults' retrospective motives to run when they were younger, and Ogles and Masters (2000) investigated motives of older adult males. The current research will extend the literature by investigating the specific motives of women runners, because they are an understudied population of runners. The research is intended to help females gain a greater understanding of what running means to their identity and how they are motivated to continue running. Furthermore, the results may provide information for running groups, clubs, and coaches to help motivate runners through times of amotivation or fear of a new distance or offer helpful strategies to overcome barriers to running.

Thus, while initial research on marathon running has identified major motives for running and identified some interesting experience and gender differences, more research is needed to verify these initial results. A gap exists in the literature related to how running provides meaning and satisfaction to one's life. Finally, while personal meaning has been identified as one of a number of motives for running, it has not been explored in

depth about how meaning develops, relates to other motives, and potentially changes over time.

The purpose of the current research is to understand how marathon running provides personal meaning and life satisfaction to recreational female runners. Furthermore, the study is designed to assess why these runners participate in marathons despite knowing the physical pain and psychological anguish associated with running long distances? The present two-phase study aims at answering the following research questions:

(1) how does running create personal life meaning for recreational female runners?

(2) how do recreational female marathon runners find life satisfaction in running?

(3) what are the motivations behind why female recreational runners train and complete marathons and do they differ from their male counterparts?

(4) is part of the motivation for female recreational marathon runners to discover personal meaning and have greater satisfaction in their lives?

In reviewing the current and past literatures related to understanding the experience of female recreational marathon runners, the present review will focus on: (a) finding meaning through sport and physical activity, (b) increasing life fulfillment and satisfaction through sport and physical activity participation, (c), motivation specific to marathon runners, (d) and future research directions.

Chapter II

LITERATURE REVIEW

During a critical time to promote physical activity in the United States, an interesting subgroup of exercisers exists. While many people struggle to complete the recommended amount, type, duration, and intensity of physical activity, marathon runners go above and beyond by exercising five to six days per week, for 40 minutes to over three hours in duration at a vigorous intensity. While some of these individuals are highly competitive athletes, others are training and exercising for their own reasons, at a recreational level.

Marathon runners are an interesting subgroup of recreational athletes because of the long months of training required and the grueling pain of the race itself. Understanding the motivations and experiences of marathon runners has potential to provide a greater understanding of adherence for all exercisers. Specifically, marathon runners have not only determined how to continue an exercise program, but also how to increase their intensity and duration to extremely high levels. Such rigorous training is required in preparation for a marathon race, that these runners may provide a model for "super-adherence" (Masters, Ogles, & Jolton, 1993). Another reason the study of marathon runners is important is because participation in the race is often seen as an important life event, on par with completing a degree, having a child, or getting a job (Burfoot, 2007). Finally, since the beginning of the modern marathon in the Olympics in 1908, marathon participant numbers have dramatically increased (Burfoot, 2007; Trappe, 2007). The high number of total marathon entries across all races is not an increase in

elite, competitive racers, but rather a growing interest of recreational participants. Over the last 20 years, the median finishing time has increased by 50 minutes, further indicating the dramatic increase in recreational participants (Masters, Ogles, & Jolton, 1993).

The marathon race dates back to 490 B.C. when the Greek soldier Pheidippides ran from Marathon, Athens, Greece, to deliver the message of victory over the Persians (http://en.wikipedia.org/wiki/Marathon). The historical accuracy of the account may not be exact; however, from this story the modern marathon was born. During the first Olympic Games held in 1896 in Athens, Greece, the original distance and route ran by Pheidippides was completed for the marathon race. This course entailed a 24.85 mile (40,000 meters) run from the Marathon Bridge to Olympic stadium in Athens. The marathon at the 1908 Olympics in London, England was changed to 26.2 miles for the race to finish in front of the royal family's viewing box. The distance of 26.2 miles was then established as the official marathon distance and has been maintained ever since.

Women have not always been allowed to run the marathon race, as it was once believed that women could not physically complete the distance (Burfoot, 2007). The first recorded marathon run by a female dated back to the 1923 Comrades ultra marathon in South Africa. Frances Hayward ran the 90 kilometer (55.9 mile) uphill race in 11:35:00. Female distance running halted for many years until American women began forcing their way into races. Forty-three years later, in 1966, Roberta Gibb was the first woman to run the Boston marathon (Pate & O'Neill, 2007). Although her time was not official because she disguised herself as a man and jumped in the race from the bushes, she finished in 3:21:40. Katherine Switzer was the first woman to officially register, as K.

Switzer, the following year. Race officials tried to stop her from running once they realized she was a female, but she ran and finished in 4:20:00. By the late 1970s, females were regularly running the Boston marathon, during which Joan Benoit Samuelson won the race in 1979 and again in 1983. The first women's Olympic marathon was finally run in 1984, where Joan Benoit Samuelson of the United States won the gold medal in 2:24:52 (www.marathonguide.com). Paula Radcliffe of Great Britain currently holds the world record for the women's marathon with a time of 2:15: 25.

Women marathon runners have shown a remarkable and dramatic decrease in running times from the earliest official time of 4:20:00 in 1980 to 2:15:25 set in 2003 (www.marathonguide.com). Men have had a more consistent trend over the last 30 years with world record times ranging from 2:10:10 set by Bill Rogers from the U.S. in 1976 to 2:03:59 set by Haile Gebrselassie of Ethiopia in 2008. Statistically, the best male performances in the marathon have decreased approximately 2.5%, while the best female performances a dramatic 14.5% (Burfoot, 2007). The gender gap between the world's elite runners is now only 11 minutes and 26 seconds. The impact that female runners have had in the marathon event is not only impressive and noteworthy, but also invites researchers to question and understand the experience of marathon running for females.

Since the increase in popularity of the marathon race for recreational athletes, sport psychology researchers have investigated sources of motivation including health and weight control, goal achievement, affiliation, and psychological well-being (Masters, et al., 1993). However, there is a lack of research in understanding how becoming a marathon runner affects one's personal meaning and life fulfillment. The purpose of the current research is to understand how marathon running provides personal meaning and

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life satisfaction to recreational female runners. Furthermore, why do these runners participate in marathons despite knowing the physical pain and psychological anguish associated with running long distances? The present study aims at answering a number of questions. First, how does running create personal life meaning for recreational female runners? Second, how do recreational female marathon runners find life satisfaction in running? Third, what are the motivations behind why female recreational runners train and complete marathons? And, finally, is part of the motivation for female recreational marathon runners to discover personal meaning and have greater satisfaction in their lives? In reviewing the current and past literatures related to understanding the experience of female recreational marathon runners, the present review will focus on: (a) meaning through sport and physical activity, (b) life satisfaction and fulfillment through sport and physical activity and sport, (c) motivation of marathon runners, (d) summary and need for the present study.

Meaning Through Sport and Physical Activity

Pondering the concept of meaning provokes many existential questions such as "What is the meaning of life?" and "what does meaning actually mean?" Understanding meaning is a deeply personal and individualistic process that most people wish not to discuss. "A search for meaning in life involves an acceptance of the meaninglessness and meaningfulness of life and an obligation towards oneself to make amends for what is meaningless" (Ventegodt, Merrick, & Andersen, 2003, p. 1034). While it is important to understand the concept of meaning, the study of meaning is challenging because of the personal risk to one's self-worth in discovering the authenticity of the meaning in one's life. Furthermore, meaning is not a stable construct as meaning can be quickly lost.

Psychologists, philosophers, and psychiatrists have proposed various theories about the concept of life meaning. While many theories exist, two specific theories will be discussed with particular importance for the present research. One theorist, Snyder (1997), discussed meaning as it relates to one's perception of control. Human beings have a need to feel in control of both themselves and their environments. Life meaning then is found by effectively managing and controlling their lives in order to achieve their life goals. Viktor Frankl (1972, 1984) offered a different perspective on meaning based on his experience as a Nazi concentration camp survivor. Frankl's therapeutic doctrine of logotherapy is centered around finding meaning in life. Frankl argues that one of the most innate human motivations is to search and discover meaning in one's own life. Yet, human beings often express concern or even despair based on their perception of the worth of their lives, which Frankl denoted as an "existential distress". Furthermore, humans today experience an "existential vacuum" surrounding the perception that the universe lacks meaning. Logotherapy is the means to help individuals realize they are the only people responsible for controlling the meaning in their lives. Humans must search for meaning during all times in their lives, even through suffering. Frankl provided personal examples of finding meaning in human suffering while living in the Nazi concentration camps.

While many differing theories and definitions exist on meaning, the majority share two commonalities including the view that life meaning is a general assessment about one's own life and that individuals who find meaning in their lives typically suffer less from negative emotions and are at a lower risk of clinical health concerns (Feldman & Snyder, 2005; Yalom, 1980). Meaning in life then, was linked with psychological health

and increased quality of life (Debats, 1996; 1999, Zika & Chamberlain, 1992). Consequently, Battista and Almond (1973) identified four major issues regarding meaning such that (a) most people are committed to seeking some concept of the meaning of life in a positive manner, (b) the concept of meaning then frames the goals in which people view their lives, (c) their life becomes a mission to fulfilling the meaning they identified, and (d) people finally experience a sense of fulfillment and significance as they strive and find such meaning.

Another important concept related to meaning is hope. Snyder and colleagues (1991) defined hope as, "a cognitive set that is based on a reciprocally-derived sense of successful agency (goal-directed determination) and pathways (planning to meet goals)" (p. 571). Empirical evidence has suggested hope is related to academic and athletic success, improved mental and physical health, and more adaptive coping (Dufault & Martocchio, 1985; Lange, 1978; Snyder, 2002; Snyder, Feldman, Shorey, & Rand, 2002). There is an intuitive link between hope and meaning based on the goal-directed nature of both concepts. From an empirical standpoint, Feldman and Snyder (2005) found hope to be conceptualized as a factor in the broader concept of life meaning. Hope and meaning were further associated with depression and anxiety scales. In their study of 139 college students, it was found that individuals with low levels of hope and meaning were more likely to be depressed and anxious and individuals with high levels of hope and meaning were not related to depression, were less anxious, and placed a greater emphasis on achieving their goals.

Whether considering theoretical, empirical, or intuitive perspectives, meaning is a vitally important concept to human existence. Meaning can be found or enhanced by

various sources. Researchers (Feldman & Snyder, 2005; Debats, 1996) have found significant relationships to be consistently the most important source of meaning. Other sources such as health (physical and mental), self-actualization, achieving tangible goals, and talents provide sources of meaning. Also, experiencing quality of well-being, enjoying life, and being involved in leisure activities and sports offer many people sources of meaning in their lives.

Meaning is an important philosophical construct to understand as related to the specific domains of physical activity and sport participation. Goal-oriented movement in sport and physical activity provide sathletes with a subjective experience (Metheny, 1968; Slusher, 1967). Metheny (1968) described the process of finding meaning in movement as,

> No form is innately meaningful, in and of itself; neither is any conception of its organizational pattern innately meaningful. Rather, this conception becomes meaningful to us as we seize upon it, take it into ourselves, and become involved with it. This feeling of involvement is a symptom of what the idea *means* to us, or how we find it meaningful or significant (p. 5).

This quote describes how most movement in itself is not inherently meaningful, but rather the performer or the observer must associate personal meaning with such movement.

In Greek mythology, the story of Sisyphus was one of finding meaning in movement (Metheny, 1968). Sisyphus was a mortal man who upon discovering the meaning of life from the gods was condemned to an eternity of pushing a rock up a hill, only to have that rock roll back down to the bottom. In order to deal with his eternal punishment, each time Sisyphus pushed the rock up the hill he focused on a different

movement pattern. The meaning that Sisyphus found in pushing the rock made his punishment bearable and one could even contend he found happiness in his task.

Finding meaning in movement goes back to the beginning of mankind, humans formed patterns of movement that could be personally interpreted, yet independently the movements were virtually meaningless (Metheny, 1968). The meaning, then, is found in the connotations the movement may represent. Such movements started out as a means of communication and entertainment. Dance was utilized to please the gods, ask for rain, and celebrate good fortune.

Another form of movement created was in the form of a task that one would try to improve on with each attempt. For instance, one might pick up a stick and throw the stick as far as he can, trying each time to outperform the last. This task represented early forms of javelin throwing. As more people became interested in the task, the performers developed rules such as everyone must start at this line, the sticks must be similar in length and weight. Metheny (1968) discussed the early forms of sport to be experiences of self in a fully motivated, integrated, and functioning form of human experience. These experiences helped people to understand themselves, recreate themselves, and cope with their lives.

Sport has been a meaningful activity since the times of ancient Greece. Greek warriors would "stand naked before the gods" (Metheny, 1968, p. 65) and demonstrate their talents and abilities without excuses, or the protection of false pretenses. Three thousand years ago the Greek warriors participated in funeral games, which honored dead soldiers and reaffirmed new life (Caldcleugh, 1870). While the funeral games were violent and destructive, the warriors who participated wanted a fair chance to

demonstrate their competence and abilities (Metheny, 1968). A code of ethics for the games was developed that focused on honor, human dignity, and honesty. The funeral games eventually developed into the Olympic Games, which represented a celebration of global peace as all fighting between the Greek and Romans would cease for the duration of the games. The Olympic events were governed by a code of rules, of which penalties for breaking the rules within each sport were employed.

Exercise or recreational sport involvement also serves as a source of meaning for many people. The form of exercise itself can be described as an organization of movements, during which the performance of such movements will produce desirable physical and psychological effects (Metheny, 1968). While such desirable effects provide a motivation to participate, the movement pattern itself can be viewed by participants as boring, difficult, and exhausting. Furthermore, while exercise can produce a gratifying image of self-improvement, such improvement brings to the forefront the reality of how far one needs to improve to achieve their goals, thus invoking feelings of inadequacy. However, individuals who push through the monotony, pain, and fatigue of exercise may experience themselves at the utmost of their capabilities and potential. Based on this subjective and intrinsic experience, individuals also experience feelings of self-actualization (Maslow, 1965; Metheny, 1968). Finally, many exercise participants have an innate drive that compels them to try to outperform their last experience or perform better than their opponent (Metheny, 1968). This drive also keeps the participant motivated to participate in the exercise activity.

In regards to girls and women specifically, little has been written in terms of gender differences in finding meaning in sport. Yet, Metheny (1968) stated that both

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work and sport could be potential sources of meaning for women, the domains they invest themselves in reflect on their own definitions of the feminine image that fits within the social acceptance of feminine roles defined by society.

Maslow's (1968) concept of peak experience is one of particular interest regarding meaning. In terms of Maslow's (1968) hierarchy of needs, individuals reaching self-actualization typically have had a peak experience. Peak experience was defined as, "moments of highest happiness or fulfillment" (p. 45). The peak experience fits into Maslow's (1968) hierarchy of needs at the highest level of self-actualization. Characteristics of peak experience included a larger link with the universe as a whole, total attention to the task, perception of the world as independent from themselves and humans in general, supremely rich perception, relatively ego-transcending or egoless, intrinsic, self-validating, and self-justifying, disorientation of time and space. Furthermore, peak experiences are viewed as only good or desirable, evoke emotions of wonder, awe, and humility, where all dichotomies or conflicts are resolved. Finally, when peaking most people experience a momentary loss of fear, anxiety, and inhibition and instead have an openness to the experience. The person becomes completely him/herself, where he/she is free to experience with a lack of effort and doubt to ultimately enjoy something previously thought of as impossible. Moments of peak experience can be viewed as one's happiest, most thrilling, fulfilled, mature, and healthiest moments of his/her life.

Maslow's (1959) early arguments on peak experience indicated only people who have attained self-actualization have the capacity to achieve a peak experience. Later evidence, however, suggested that every human may be capable of attaining a peak

experience (Maslow, 1968; Wuthnow, 1978). Wuthnow (1978) conducted a large-scale study of 1,000 people who were asked if they ever had "contact with something holy or sacred", experienced "the beauty of nature in a deeply moving way", or had a feeling they were "in harmony with the universe" (p. 61). Wuthnow found only 12 percent who had not achieved a peak experience in one of the three aforementioned ways. Furthermore, based on a small subsample of interviewed participants, Wuthnow discovered peak experiences were obtained in extremely various and sometimes random manners. Some people were in the presence of great beauty (e.g., the Grand Canyon), while others were driving, alone in nature, or meditating. While most people are capable of having a peak experience, research has indicated that self-actualized people have the capacity for achieving more frequent and intense peak experiences (Maslow, 1968; Wuthnow, 1978).

Ravizza (1977) replicated Maslow's (1968) research on peak experience to characterize the subjective nature of the peak experience in sport. Ravizza (1977) interviewed 20 athletes from a variety of team and individual sports, across recreational, university, and Olympic levels, about their "greatest moment" in sport. Participants described their greatest moments to be unique, involuntary, short-lived, and one of total perfection. The athletes described themselves as feeling pleasant, estatic, totally immersed, and self-validated. While the majority of results paralleled Maslow's (1968) original research on peak experience, some differences regarding sport emerged. Athlete's reported total focus and a narrow attentional field. Furthermore, athlete's described a loss of consciousness of their thoughts, perceptions, and feelings, rather than the cognitive or reflective nature of peak experiences in other domains.

While peak experiences do not happen often for the majority of people and athletes, the state of flow can be achieved slightly more regularly. Flow can be defined as "a state of consciousness where one becomes totally absorbed in what one is doing, to the exclusion of all other thoughts and emotions" (Jackson & Csikszentmihalyi, 1999, p. 5). Flow states can be reached in a multitude of different domains including physical activity, sport, dance, music, or work to name a few. Various characteristics have been identified to be inherent to the flow experience. In terms of sport or physical activity specifically, flow states are typically characterized by a balance between challenge and skills, the merging of action and awareness, clear goals, unambiguous feedback, total concentration on the task, sense of control, loss of self-consciousness, transformation of time (faster or slower). Finally, most people who have experienced flow states described them as autotelic, or intrinsically motivating, where an enjoyment is experienced solely from the act of the task itself.

A plethora of research has been done on the topic of flow, with specific attention to athletes reaching states of flow (Jackson, 1992, 1995, 1996; Kimiecik & Stein, 1992; Moneta & Csikszentmihalyi, 1996). Furthermore, research has been done on investigating flow states in physical activity (Csikszentmihalyi & LeFevre, 1989; Jackson & Eklund, 2002; Jones, Hollenhorst, Perna, & Selin, 2000). In a study by Sparkes and Partington (2003), a narrative practice approach was utilized in a case study of a collegiate white water rapids team. The narrative practice approach highlighted what and how the participants experienced flow, in a personally meaningful manner. For example, one athlete identified her flow experience to be characterized by "paddling like a god" (p. 311). Another athlete discussed his focus during performance to be, "You just felt

extremely focused, just totally, with exactly what you're doing. You know exactly what you're doing and you can respond. I don't think I've ever raised myself up to that level of concentration before or since" (p. 310). Such method may be useful in exploring how sport and exercise experiences help individuals to find meaning in their lives.

In conclusion, meaning is an important concept to study in relation to an individual's participation in sport and exercise. Finding meaning can lead one to peak experiences and flow states. The domains of exercise and sport can provide a vehicle for many individuals to find meaning and further achieve heightened experiences. A lack of research in the area of meaning, coupled with the importance of understanding meaning, calls for future research to help athletes and exercisers in particular to find meaning in their participation. Furthermore, such research could also help individuals who struggle with adhering to an exercise program to find meaning in their participation.

Life Satisfaction and Fulfillment through Physical Activity and Sport

The concept of meaning is directly linked to life satisfaction. Researchers have found that those who find meaning in their lives experience a greater level of life satisfaction (Zika & Chamberlain, 1992). Life satisfaction, however, appears different from life meaning because one can be satisfied with negative aspects of his/her life and the lack of meaning. Instead of trying to change one's life and find meaning, the individual instead adapts to his/her environment and functions within the meaningless situation (Ventegodt et al., 2003). For example, a man could be completely miserable with his job but unwilling to change professions. Instead he adapts to the misery of his job and becomes content with the lack of meaning he is receiving. Most people are fairly satisfied with their lives. However, these individuals are usually less satisfied than their

actual state of well-being would suggest (Ventegodt et al., 2003). Being satisfied is the self-understanding that life is as it should be (Ventegodt et al., 2003). Such an understanding is both a mental state (i.e., happiness, positive outlook) and a cognitive entity (i.e., thinking that one is satisfied).

Looking more in depth at Maslow's hierarchy of needs, briefly mentioned in the previous section as related to peak experience, one of the highest levels of needs includes life satisfaction. Abraham Maslow (1959, 1968, 1971) attempted to explain human motivation in terms of what specifically energizes, directs, and sustains the efforts of human behavior. His conclusion was that all humans have various needs to be fulfilled, which once fulfilled the individual can advance to discovering higher levels of meaning in his/her life. The most basic human needs included physiological (hunger, thirst, comfort), safety and security (free of danger), a sense of belongingness and love (acceptance and affiliation), and self-esteem needs (competence). The next level of needs included both cognitive (knowing, understanding) and aesthetic (appreciation for beauty and symmetry) needs. The first two levels of needs must be met for a person to reach self-actualization or find self-fulfillment and reach their potential. Self-actualized people typically are problem-focused, have a genuine appreciation for life, are concerned about their personal growth, and have the ability to attain peak experiences. A final level of self-transcendence included the ability to move beyond one's ego and instead help others to discover self-actualization (Maslow, 1971).

Maslow (1965, 1968) described achieving self-actualization as an intrinsic learning process consisting of "little accessions accumulated one by one" (1965, p. 115). Growing toward self-actualization included characteristics of selflessness and total

absorption, making progression rather than regression choices, understanding the self as a being, choosing honesty, making better choices, daring to be oneself, the awareness of peak experiences, and opening oneself to be oneself. Self-actualization then is about pondering challenging questions about philosophy, religion, and the meaning of life. Self-actualization is the process of striving to be the absolute best one can be. Maslow (1968) argued that everyone has the capability of reaching self-actualization, but many people are not willing to make the choices needed to be actualized. Instead people choose to be selfish, make regression decisions, are dishonest, conform to others, lack awareness, and are not willing to understand their defenses.

The concept of self-actualization is one that directly relates to life satisfaction. Can a person be satisfied without achieving or striving for self-actualization? According to the definition of life satisfaction, people can be satisfied without reaching their potential if they do not wish to change their behaviors (Ventegodt et al., 2003). Many people are then satisfied with not reaching actualization then because they have given up on achieving more and become complacent with what they already have. While satisfaction does not necessarily advance one in the positive direction, for the related concept of quality of life, directionality is important.

Another construct impacting psychological health, well-being, and life satisfaction is the fulfillment of needs. Needs produce a psychological intensity that influence and direct a person's behaviors. Several need theories exist describing what needs are and how people strive to fulfill those needs impacts behaviors. Hull (1943) studied needs from a physiological approach identifying innate basic needs for food, water, and sex. When needs are unfulfilled, individuals shift into a drive state in search for the

satisfaction of such needs. Once the needs were met individuals become satisfied and healthy. Limitations of Hull's work included a lack of evidence of physiological needs being met in play or leisure activities. Another popular need theory is that of Murray (1938) who addressed the psychological needs rather than physiological needs. Rather than innately present, Murray perceives needs to be acquired,

> A need is a construct (a convenient fiction or hypothetical concept) that stands for a force (the physico-chemical nature of which is unknown) in the brain region, a force that organizes perception, apperception, intellection, conation, and action in such a way as to transform in a certain direction an existing, unsatisfying situation (p. 123-124).

According to Murray, anything that motivates action to occur, including psychologically, qualifies as a need. The striving to fulfill such needs does not necessarily produce homeostasis or health and satisfaction, rather social norms, power, and affiliation may be fulfilled. The theory is flawed, however, because the definition of needs is too broad indicating that nearly anything could be described as a need. Finally, self-determination theory (SDT) provides more recent focus on three basic psychological needs of competence, autonomy, and relatedness (Deci & Ryan, 1980, 1985, 1991, 2000). SDT will be discussed in depth during a later section.

Life satisfaction is an important concept to study because of the inexplicit link to self-worth. While people can be satisfied with the lack of meaning they have or falling short of their potential, most people strive to find fulfillment in their lives. Needs are an important part of becoming satisfied with life, during which physiological and psychological needs must be met. The following section will discuss motivation and several theories of motivation relevant to the present investigation.

Motivation of Marathon Runners

Motivation is an important concept in every domain, as most people are striving to achieve some goal. The goal may be to participate in some endeavor, to improve, or to become the best. In the specific domains of sport and exercise, the processes of striving for goals are clearly depicted through personal records, team championships, and improved health via weight loss and increased activity. While many exercisers strive to adhere to their exercise programs, marathon runners strive to push themselves harder, further, and faster with each training run. Understanding the motives behind such exercisers may offer important suggestions to help novice exercisers to not only adhere to a program but also learn to strive further within that program. Before investigating motivation in the specific subgroup of marathon runners, an understanding of what motivation is and key motivational theories will be presented; however, an in-depth review is beyond the scope of this study.

William James (1890) described human behavior to be comprised of conscious voluntary behaviors and unconscious, primitive, and habitual behaviors. Within James' theory, human action then is driven by a combination of those volatile and instinctual behaviors. For example, one may understand the physical and psychological benefits of exercise and want to start an exercise program, but may have unconscious insecurities and fears about not having the ability or capability to adhere to an exercise program. While the postulations of William James are dated, many theories of motivation today reflect some of James' original ideas. Over 30 theories of motivation exist today, and even more definitions of the concept have been forwarded (Ford, 1992).

Broadly defined, motivation can be described as the direction, intensity, and regulation of one's effort (Ford, 1992; Roberts, 2001; Sage, 1977). Furthermore, motivation theorists attempt to explain striving toward, avoiding, or lacking of achievement behavior. Achievement behavior can be described as the behavioral effort and intensity to push forward through challenging tasks (Murray, 1938). Furthermore, achievement motivation deals with the pride associated with participating in sport or exercise domains and achieving one's goals. Determinants of achievement behavior also exist and include dispositions of approach or avoidance, expectancies, values of success or failure, and cognitive appraisals of success and failure (Roberts, 1992, 2001). Thus, motivation describes an internal drive to participate in areas in which one could potentially experience success or failure. Such drive can be caused by either intrinsic (e.g., interest, passion for the activity, or feeling of fulfillment) or extrinsic factors (e.g., to win, attain a reward, or outperform others). Understanding the process of motivation includes the understanding that motivation qualities exist within a person, are directed toward future events, and have some degree of evaluation within the process. Furthermore, how these personal qualities combine with the environmental situations that an individual experiences are important. The interaction of such qualities then produces the drive to approach or avoid certain tasks.

Achievement motivation provides a sound rationale for the drive or motivation for individuals to participate in performance oriented activities where their success will be evaluated. Another way to examine the achievement motivation of long distance runners is Eccles' expectancy-value theory (Eccles et al., 1983). Previously, theorists have argued that choice, persistence, and performance can be explained by how much a person values

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that activity and their beliefs of success they will have in that activity (Atkinson, 1964). Furthermore, Vroom (1964) stated, in the original expectancy-value theory, that behavior is a function of people's beliefs that they can successfully perform the desired behavior, the perception that certain outcomes are contingent upon the successful performance of the behavior, and the judgment that the performance-contingent outcomes are valued. More specifically, whether someone behaves in an esteem-building way (performing well in an athletic, intellectual, or social situation) depends on individuals' expectations that they will perform the behavior, belief that behavior leads to certain outcomes, and value placed on that outcome (Brockner, Wiesenfeld, & Raskas, 1993). Eccles' and colleagues (1983) contend that there is a subjective task, values an individual assigns to that task in terms of attainment, intrinsic worth, and utility, and costs to seeking out such task. Running then could be a subjective task that runners themselves must put value into and decide if the value is worth the perceived costs of completing the activity. Therefore, it is critical to understand the value of running in a person's life and their perceptions of competence in their ability to successfully complete the distance they wish to achieve.

Self-determination theory contends that all humans are motivated to fulfill three basic needs: competence, autonomy, and relatedness. Thus, the desire to experience being good at something independently controls our efforts and the possibility of being accepted by others. In turn, fulfilling these needs manifest into three types of motivation. These include intrinsic, extrinsic, and amotivation. Deci (1971) described intrinsic motivation as feelings of satisfaction obtained from the act of participating in the behavior or in the behavior itself. An example of intrinsic motivation would be someone who runs for the sake of running. Extrinsic motivation, however, is one's striving to

participate or attain a goal contingent on a desired outcome. An extrinsic motivated runner may participate to win medals, receive race t-shirts, or improve his/her physical appearance. Furthermore, amotivation is the complete absence of motivation. An amotivated individual would not have any motivation to go for a run nor would the act of running motivate a person to continue running. SDT provides a need-based theoretical approach assessing motivation based on the fulfillment of basic needs whether the source is internal or external.

In summary, then, need achievement based theories explain why, at times, people both approach and avoid situations where their performance will be evaluated, hold certain expectancies for success, place differing values on the activity in which they are performing, and strive for the fulfillment of basic human needs. Whether one is motivated to achieve in a particular situation is dependent on the interaction of personal and situational factors. These include such factors as individual motives to approach success and avoid failure dispositions, expectancies for success and failure, task difficulty, value of the activity, and need fulfillment. Situational factors include the importance of a particular game, environmental barriers faced, and whether or not one is competing against themselves or others. Given almost 40 years of research on achievement motivation, it is clear that these variables play a role in sport participation and achievement striving. Hence, they should be involved in decisions to train and compete in the marathon by recreational runners.

In the field of Sport and Exercise Psychology the concept of motivation has been widely studied, as reflected by a Sport Discus literature search yielding over 4,000 books and articles on motivation and sport. Motivation has also been studied specific to distance

running and marathon runners to a wide degree. Over 70 books and articles have been written over the last 40 years on the specific group of marathon runners and their motives to complete the 26.2 mile distance. The following review will discuss motivations of runners in general and marathon runners in particular, mood in distance runners, coping strategies runners use, age, and gender.

Motivations of Marathon Runners

Research on the motives of marathon runners is relatively recent, dating back only to 1981. Given the relatively large amount of research on motivation of marathon runners, it is important and useful to briefly discuss the research on motives for running in general, regardless of the specific distance. Thus, before reviewing the literature specific to the motives of marathon runners, a few key studies on motives for runners will be discussed and summarized.

Early researchers in the area of motivation in running have discovered basic motives that help explain why people exercise in general, and more specifically why people run. Researchers identified physical and mental fitness, enjoyment, and self-respect as the primary motives for runners. More specifically, Camarack and Martens (1979) were two of the first researchers to explore motives for running. Investigators designed a survey that assessed reasons for running, outcomes of running, commitment to running, and training practices. It was found that while runners understand the health benefits of running, their primary motives focused on psychological reasons for running such as mental fitness, enjoyment, and self-respect. In another study, Johnsgärd (1985a) collected data on 574 male and 149 female readers of a popular running magazine.

Readers were asked why they became runners and why they continue to run. Participants identified physical fitness and weight control to be their primary motives.

Three primary factors have been identified by multiple researchers to be motives to run marathons including goal attainment, involvement with others, and psychological well-being (Curtis & McTeer, 1981; Summers, Sargent, Levey, & Murry, 1982). The first researchers to study motivation in marathon runners were Curtis and McTeer (1981), who asked 740 marathon runners why they chose to complete the marathon rather than other shorter races. Runners identified three primary reasons including goal attainment (77%), influence of others (20%), and psychological well-being (19%). While the runners all were aware of the health benefits of running, such reasons including fitness and weight loss were not listed as motivating factors. This outcome makes some sense given the general running research findings that more experienced runners shift from physical to psychological motives with experience and one would expect most people who run marathons to have already become committed to running in some form. Moreover, this inaugural study on the motives for marathon runners provided valuable information to beginning to understand the population of marathon runners.

Another early group of researchers to study marathon runners was Summers and colleagues (1982). They were interested in motivational changes experienced by first time marathoners. Three hundred sixty-three marathon runners completed open-ended questions assessing training, attitudes about running, motives to participate in a second marathon, and cognitive strategies utilized when running. While all runners identified a variety of reasons for their initial interest in completing a marathon (i.e., exercise and fitness, achieve a personal goal), all of the first time runners who identified wanting to

complete a second marathon race were interested in running a faster time. Furthermore, most runners were interested in goal achievement and testing their personal worth first, and then mentioned health and others' influence. While interesting, the study results must be viewed with some caution because their measures were not formally validated. Furthermore, understanding why runners continue their participation was only briefly mentioned.

A second study of motivation in marathon runners was conducted by Barrell and colleagues (1989). Qualitative in-depth interviews were completed with 24 marathon runners on the topic of how they became committed to marathon running. The research team found marathon running to be a long-term process that included periods of challenges with little emphasis on results, as many of their initial motives to participate included becoming healthy, improving their fitness, and losing weight. However, through this process runners also gained a sense of freedom from running, enjoyed the challenge, experienced race success, and attained a state of relaxation, in addition to the health benefits. Furthermore, 17 of the participants' spouses were also interviewed. The spouses reflected on the total family commitment marathon running becomes and how they became a source of social support for their running partner.

As researchers learned more about the motives specific to marathon runners, they discovered that motives to run evolve over time. In a follow-up study by Johnsgärd (1985b), runners over the age of 50 were recruited and asked the same two questions. While fitness was again the number one reason for running, a shift in motivation occurred. Runners started running primarily for fitness and weight control reasons and as they continued their involvement shifted to more psychological explanations for their

continuation of running Furthermore, in a study conducted by Okwumabua and colleagues (1987), masters runners (age 40 and up) completed questionnaires assessing the psychological aspects of running. The results provided further support for a shift in motives from physiological-based motives when individuals began to psychological motives. For example, psychological goals included developing cognitive strategies such as focusing on aspects of running at the beginning of the race, but allowing themselves to get distracted during the race. While the early studies on runners were important to the literature as they provided basic information about motives for running and documented a shift in motives over the length of running involvement, none of the studies targeted marathon runners per se. The studies also did not use validated and reliable measures or have large sample sizes.

Measurement of motives for marathon runners was also a point of interest to multiple researchers (Masters & Lambert, 1989; Masters, Ogles, & Jolton, 1993). In an attempt to develop a measurement tool specific to the motivation of marathon runners, Masters and Lambert (1989) created an exploratory instrument, Master's Reasons for Running a Marathon Scale (consisting of 29 reasons for running a marathon) and administered it to 30 male and 18 female runners. The factor analysis results yielded eight possible factors including both cognitive (e.g., associative and dissociative strategies) and performance-related variables (e.g., competition with self, competition with others). The instrument was an improvement over previously utilized measures that had not demonstrated validity or reliability; however, only correlational data relating to associative and dissociative strategies were presented instead of tested psychometric

properties concerning validity and reliability of the measure. The sample size was also inadequate for the factor analysis that was conducted.

In 1993, Masters and colleagues made a second attempt at developing an instrument when they created the Motivations of Marathoners Scale (MOMS). The scale is based on four broad motives for running including, psychological, physical, social, and achievement objectives. Nine more specific subscales were created within the four broad categories including life meaning, self-esteem, and psychological coping (psychological), personal goal achievement and competition (achievement), recognition and affiliation (social), and health orientation and weight concern (physical). In total, 96-items were developed to assess the nine subscales of motivation in marathon runners. The measure was validated in a sample of 482 marathon runners. Cronbach's alpha results were calculated and items under $\alpha = .60$ were deleted (40 items), leaving the final scale to include 56-items, with reliability coefficients ranging from $\alpha = .80$-$.92$. Reliability tests were also completed with 180 of the previous participants. Replication over time was achieved based on *R* results ranging from .71 to .90.

The MOMS scale was developed to stimulate additional research in the area of motivation in marathon runners, which was successful based on the dozen studies subsequently completed using the MOMS. Understanding why recreational and competitive exercisers participate in the marathon race will add to the theoretical and practical literature base. Furthermore, understanding the motives of marathon runners could help increase adherence to other exercise programs for individuals who struggle with continuing their participation. While utilizing the MOMS with a recreational population will provide a greater understanding of the motives of marathon runners,

studying each motive more in depth would provide the greatest level of understanding. The life meaning subscale is of particular interest because of the impact that finding meaning has on one's life. Previous research on meaning in general has indicated individuals who find meaning in their lives typically experience less negative emotions, lower risk for clinical health factors (Feldman & Snyder, 2005; Yalom, 1980), and greater psychological health and increased quality of life (Debats, 1996; Zika & Chamberlain, 1992). A review of the MOMS literature is presented next.

A study investigating how MOMS results change with the level of marathon experience was completed by Masters and Ogles (1995), utilizing a sample of 472 marathon runners completing one of three marathons in the Midwest. Three groups were created based on the runners' level of experience including, the rookie group (first marathon), mid-level (two-three marathons), and the veterans (three or more marathons). Participants completed a demographic questionnaire assessing their level of training, performance, and experience, as well as the MOMS (Masters et al., 1993). Using a one-way MANOVA, participants differed on the MOMS motives based on their level of experience. A discriminant function was also conducted and found two variables explaining 100 percent of the variance. Function 1 explained 65.8 percent and was labeled Marathon Identity because of the high loadings from affiliation variables of competition, recognition, and health subscales. Function 2 explained the additional 34.2 percent of the variance and was labeled Internal Focus because of high loadings on running technique and personal performance variables. In relation to the three experience levels, the veteran group highly identified with the Marathon Identity factor, reflecting high scores in the social identity, recognition, affiliation, health, and competition

variables. Mid-level runners were most motivated to improve on their first marathon time and factored mostly into the Internal Focus factor. Finally, the rookie group was more concerned with health and weight, self-esteem, and goal achievement variables, also representative of the Internal Focus factor. The study provided additional evidence for an increased focus on psychological variables and was significantly related to level of experience.

Using the MOMS scale, Ogles and Masters (2003) identified five clusters of motivational profiles characterizing 1,519 marathon runners based on MANOVA and cluster solution results. Running enthusiasts identified all nine MOMS motives and were characterized as older, completing more marathons, more likely to run another marathon, and primarily female. Lifestyle managers identified goal achievement, self-esteem, health orientation, psychological coping, weight concerns, and life meaning. These individuals were more likely to train alone, ran slower races, trained less miles, and were typically female. Personal goal achievers only identified personal goal achievement motives and were typically younger, males, who trained more miles. Personal accomplishers scored average on most of the variables including goal achievement, self-esteem, and health orientation, and were mostly males. Finally, competitive achievers identified goal achievement, self-esteem, health orientation, competition, and life meaning. Runners were characterized as younger, faster, males, who train more, and often twice a day. Interestingly, for all clusters health and esteem motives were more important than social or competition motives.

Another MOMS study was conducted by Havenar and Lochbaum (2007) with 106 first time marathon runners. The participants included 72 females and 34 males.

Furthermore, 31 people completed the training and race, while 75 stopped training prior to the race. The MOMS scale was utilized along with two questions, "how many miles a week do you currently run" and "how long have you been running". Researchers found marathon finishers to be more motivated by social factors and weight concerns than dropout runners. Interestingly, 70 percent of the sample dropped out of the marathon race, which is an adherence rate comparable to general exercisers (United States Department of Health and Human Services, 2000). The high dropout rate makes intuitive sense based on other exercisers as well as the difficult training regimen and potential for injury; however, the increasingly high number of participants indicates many runners keep running long distances. More specific data on why runners dropped out of the race would be important in future studies. Other limitations included not asking participants their desired weight loss goals and a disproportionate number of females in the study. The MOMS measure was validated based on a higher proportion of male runners than females, which could poorly generalize to female runners.

Other non-MOMS research also helps us understand motivation for running. Santamaria and Furst (1994) completed a study assessing the attributional styles of long distance competitive runners during their most and least successful races. Using the attribution theory (Weiner, 1979), the three causal dimensions of locus of causality, controllability, and stability were assessed using the Causal Dimension Scale (CDS-II; McAuley, Rejeski, & Russel, 1985). Thirty-eight junior college, Division I, or post-graduate level runners were asked to complete the survey and reflect back on their most and least successful races of their running careers. ANOVA results reflected significant differences between attributions of causality (more successful race associated to internal

causality) and control-personal controllability (more in control during successful races) dimensions. No significant differences were found for the stability dimension and control-external controllability dimensions. Based on these findings, researchers indicated a potential self-serving bias to be in effect in that athletes were happy to discuss their most successful performances but more reluctant to describe their least successful performances, which served to protect their ego (Gill, 1980). The runners experienced a confidence boost from successful races because they attributed their performance to be within their control and caused by internal factors. Races that did not go well on the other hand, were perceived to be caused by external factors outside of their control. The non-significant results may have been affected by the retrospective nature of the study, indicating that stability and control-external dimensions may have been forgotten over time. However, the study is important because it shows that reasons individuals use to explain the competitive successes and failures influence their motivation. The weaknesses of the study included a small sample size and the retrospective approach to answering the survey items. Future studies could assess a similar relationship looking across the last competitive season with a larger sample of competitive athletes.

Within the motivation in marathon runner's literature, several studies have specifically investigated marathon finishers and those who drop out pre-race (Clough, Shepherd, & Maughan, 1989; Havenar & Lochbaum, 2007). Clough and colleagues (1989) studied 489 male marathon race finishers and 559 male runners who registered for the race but did not end up running the race (non-finishers). Study participants completed a questionnaire following the race and another 12-months prior to the race. The researchers found a significant difference between finishers and non-finishers in training

distances. Finishers were more likely to want to run another marathon and follow through on that goal within a 12-month period. Both groups stated similar reasons for starting to run including to improve fitness, to improve health, or to take part in a marathon, as well as reasons for running the marathon race including for personal satisfaction, to set a challenge, and for the experience itself. Both benefits and negatives were also identified including physical health, overall well-being, and personal insight into one's capabilities, and problems of injury, decreased time with family, and social lives effected, respectively. Finally, it was important to understand why race entrants did not participate. Reasons included injury, lack of training, illness, and a few mentioned lack of interest. While the study included a large sample size, psychometric properties of the questionnaire were not assessed. Furthermore, the study was limited to perceptions of male runners only.

In summary, although somewhat limited in scope, initial research on motivation for marathon running showed that people have multiple motives for participating in marathon races. The most widely utilized scale was the MOMS (Masters et al., 1993) which identifies eight different motives for participating. Researchers have also found that the motives that drive runners' initial involvement (physical reasons such as weight loss and health interest) seem to differ from the motives that sustain involvement including goal achievement, social interaction, and life meaning.

Mood Related to Marathon Running

A well known link exists between exercise and the reduction of depression and other negative mood states (Kostrubala, 1977). Research also exists on the role of marathon running in reducing depression (Gondola & Tuckman, 1982; Lane, 2001; Lane,

Lane, & Firth, 2002; Morgan, 1978; Morgan & Pollock, 1977; Wilson, Morley, & Bird, 1980). Kostrubala (1977) found running to be an effective therapy treatment to depression, as runners often experience an altered state known as the "runner's high".

Additional research by Morgan (1978) indicated elite and world-class marathoners to be less tense and happier than non-runners, as per scores on the Profile of Mood States (POMS) measure. Runners experienced less tension, depression, fatigue, and confusion, as well as greater vigor, characterized by the iceberg profile. Wilson and colleagues (1980) found both marathoners and joggers to have lower ratings of depression, anger, and confusion, and greater scores on vigor compared to non-exercisers. Marathoners were significantly different from joggers on depression, anger, confusion, and vigor. Gondola and Tuckman (1982) found male and female marathon runners to have less tension, fatigue, depression, and confusion than same-aged non-runners. Furthermore, the researchers indicated similar relationships for both elite and average recreational runners. Finally, research exists on endorphins and mood changes in long-distance running (Markoff, Ryan, & Young, 1982) and shows runners to have decreased tension-anxiety and anger-hostility during and post-run compared to pre-run.

Further research on marathon running and mood exists incorporating the additional variable of performance (Lane, 2001; Lane et al., 2002). Previous researchers have demonstrated a relationship exists between successful performance and positive mood (Biddle & Hill, 1991; Hall & Terry, 1995). In his first study, Lane (2001) examined the relationship between depression and mood with pre-race performance expectations. Participants included 188 male runners competing in race distances of 10K, six miles, and marathon. Pre-competition mood was measured by the POMS-A (Terry,

Lane, Lane, & Keohane, 1999) and performance expectations assessed by the Pre-Race Questionnaire (PRQ; Jones, Swain, & Cale, 1990). Runners were then split into one of two groups based on their depression subscale scores, a depressed group and non-depressed group. Researchers found significant differences between the depressed and non-depressed groups on POMS-A and PRQ scores. The depressed group identified higher anger, tension, confusion, fatigue, and PRQ scores, and lower vigor than the non-depressed group. Further, the relationship between mood and performance expectations yielded higher perceived readiness, vigor, and lower anger in the non-depressed group. Finally, the depressed group experienced lower perceived readiness and vigor, and higher anger, confusion, and fatigue compared with the non-depressed group. While the study was theory-driven and measured one hour prior to competition, limitations still existed in using self-report measures and not accounting for situational factors influencing mood during the time of completing the survey.

While post-exercise mood is typically positive, post-performance mood may be contingent on the performance success (Berger & Motl, 2000). Participants in a study by Berger and Motl (2000) were 195 ten-mile competitive runners. Mood was measured using the Brunel University Mood Scale (previously POMS-A; Terry et al., 1999) and again based on the depression subscale score, depressed and not-depressed groups were created. An overall significant difference emerged between the depressed and not-depressed groups on the mood inventory subscales. Depressed mood individuals scored significantly higher on anger, confusion, fatigue, and tension, as well as lower on vigor items. Furthermore, low performance satisfaction was related to depressed mood scores. Multiple regression analyses assessing the relationship between performance satisfaction

and mood scores yielded only one percent of variance explained for the non-depressed group. The depressed group scores predicted 27.5 percent of the variance. Depressed mood appears to be a potential moderator between performance expectation and mood scores.

Based on previous research, there is a clear relationship between marathon running and reduced depression, tension, anxiety, fatigue, and anger. The relationship is further explained by the additional factor of performance. Successful performances typically produce positive feelings following the performance. Finally, depressed mood may be a moderator between the relationship of performance and mood. These results may have implications for the present study because the enhancement of positive mood from running would logically link to one's motives to run and the personal meaning received from running.

Coping Strategies of Marathon Runners

Athletes across sports utilize many different types of coping strategies during competition and training to get through tough work-outs, pain, and fear or anxiety. Lazarus and Folkman (1984) defined coping as, "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). Based on their model, Lazarus and Folkman assumed that coping and emotional responses change based on the perceived stress of the situation. Morgan and Pollock (1977) studied the coping strategies specific to long distance runners and found two main cognitive strategies utilized, association and dissociation. Associative strategies referred to the runner increasing their awareness of their bodies and how their bodies felt, while dissociative strategies were a

purposeful detatchment from the body and sensory feedback. Researchers discovered that more elite runners utilized associative coping strategies because the heightened awareness was important to push themselves to their maximal potential without getting injured. Recreational runners, however, typically utilized dissociative methods in order to distract themselves from the pain and anguish that goes along with pushing oneself to new distances (Rejeski & Kenney, 1987).

Many studies exist on cognitive coping strategies of association and dissociation with runners (Morgan, Horstman, Cymerman, & Stokes, 1983; Weinberg, 1985; Weinberg, Smith, Jackson, & Gould, 1984). Weinberg and colleagues (1984) identified most athletes utilize both strategies to be effective during endurance performances. However, Brewer and Buman (2006) found elite athletes typically use association strategies and non-elite athletes dissociative. Furthermore, studies have been done investigating the type of cognitive strategy with injury risk. Runners using a dissociation strategy may be more susceptible to injury because they do not attend to the sensory information from the body (pain) (Morgan & Pollock, 1977; Schomer, 1987). Finally, some researchers have argued recreational athletes use dissociation strategies in training but association strategies while racing (Masters & Lambert, 1989; Summers, Sargent, Levey, & Murray, 1982). More recent studies have identified that most runners use both dissociative and associative strategies to cope with pain during running. Buman and colleagues (2008) investigated the potential relationships among competitive level and cognitive coping strategies, as well as the impact of coping strategy on injury.

Masters and Ogles (1998) presented findings related to association and dissociation coping strategies and injury in marathon runners, specifically testing the

accuracy of the dissociation-injury hypothesis (Morgan & Pollock, 1977). In the first study, 127 recreational marathon runners completed the marathon and training thoughts (Okwumabua, Meyers, & Santille, 1987) instrument, the injury checklist (Centers for Disease Control, 1988), and the MOMS (Masters et al., 1993). Participants identified using dissociation coping strategies 61 percent of the time during training, but only 32 percent of the actual marathon race. Furthermore, 25 percent experienced one injury during training for the previous year, and 37 percent experienced more than one running-related injury. Of these injuries, 35.4 percent of runners went to a doctor and 72.8 percent decreased or took a break from their training due to the injury. Dissociation scores in particular correlated with past performance, future running goals, and motivation variables, yielding a characterization of slower runners, less enthusiasm for training after the race, and less motivation by competition or personal goal attainment. Researchers also found associative coping strategies to offer a greater risk of becoming injured because runners were associating with the sensory feedback of pain but failing to recognize the pain as aversive or leading to injury. This study did not support the dissociation-injury hypothesis previously identified by Morgan and Pollock (1977), but was limited by self-report and not collecting physiological data.

In a study by Ogles and colleagues (1993), cognitive strategies and motivations were investigated in relation to absorption, fantasy style, and dissociative experiences. Participants included 104 male and 27 female marathon runners completing a battery of questionnaires. The results indicated 52.9 percent of races and 28.8 percent of training runs to be an associative or internal coping strategy. Dissociation was found 10.1 percent of races and 45.9 percent of training time, which were consistent with previous research.

Furthermore, researchers found positive constructive daydreaming to be negatively related to association and positively related to dissociation. Some runners identified running itself as a stress management technique to deal with problems, this technique was also more likely to occur for those dissociating. Motives for running, including life meaning, were also more likely to dissociate to external stimuli following a training run. The runners who were motivated by life meaning and psychological coping typically utilized dissociative strategies, imaginal processes, and absorption to get through training runs. Finally, those motivated by life meaning experienced greater bliss while running, felt more whole, or felt a part of nature during their dissociative experiences. These factors, characteristic of runners using dissociative strategies, were extremely meaningful to recreational runners who sometimes grew bored of the mundane training. The study, however, was limited by a potential self-selection bias, small sample size, and weak instrumentation for measures of absorption.

Campen and Roberts (2001) found runners to utilize a variety of cognitive and behavior coping styles. Marathon runners in their study were able to use both behavior and cognitive efforts to accomplish their task goals. Utilizing personal resources of attention on cognitive activations to accomplish task-oriented running goals helped runners to avoid external stimuli and distractions, as well as fears and anxiety about not accomplishing their race goals. Another study by Buman and colleagues (2008) was conducted to understand the experiences and coping processes of recreational runners "hitting the wall". Hitting the wall was defined as, "...the point where glycogen supplies have been exhausted and energy has been converted from fat" (Stevinson & Biddle, 1998, p. 229). Forty male and 17 female recreational marathon runners completed a web-

based set of open-ended questions. Higher order themes of affective, behavioral, cognitive, motivational, and physiological dimensions emerged from questions on the characteristics of hitting the wall, knowing when you have hit the wall, and coping mechanisms for after hitting the wall. Coping strategies identified included association, dissociation, mental framing, race goal renegotiation, relaxation, self-talk, visualization, mental reframing, and willpower. Emotional coping responses of emotional regulation and social support were also identified. Finally, 30 percent of participants indicated they did not have an effective coping strategy to deal with hitting the wall. The study was extremely limited by not conducting face-to-face interviews where the researcher could probe responses that were unclear or needed more details. However, it was evident that recreational runners use a large range of coping strategies to deal with the pain and anguish of hitting the wall.

Emotional coping (e.g., emotional regulation and social support) is also relevant to discuss related to dealing with injury. In an autoethnography, Collinson (2005) detailed the emotional experience of a knee injury from both the author and her running partner. Emotions were described as "self-feelings, an embodied form of consciousness" (p. 222). Both runners experienced a "fall from grace" when they became injured, as running was an integral part of what they did day to day and their self-identity. Emotions such as anxiety, fear, doubt, despair, disappointment, anger, and blame where expressed by both runners as they had to limit their running activity because of the injury. Coping strategies were utilized together and the social support provided an additional strategy to gain the momentum needed to recover from the injuries. While the study was conducted with only

two participants and autoethnographic in nature, the results provided important implications for runners to lean on their social support network during a time of injury.

Finally, marathon runners can experience emotional experiences during a run because of the distance, the energy and effort, and potential to experience pain, injury, and psychological distress. Schüler and Langens (2007) conducted a two-phase study on psychological crisis experienced in marathon runners and the coping mechanism of self-verbalization. In Study 1, researchers were interested in identifying a psychological crisis and its consequences on performance. Participants included 129 marathon runners (88 male, 41 female), who completed a pre-race and post-race battery of questionnaires. Based on indicators of psychological crisis including impulse of disengagement, thoughts about the costs of goal strivings, and the benefits of goal disengagement, the results indicated psychological crisis was greatest at the 30 kilometer mark. Experiencing a psychological crisis negatively impacted race performance, leading to a slower time. Finally, runners experiencing a more severe psychological crisis had a slower time than those experiencing a small psychological crisis. In Study 2 researchers tested the effects of a self-regulation strategy of self-verbalizations to get through the crisis. Participants were 110 (91 male, 19 female) marathon runners assigned to either an experimental condition (i.e., received a questionnaire with self-verbalizing instructions) or a control condition (i.e., did not receive a self-verbalizing instruction sheet). Based on the control group results, Study 1 was replicated. A significant difference emerged between participants in the experimental and control groups for those experiencing a severe psychological crisis. Participants who read about self-verbalizations were able to calm themselves down during the race and finish with a faster time than those participants who

did not read about self-verbalizations. While this study has great implications for recreational runners to learn self-verbalizing and self-regulation strategies, the study was limited by a small sample size, disproportionately male sample, and retrospective self-reported identification of a psychological crisis.

Marathon runners of all levels and intensities utilize coping strategies to deal with the physical and psychological stress experienced in marathon training and running. Cognitive strategies have been frequently studied and include both associative and dissociative coping resources. While researchers disagree on which is more effective for performance and injury prevention, most marathoners utilize both strategies. Furthermore, runners also utilized emotional coping to deal with injury and often psychological or physiological crisis. Future research is needed to understand the concept of psychological crisis and identify intervention strategies to give runners self-regulation techniques could be widely useful to running groups. Furthermore, it would be interesting to learn how coping with crises inherent in marathoning (e.g., pain, injury) relates to personal meaning. On one hand, having excellent coping strategies may allow participants to derive more pleasure and meaning. On the other hand, overcoming obstacles may contribute to feelings of meaning.

Exercise Addiction in Marathon Runners

To most people, any type, intensity, and duration of exercise are important to maintain physical and psychological health. However, some researchers have become interested in whether or not marathon running is more of an addiction (Horton & Mack, 2000; Leedy, 2000; Pierce, McGowan, & Lynn, 1993). Addiction to running has been characterized as both positive including psychological strength, increased life

satisfaction, and the attainment of a euphoric state (Byrne & Byrne, 1993; Glasser, 1976; Sachs & Pargman, 1979; Summers, Sargeant, Levey, & Murray, 1982) or negative state including anxiety or guilt about missing a run, maintaining exercise during severe pain or threatening health conditions, and the prioritization of running ahead of other activities such as work, family, and social commitments (Chan & Grossman, 1988; Conboy, 1994; Morgan, 1979).

Pierce and colleagues (1993) found a relationship between exercise addiction, distances raced, and miles trained. Participants were 137 male runners who participated in races of varying lengths (i.e., ultramarathon trail runners, marathoners, 5K runners, and non-competitive runners). The researchers found ultramarathoners and marathoners scored significantly higher on exercise addiction measures than 5K and non-competitive runners. Ultramarathoners scored significantly higher than marathoners on the exercise addiction measures as well. Furthermore, runners with higher scores on exercise addiction competed in longer races and trained higher miles, consistent with the habituation effect, indicating running has become habit for the individual (Lyons & Cromey, 1989; Sachs, 1981). While the study provided a cross-sectional picture of long distance runners, several limitations exist including a male only participant pool and self-report measures.

A study by Leedy (2000) was conducted to gain a better understanding of the commitment of long distance runners, to understand whether a positive or negative addiction is present. Participants were recruited from a race exposition and included non-runners (n = 37) and runners (n = 239), competing in the 5K, 10K, marathon relay, half marathon, and full marathon. Nearly half of the participants were female (43.9%), but

more males were participating in the marathon and more females in the shorter races. Two general factors of commitment emerged in the results, including running for stress relief and adherence to training schedule. Female runners had higher scores in the stress relief factor compared to males. Half and full marathoners also had higher scores on stress relief. Females also had higher scores on the adherence to training factor, as well as half and full marathoners. An interaction also was significant for gender and race distance. Therefore, anxiety and stress relief are common reasons to run long distances, which provided support of the negative running addiction hypothesis as defined by coping with life stressors and maintaining training in spite of obstacles. Additionally, researchers found high levels of commitment to running to be associated with health and fitness motives and positive mental traits. Mood change is an important factor not assessed in this study, and one that needs to be investigated further in relation to exercise addiction. Furthermore, while coping with life stressors was correlated with anxiety trait scores, the inference that running increases anxiety cannot be made.

Gender Differences in the Psychological Components of Marathon Running

While many women today run the marathon race, previous research has focused on experiences of male runners (Deaner, 2006; Masters & Ogles, 1998; Ogles & Masters, 2000; Pierce et al., 1993). Today several races for only women exist including the San Francisco Nike Women's Marathon and the New York City Women's Marathon. During the 1998 San Diego Marathon, 55 percent of all race entrants were women (Jenkins, 1998). Despite the increased number of female participants today and decreasing times of women racers, research has not focused on the experience of the marathon for women specifically. Because of small sample sizes of women in the studies that include both

genders, accurate comparisons between males and females are challenging to make. Leedy (2000) had nearly equal male and female participants. Gender differences in motivations were significant; women had higher scores of commitment for both stress relief and training adherence. Ogles, Masters, and Scott (1995) also described gender differences in commitment potentially resulting from pressure and time constraints women typically face if they have children and/or a career. Yates (1991) also identified women to be more committed to their running program, because of their competing roles. Women who lack commitment typically dropout of running because they do not have the time to dedicate to training and racing, while fulfilling their other commitments. Future research needs to focus on the women who do participate in training and racing, while juggling other commitments to understand their motives and experiences.

Summary and Need for the Present Study

In summary, millions of people today participate in the marathon race. While an extensive body of literature exists on motivation and motivation in marathon runners specifically, little is understood about why certain runners are motivated by certain factors. For instance, life meaning and life satisfaction are subscales in the MOMS measure, but no research exists on what aspects of long distance running in particular provide life meaning and/or satisfaction. While most runners initiate their training for health and fitness reasons, those that continue running marathons often maintain motivation through other factors and processes including life meaning, personal satisfaction, goal attainment, competition, and social aspects. Why is it that some runners attain life meaning and satisfaction, concepts that are inextricably linked to one's self-worth, and other runners continue participating for the competition of running? Is it

possible to understand the "super-adherence" exercisers and provide new motivation strategies to sedentary individuals that struggle with sticking to their exercise program? Future research on long distance runners needs to uncover in-depth the factors specific to developing life meaning and satisfaction.

Furthermore, while extensive research has been done on the motivations of male marathon runners, little information exists on how the experience differs for females. Females are running just as many marathons and almost as fast as male runners today. Understanding how females commit to the challenge and time of marathon training and racing would be helpful to other women that struggle with motivation to exercise. Specifically, because most women today are not only taking care of their families but also have a career, how do females find the motivation to train and complete marathons? How does running create personal life meaning and satisfaction for these women? And furthermore, do women run marathon specifically to find a greater life meaning and satisfaction?

Chapter III

METHODS

The present study was conducted in two separate phases. Phase one assessed male and female runners on the motivation behind why they run. The purpose of Phase 1 was twofold. First, phase one replicated previous research on the motives of marathoners using both a male and female runner sample. Secondly, the results of the motives for running scale identified female runners who scored particularly high in the life meaning subscale. Phase 2 of the study then focused on a qualitative approach to how marathon running provided meaning for recreational female marathoners.

Phase 1: MOMS Survey

Participants

Participants were 137 male ($N = 44$) and female ($N = 93$) marathoners age 19-75 years ($M = 41.62$, $SD = 11.28$). The majority of participants were married ($N = 95$; 70.0%), while 29 where single (22.1%), 11 were divorced (7.9%) and 2 did not report (3%). Furthermore most runners had children ($N = 94$, 67.1%) and 43 (30.1%) reported not having children. Many participants played a variety of high school sports ($N = 100$, 71.4%), while 37 (26.4%) did not play high school sports (the remaining 4% did not report high school sport involvement). Few participants played college sports ($N = 26$, 19.0%), while 111 (81%) did not play sport in college. Table 1 displays participant demographics and compares male and female runners.

Table 1

Participant Demographics by Gender

Demographic variable	Males	Females
Participants	44	93
Age range (years)	19-60	22-75
Married	30	66
Single	11	19
Divorced	4	7
Children	29	65
High school sports	31	70
College sports	16	12

Measurement

Running history. Basic demographic information was collected including age, occupation, marital status, number of children, and previous sport involvement. Furthermore questions assessing their running history were also included, such as, "how long have you been running, what types of races and how many races have you completed, what are your best finishing times, how many days per week do you train, how many miles do you run per week, what is your running pace, do you run with a partner or alone, and do you participate in any other activities?" The full demographics questionnaire was included in Appendix A.

Motivations of marathoners scale (MOMS; Masters et al., 1993). The MOMS likert-scale measure contained 56 items across four broad dimensions (i.e., psychological, physical, achievement, and social), characterizing nine subscales of motivation for running (i.e., life meaning, psychological coping, self-esteem, health orientation, weight concern, competition, personal goal achievement, recognition, and affiliation). Participants rated themselves on each item from 1 (not a reason) to 7 (most important reason). Using a sample of 712 runners, Masters et al., (1993) presented adequate internal consistency data ranging from $\alpha = .80 - .93$, and content, construct, and factorial validity of the scales, and test-retest data ranging from .71 to .90. The full measure was included in Appendix B.

Procedures

Consent to use human subjects was granted from the Institutional Review Board (IRB). Participants were recruited from a local running club. The study was advertised in a local running store, on the running store's website, and in the running club's weekly newsletter. While the primary group of interest for Phase 2 of the study was females, demographic, running history, and MOMS data were collected for both males and females to provide a between groups comparison. Interested runners consented to participating in the study and proceeded to complete the battery of questionnaires online via survey monkey. The approved informed consent can be found in Appendix C.

Data Analysis

Phase 1 of the study was primarily descriptive in nature assessing the characteristics and motives specific to male and female runners. MOMS subscales and standardized subscale scores were computed. Descriptive statistics were analyzed for

demographic questions, running history, and MOMS subscales. Further, an Analysis of Variance (ANOVA) was conducted to assess mean differences between males and females on the life meaning subscale, where gender was the independent variable and life meaning was the dependent variable. The hypothesis was that females would have higher life meaning subscales than males.

Phase 2: Qualitative Interviews on Personal Meaning in Running

Participants

In order to better understand how marathon running provides personal meaning and life satisfaction to recreational female runners, a qualitative semi-structured interview approach was used. Qualitative research designs typically provide an in-depth analysis of a small number of participants selected purposefully (Patton, 2002). Based on this premise, 12 adult female marathon runners were interviewed. The runners were selected based on their scores on the meaning subscale of the MOMS survey. More specifically, participants in phase two ($N = 12$) scored an average 29.83 on the life meaning scale ($SD = 7.93$), compared to the average of all females ($N = 93$) of 22.18 ($SD = 10.68$).

Looking at the demographics of participants in phase two of the current study, the mean age of participants was 42.83 ($SD = 8.11$; minimum = 33, maximum = 59). Most participants were married ($N = 10$), one of which was on her second marriage, while two women were single. Furthermore, the majority also had one to three children (N = 9), with three women not having children. Seven participants competed in high school sports and two also competed in college sports.

Participants also completed the running history questionnaire during phase one of the study. On average, participants had been running for 12.83 years ($SD = 11.57$;

minimum = 4, maximum = 39) and had completed an average of 2.83 marathons (*SD* = 1.70; minimum = 1, maximum = 6). The range of participant's personal record finishing times for the marathon was 3:55 to 5:59. Runners trained 4.67 days per week (*SD* = 0.89; minimum = 3, maximum 6), completing on average 14.0 miles per week (*SD* = 12.07; minimum 6, maximum 44), at a pace ranging from eight minute miles to 14 minute miles. All participants completed races of various distances including 5K (*M* = 60.13), 10K (*M* = 11.33), and half marathons (*M* = 8.5). Many runners completed other distances including 8K (*N* = 1), 10 mile (*N* = 3), 25K (*N* = 1), triathlon (*N* = 1), duathlon (*N* = 1), and an ultramarathon (*N* = 1).

Participants were selected based on the criteria that they were female, over age 18, were self-defined as recreational runners, and scored high on the life meaning scale. Only female runners were utilized in the study in order to understand the specific challenges of female runners. Female runners were also of interest because they may have unique motives to initiate and continue marathon running, as well as different personal meaning and life satisfaction attained from running than male runners. A runner qualified to be recreational as long as she was not sponsored by running clubs and did not regularly receive monetary rewards for participating in races. All running speeds and race finishing times qualified females to participate in the study. All participants had completed at least one marathon and had future plans of completing subsequent marathons.

Measurement

A semi-structured, inductive qualitative approach was utilized to study the experiences of meaning, life satisfaction, and motivation in female recreational marathon

runners. Because demographic and running history were already collected, additional demographics were not necessary. Prior to the interview, an ethnographic approach was used as an ice breaker, during which participants were asked to bring pictures representative of why they run to the interview (Marshall & Rossman, 2006). Nine of the participants volunteered to complete the ethnographic portion of the study and either took pictures with their personal digital camera and emailed them to the primary investigator or brought pictures taken previously to the interview. Incorporating an ethnographic portion to the study allowed participants to gain comfort with the interviewer and provided talking points in terms of how they view running as meaningful.

Participants were interviewed following a general interview guide approach and semi-structured questions. The researcher asked participants similar questions but had flexibility to probe specific issues as they emerged for each participant. The interview guide contained broad open-ended questions about what got them into running, what their experience as a runner has been like, why they chose the marathon race, and what motivates them to continue training and running marathons. Specific probe questions asked to clarify and attain a deeper level of discussion. The interview guide was included in Appendix D.

Procedures

Participants were selected based on the selection criteria they completed during phase one of the study. Interested participants were then contacted by telephone, explained the purpose of the study, and asked to voluntarily participate. If the runner was willing to participate, a scheduled day and time for the interview was arranged. Runners who also wished to participate in the ethnographic portion of the study were asked to take

or find pictures prior to the interview and either bring or email the pictures to the primary investigator. Interviews were conducted face to face in a quiet interview room, a participant's home, or a quiet restaurant if requested. Two participants completed phone interviews due to being unable to meet in person.

The interview process began with participants reading and signing an informed consent approved by the university Institutional Review Board (IRB) specific to phase two of the study. Individuals participating in phone interviews were mailed an informed consent form and a self-addressed stamped envelope to return the form to the primary investigator. Both participants who completed phone interviews returned the consent prior to the interview. Participants were also asked to consent to allow the primary investigator to utilize their audiotapes during teaching presentations. The approved informed consent can be found in Appendix C. Participants reviewed their demographics questionnaire completed during phase one for accuracy and updated information. Next, the interviewer displayed the photos the participant took or brought and asked her to describe how each picture is representative of her running experience. Then, through a series of open-ended questions participants discussed their experiences as a runner, why they complete long distance races, and how running has impacted their lives. Interviews took between 40 and 75 minutes. Confidentiality was assured for all participants and any information they disclosed by assigning numbers to each participant. All interviews were audio taped to record the verbal responses of participants. Interviews were then transcribed verbatim and identified only with the participant number.

Data Analysis

Qualitative research methodology is a process of data interpretation free from quantification and statistical analysis. Rather, qualitative research is the process by which researchers gain an understanding of an unknown area or problem or obtain rich and detailed information about a phenomenon (Patton, 2002). The three major components of qualitative research include the data gathered, the procedures used to interpret and organize the data, and finally, the written or verbal report that presents the data and procedures to the intended audience (Strauss & Corbin, 1998). Many different types of qualitative methods exist including: biography/life history, phenomenology, grounded theory, ethnography, case study, archival analysis, and visual analysis. This particular study utilized biographical/life history information, ethnography, and interview methods. Furthermore, qualitative queries can be useful to create, describe, or provide rationale for theory. Theory can be defined as "a set of well-developed concepts related through statements of relationship, which together constitute an integrated framework that can be used to explain or predict phenomena" (Strauss & Corbin, 1998; p. 15). Grounded theory methodology is one method of qualitative research that allows the data to describe, create, and adapt theory.

Grounded theory methodology (GTM) was developed by sociologists Glaser and Strauss (Glaser & Strauss, 1967) as a means to move beyond the basic theoretical frameworks of the time and begin to develop new and more appropriate theories grounded in the data of new research questions. Although seemingly simplistic, GTM is an extremely complex process, complicated by differing ideas and interpretations from the originators (Glaser and Strauss) in proceeding publications. The working definition of

GTM is "theory derived from data, systematically gathered and analyzed through the research process" (Strauss & Corbin, 1998; p.12). The researcher typically does not conduct the study within a pre-existing theoretical framework, but rather the theory emerges from the data itself, while other researchers utilize GTM to elaborate and extend existing theories. Building theory from data allows the researcher some degree of freedom and creativity to portray the reality of what the data are saying by asking thought provoking questions, assigning unique names to categories, and then hierarchically organizing the raw data. GTM provides researchers with a set of procedures to code and organize data in the most representative fashion, while also allowing the researcher flexibility and creativity to analyze the data most appropriately.

Grounded theory methodology is also a unique aspect of qualitative research that is complementary to quantitative research methods. The process of conceptualizing research ideas and formulating research questions is what leads the scientist to the most appropriate methodology, rather than choosing the method one likes best to answer all questions. Therefore, there is integration between qualitative and quantitative research that should be supplementary and complementary, meaning sometimes to best answer a question one must rely on both analytical approaches (Strauss & Corbin, 1998). For example, a qualitative study utilizing GTM approach may produce a new theoretical framework for parent behavior in youth sports. However, in order to discover the prevalence of these behaviors and make generalizations, a researcher may need to conduct additional quantitative studies to build upon the theory and potential hypotheses. Finally, more qualitative inquires may be conducted to clarify and provide depth to the generalizations learned in earlier studies. Furthermore, because GTM is a purposefully

explanatory process of multivariate nonstatistical procedures, government funding agencies may be more likely to fund projects using this methodology (LaRossa, 2005).

One commonly used and widely recognized data analysis procedure for qualitative methodology is the three-phase model by Strauss and Corbin (1998), which includes open coding, axial coding, and selective coding. In the current study, the process of coding started with microanalysis, which was a line-by-line detailed analysis that identified initial categories and possible relationships among the categories. The microanalysis took into account the data, the researchers' interpretation of the data, and the interaction that took place between the researcher and the data. Such interaction may not typically be objective, despite researchers' best efforts, because their knowledge and experiences were what drew the researcher to the particular question in the first place. Microanalysis could also be viewed as a "pre-coding" to open or axial coding processes, where the researcher takes a first glimpse at particular paragraphs of interest or intrigue. The primary investigator completed the pre-coding by reading through and making notes in the margins of all participant transcripts.

Next researchers utilized open coding, which is the process of opening the data and breaking it down into discrete parts or meaning units to be compared and organized. Strauss and Corbin (1998) relate open coding with the development of concepts or categories made up of the interrelated discrete parts. In order to build a theory, the researcher must identify specific concepts that together are representative of the phenomenon of interest, define categories that organize related concepts, and finally develop categories in terms of their specific properties and dimensions. The end product

then, is a hierarchical organization of the many discrete parts into clusters of interrelated discrete parts, which are then further organized into general or more global themes.

Glaser (1978) originally identified the procedural process of open coding within the concept-indicator model, during which there is constant comparison of the indicators in each concept. An indicator, or meaning unit, is the discrete part or unique idea separated out from other parts of the data. The concept, or lower-order theme, then is the name which describes the cluster in which the related indicators are organized. For each concept, researchers were looking to reach theoretical saturation, during which the optimal number of indicators for each concept was found, producing a well-grounded concept. Next, the concepts identified were similarly organized based on the interrelationship with one another into categories, or higher-order themes (LaRossa, 2005). Microanalysis was also used throughout the process of open coding, as it is a fluid process which is constantly changing.

After the researcher completed the open coding process, the axial coding began, or the intense analysis of one category (higher-order theme) (Strauss & Corbin, 1998). Strauss and Corbin also described axial coding as "relating categories to their subcategories" (p. 123). Subcategories are the characteristics of each category, the when, where, why, who, how, and with what consequence to the actual category. Furthermore, Glaser (1978) identified six Cs as distinctive features of axial coding which include: causes, contexts, contingencies, consequences, covariances, and conditions to the process of analysis. The six Cs remind the researchers that coding is a fluid process where they are always asking questions of the data to eventually develop hypotheses or propositions to understand the relationships among the variables.

The final phase of coding was selective coding, which in short is a selection of the most meaningful and compelling "story" of the data. Where quantitative research looks to tests significance, qualitative methodology employs selective coding. More specifically, the researcher identified a core concept (higher-order theme) from all of the generated concepts (higher-order themes) that was most theoretically saturated and relevant to the research questions (LaRossa, 2005). The key criterion for selective coding is for a core category (higher-order theme) to have "clear and grabbing implications for formal theory" (Glaser, 1978; p. 95-96). Selective coding does not mean one category (higher-order theme) only must be selected; rather the major categories can be integrated to form a theoretical schema and eventually the theory itself (Strauss & Corbin, 1998). During this research phase, refinement of the theory also occurred, in which extra categories and poorly saturated categories were removed. The poorly developed categories have the potential of reaching saturation with the collection of more data. The researcher collected data until the point of saturation was met.

In order to complete the GTM process, the researcher utilized an excel spreadsheet containing the raw data and meaning units. The axial coding process was completed by organizing the raw data and corresponding meaning units into lower-order and higher-order theme clusters. Finally during the selective coding phase, higher-order themes were further analyzed to piece together the "story" of motivation and life meaning in recreational female marathoners. The story emerged in four global theme sections. A secondary researcher was utilized to strengthen trustworthiness of the study results. The secondary researcher independently coded one third of all original transcripts. Both researchers met and discussed the independently coded transcripts until congruence was

reached. During the axial coding process, again both researchers analyzed the data independently before meeting to discuss the data. Once congruence was reached, the primary investigator finalized the selective coding process, which was checked for accuracy by the secondary researcher.

Chapter IV

RESULTS

Phase I

Participants completed a running history questionnaire. It was found that on average, participants had been running for 12.97 years (SD = 11.17, minimum 1 year, maximum 44 years) and completed 5.02 marathons (SD = 9.50, minimum 1, maximum 95). Runners also completed races at other distances including 5Ks, 10Ks, and half marathons. Some runners also identified completing five milers, 8Ks, 10 milers, 25Ks, duathlons, triathlons, ultra marathons, adventure races, and relay runs. Participants trained on average 4.39 (SD = 1.19) days per week. While most runners participated in other physical activities (N = 103, 74.6%), 35 (25.4%) did not. Other activities included swimming, biking, weight training, yoga, group exercise classes, golf, and tennis.

During phase I of the current study, 137 recreational marathon runners completed the MOMS scale (Masters, et al., 1993). The MOMS consists of nine subscales including, life meaning, psychological coping, self-esteem, health orientation, weight concern, personal goal achievement, competition, recognition, and affiliation. Subscale scores were computed by summing the items contributing to each subscale. Furthermore standardized subscales were computed by dividing the mean of each subscale by the number of items characterizing that subscale. Descriptive statistics are presented in Table 2, and included minimum and maximum scores, mean (M), standard deviation (SD), and standardized means (M_S). Comparing the standardized mean scores allowed for a further analysis of the MOMS motives. Health orientation (M_S = 4.86, SD = 9.02) was the most

important motive, followed by personal goal achievement (M_S = 4.54, SD = 7.52), and self-esteem (M_S = 4.33, SD = 11.13). The life meaning subscale fell within the bottom three motives (M_S = 3.27, SD = 10.78).

Table 2

Motivations of Marathoners Scale

Subscale	Minimum	Maximum	Mean (M)	Standard Deviation (SD)	Standardized Mean (M_S)
Life Meaning	7.0	45.0	22.94	10.78	3.27
Psychological Coping	9.0	61.0	30.34	14.92	3.37
Self Esteem	8.0	54.0	34.61	11.13	4.33
Health Orientation	6.0	42.0	29.17	9.02	4.86
Weight Control	4.0	28.0	15.05	6.71	3.76
Goal Achievement	6.0	40.0	27.22	7.52	4.54
Competition	4.0	25.0	9.32	5.13	2.33
Recognition	6.0	34.0	14.38	7.89	2.40
Affiliation	6.0	39.0	20.70	8.63	3.45

The life meaning subscale was of particular interest to the present study. The subscale had a minimum of 7.00 and a maximum of 45.00, with a mean of 22.94 (SD = 10.58). Because females were the population studied during phase two, a gender comparison between means of the life meaning scale was conducted. Females produced a mean of 22.18 (SD = 10.51) and males 24.55 (SD = 10.68). A one-way ANOVA was conducted to determine if the means were significantly different. The results indicated

that males and females were not significantly different on their motives of life meaning $F(1,130) = 1.50, p = .223$.

Phase II

The interview process began with an ethnographic photo analysis. The photos were taken and brought by participants to describe what running meant to them. The ethnographic portion of the interview was utilized as an ice-breaker for the interviewee to become more comfortable speaking about their experiences as a runner with the interviewer. Participants brought in photos of themselves running, running friends, races they completed, family, scenery that was important to them, and objects, such as medals, jackets, and running shoes. Photograph results were not included in this study as the photos would break confidentiality.

The inductive content analysis of the interview transcriptions yielded 1,235 meaning units, which collapsed into 113 lower-order themes, 24 higher-order themes, and four global themes. The global themes included motives to run, barriers that threaten motivation to run, strategies to maintain motivation in running, and life meaning gained through running. A table of the hierarchical organization is presented in Table 3.

Table 3
Hierarchically Arranged Global, Higher-Order, and Lower-Order Themes

Global Themes	Higher-Order Themes	Lower-Order Themes
Motives to Run	Motivated to run for the pride of accomplishing challenges	Run for the challenge Sense of accomplishment Pride of accomplishment Importance of accomplishing a goal Symbols of achievement
	Motivation to run to accomplish future running goals	Qualifying for Boston is a future goal Motivated to achieve outcome-oriented goals Staying healthy to continue running is a future goal Continuing to run long distances is a future goal Running is a lifelong activity
	Motivated to run by training and racing characteristics	Training preparation for racing Commitment to training program Race frequency Running is a convenient activity
	Motivated to run for health and fitness	Run to maintain personal health Run to stay healthy for family Run to meet fitness needs Run to participate in a physical activity Maintain fitness momentum

Table 3 (cont'd).

	Enjoy the physical nature of running Overcome family health history Running encourages healthy eating
Motivated to run for physical appearance	Running improves physical appearance Motivation to lose and maintain weight Fear of gaining weight
Motivated to run for the social opportunity	Meet new people through running Running group acceptance Running group enjoyment Social opportunity Opportunity for time with other female runners
Motivated to train with others	Accomplish training as part of a group Accountable to running partners Sacrifice pace to run with friends
Motivated to run to give and receive support from others	Giving and receiving support from others Running partners help with motivation Appreciation for race spectators Recognition from others Family support Family involvement in running
Motivated to run for peaceful time	Running provides a sense of peace

Table 3 (cont'd).

		Running provides an opportunity for spiritual time Run to have time for thoughts
	Motivated to run to relieve stress and work through problems	Running provides stress relief Running is an escape from life stress Running provides a vehicle to work through problems
	Motivated to run to connect with the outside world	Run to be outdoors Run to appreciate nature Run to travel to new places
Barriers that Threaten Motivation to Run	Internal barriers to running motivation	Lacking motivation to run is a barrier Running alone is a barrier Self-negativity is a barrier Doubt ability to run a marathon
	External barriers to running motivation	Inclement weather is a barrier Time commitment of training is a barrier Pain of running is a barrier Lack of post-race support is a barrier Other barriers to running
Strategies to Maintain Motivation in Running	Maintain motivation to run by structuring the running experience	Joined a running group to stay motivated Structure of training program

Table 3 (cont'd).

	Maintain motivation to run by setting goals	Implementing effective individual goal setting Process and outcome goals Finishing the run is a goal Motivated by setting next race goal Motivated by signing up for next race Working to improve on speed
	Coping with pain to maintain motivation	Push through pain Dissociate from pain during running Behavioral coping with pain during running Break challenge into steps Reward self after runs
Life Meaning Gained Through Running	Discovering the capability of running	Realize marathon goal is possible Learn to push limits further through running Appreciate ability to run Running sets you apart Age is not a limitation
	Developing a mastery-oriented approach	Focus on personal improvement Importance of effort Running develops discipline Mental strength needed to push through tough times Fill competitive need To compete with self

Table 3 (cont'd).

Inspiration gained through running	Run to inspire family Run to inspire others Family provides running inspiration Others provide running inspiration Inspired self with setting a marathon goal Others suggested setting marathon goal Run for a good cause Objects important to running
Developing a sense of self	Run for self Run for a sense of fulfillment Running enhances self-confidence Running shapes one's identity
Positive feelings created through running	Run for the feeling after a run Enjoys how running feels Enjoys running endorphin rush Feel positive with running Become more accepting of self and others through running Running is an emotional experience Race enjoyment Running provides balance and perspective
Developing social relationships through running.	Meeting new people through running Running group enjoyment

Table 3 (cont'd).

	Social opportunity Opportunity for time with other female runners
Form a relationship with running	Love-hate relationship with running Positive relationship with running Relationship with running has evolved Running becomes an addiction
Factors that impede developing meaning	Experience frustration when not improving Feel negative without running Disappointment following race

Motives to Run

Participants were asked to identify what motivates them to run in general and why they chose the marathon distance in particular. All participants identified multiple motives that explain how they sustain the drive to run long distances, more specifically to train and complete marathons. Eleven higher-order themes fit in the global theme and included being motivated to run for the pride of accomplishing challenges, to accomplish future running goals, training and racing characteristics, for health and fitness, for physical appearance, for the social opportunity, to train with others, to give and receive support from others, for peaceful time, to relieve life stress, and to connect with the outside world.

Motivation to Run for the Pride of Accomplishing Challenges

All participants explained part of their motivation to run marathons came from the feeling of accomplishing something challenging. More specifically, six lower-order themes characterize the category including, running for the challenge, having a sense of accomplishment, finding pride in accomplishment, valuing the importance of accomplishing a goal, and marking symbols of achievement.

Running for a challenge. Participants discussed how one motive to run marathons is the challenge of training and racing. One participant summarized challenge of running, as, "Because it was hard, it was hard to do. It was a challenge and I love a challenge." Beyond the difficulty of running itself is the challenge to fit together all of the pieces to succeed in a race. One participant stated, "putting the pieces together to make it work. That's one of the fun things about running, the nutrition, the hydration, the training, the

mental, the energy, the asthma, you've got to get them all working for you." Another runner spoke of selecting tough races for the purpose of challenging herself. She said,

> I feel it can be very challenging, but I love the challenge of it. So, I try for me, besides the daily run, I try for me to pick different events that I think are not going to be possible for me. And then I try them. And if I succeed, wonderful, if I don't then I try again.

The runners knew that not every run was going to go smoothly, but the challenge of getting out the door everyday and pushing through the training run for accomplishment of challenging goals was a motivating factor.

Sense of accomplishment. The female runners who participated in this study all spoke of the sense of accomplishment that training and racing gives them. Runners earn this sense of accomplishment from completing races, but also completing the daily runs. One runner explained,

> I think it's the sense of accomplishment when I'm done. Although it can be a horrible run and I don't want to be out there, it's awful, every step is horrible, but once I'm done its just that sense of accomplishment that ok I've overcome that horrible run and I'm good.

For this runner, even if the run itself was difficult, the feeling of accomplishment after the run was an important motive.

Pride of accomplishment. Runners also discussed the feeling of pride they get after accomplishing a run. One runner felt this pride after long runs and said, "It was just wow, I did this! You know, I don't know, you feel like such a real athlete after that long weekend training run." Another runner discussed how proud she felt after finishing her first marathon. She shared, "There it is, the greatest moment of my life possibly. Like that's mine forever and ever, nothing can take that away, I did it. That's, I own it, it's

mine, every step." For her the accomplishment of finishing a marathon is something she will never forget.

Importance of accomplishing a goal. While participants experienced a sense of accomplishment as a runner in general, all participants set specific goals to strive to accomplish. One runner simply stated, "doing something, making a plan, setting a goal, and following through. That's what means a lot to me at this point." Another runner set a specific goal of qualifying for the Boston marathon and pursued the goal until she accomplished it. She said, "And after four attempts of um, three other attempts to qualify, last fall I finally qualified for Boston."

Symbols of achievement. Runners also discussed how awards and t-shirts were symbolic of their accomplishments. One runner said, "Those are all my medals. It means achievement to me." Another runner talked about how the medal was symbolic of why she runs marathons, "Because you don't know until you do it, you don't know until that medal is placed around your neck about why, why people do it." One participant who had qualified and run the Boston marathon talked about how she earned the right to purchase the Boston marathon jacket and how symbolic that jacket was to her achievement. She stated, "This is just my dream come true. That was the day before getting our pictures taken. And the most important was my jacket, had to buy the jacket."

Motivation to Run to Accomplish Future Running Goals

All participants were motivated to accomplish future running goals. Future goals of participants included qualifying to run in the Boston marathon, wanting to achieve outcome-oriented goals, staying healthy to continue running, continuing to run long distances, and continuing to run throughout life.

Qualifying for Boston is a future goal. Three participants identified qualifying to run in the Boston marathon as a future goal. One participant was inspired by an older co-worker who qualified,

> I have a former co-worker that she made Boston several times but um, yeah she is I think in her late 50s now. And still out there, so you know if I can be like [name], yeah maybe. So, I think that's one of my goals.

Another participant talked about qualifying for Boston as a dream goal that could take a long time to accomplish.

> Boston marathon baby! I may have to be 97 before they let me run, but I dream of that moment, I do, it pumps me up. I think about, sometimes I fanaticize being on that course. And I've been to Boston, I've gone actually down the route, I've definitely watched you tube videos of races from different years. Um, yeah that's the big awesome goal...I'm just, I'm very excited to one day share that course with all those very awesome people that have come before me.

Motivated to achieve outcome-oriented goals. Two participants identified wanting to achieve outcome goals in running. One participant was focused on being competitive with her running partners. She stated, "Well, if my training partners keep running, it's a little bit the competitiveness. If you're going to keep going, I'm not going to slow down and I know she feels the same way. And that would reflect that I'm weaker." Another participant set a future goal to win a race. She said, "I would like to win, win a race...And if I can win a race that would be great." Other participants explained that beating other runners is not a goal for them.

Staying healthy to continue running is a future goal. Two runners identified future goals revolving around their health as a runner. One participant wanted to run the Boston marathon again and train for an ultra marathon when she is injury-free.

> I would like to get back to being healthy so I can start training in December for, I'd like to run Boston next April, and run it healthy...So, but I really truly would like to get healthy this year and run Boston, and then after that next summer I'd

> like to try an ultra...But I would like to now run it where I'm healthy and be just a little more competitive with it and see how I can do on the hills and train differently here.

Continuing to run long distances is a future goal. Most runners wanted to continue running long distance races in the future. Some wanted to continue running marathons, while others found half marathons or distance relay races to be a better distance for them. One participant discussed how runners continue to try to improve on their training and speed in subsequent races. She said, "I mean you know how runners are, they always think back and they're like I could have done this differently, I could have done that. I've already thought that through. I mean I would like to get a little faster."

Running is a lifelong activity. All but one participant discussed how they hope running will be a lifelong activity. One participant described her future as a runner by saying, "As long as my knees hold up, and the rest of me holds up, and I have the time I'll do this. And I don't think I'll ever stop. I might go down to the half, just for time sakes." Another runner explained that while she will slow down with age, she wants to keep running as long as she can.

> I want to continue as long as I can put my shoes on and go out and run. Will I be fast? No, unrealistic. And that's ok. Will I slow down? Yes, and I realize that. But I see other people out there, men and women, that are running in like their 70s. That gives me inspiration, I think that is just so amazing. And I think there is going to be a bigger group, like say my generation, there's a lot of people that are my age that are into running, and I think we're going to see my generation running into their 50s, or 60s, or 70s.

One runner had knee surgery and may not be able to continue running marathons. However, running will still be an activity that she is actively involved with. She stated,

> Although I'm not as active as a participant in running, I think I'm always going to be around it because I've had such fond memories. It was a real enjoyable thing to

> do and I don't want to lose ties with everything that, that sense of accomplishment I've gotten from things that I've done before.

Motivated to Run by Training and Racing Characteristics

Another motivating factor for the female marathon runners interviewed was adhering to training programs and the race experience itself. Lower-order themes characterizing training and race characteristics include training preparation for racing, commitment to a training program, race frequency, and running is a convenient activity.

Training preparation for racing. The purpose of following a marathon training program is to be prepared to complete the 26.2 mile distance. All participants discussed the importance of completing the training in order to finish the race. One participant stated,

> I go back to if I'm training for a race, like I'm doing now with the half marathon, I'm like ok, I know this is tough. But if I want to be able to finish the race and have a decent time, I need to put in my training. That motivates me too.

Another participant discussed how the reward for training hard is being able to have a good race. She said, "I really worked for this so I'm going to do my best. You know rather than yeah I woke up in the morning and kind of gutted it out."

Commitment to a training program. All participants discussed the importance of being committed to their training program in order to run their best. The commitment helped each runner to find the motivation needed to check off every training run. One runner explained,

> They [running group] first gave me a training calendar, they say you do the mileage you will finish the marathon. And I was like, ok. I mean I was dedicated to that. I didn't miss a single anything. There was one, like I had to stop part way through because I couldn't do it. It was like a 10 miler or something in 90-degree heat. The next day I was like ok, I've got to try again, check that off.

Another runner talked about her commitment to training as a lifestyle change. She said, "It was such a personal accomplishment. And I wasn't all about speed, I was about building up an endurance, building up my fitness level, making changes in my nutrition. So I went about it the right way."

Race frequency. Some runners talked about being motivated by consistently running races. One participant enjoys racing once a month. She said, "I think just setting myself up to have a run every month and just know during the [busy time at work] it's not going to happen." Another participant tries to race various distances every weekend. She explained her race frequency as, "every weekend. During spring, summer, and fall. Winter, I may do just a few, like your Jingle Bell run and a special around the holidays. But usually from here until fall, every weekend. I love it, I love it."

Running is a convenient activity. Running is an activity that requires very little equipment, just a pair of good running shoes and a road on which to run. More specifically, one runner said,

> And the only way I could find to get that, I mean I could go to aerobics one day and I could do all of that, but it just seems like there's; you can always put your shoes on and go. And it doesn't matter where you are, you don't need a class, you don't need anything else, and I like, I like that.

Another participant explained how running was a better option than other team activities.

> I think that's what's so nice about it, because maybe if I had stuck with the volleyball or something, how are you going to get, unless you are with a league or whatever, and that gets hard with your family and your work life, how do you schedule that? So, yeah that's what I liked about running.

Motivated to Run for Health

All of the runners identified health and fitness as an important motive to why they run. Lower-order themes associated with the health and fitness category included: run to

maintain personal health, to stay healthy for family, to meet fitness needs, to participate in a physical activity, to maintain fitness momentum, for the enjoyment of the physical nature of running, to overcome family health history, and because running encourages healthy eating.

Run to maintain personal health. All of the participants discussed running for overall health and wellness benefits. One participant commented on how running helped her to feel healthier and stronger compared to other women her age. She said, "I think where I'm at in my life, you know I'm 46, I think I'm a lot healthier and a lot stronger than a lot of people out there. And for me that makes me feel good."

Other women discussed how running helped them to bounce back from illness or pregnancy quicker than if they had not been running. For example, one runner said after her pregnancy, "the health benefits, I can kind of see my feet. After being pregnant I can see my feet again, I am pleased that I can look down and see my feet."

Finally, the women interviewed really enjoyed that running offers a combination of health and wellness benefits at the same time. One runner said, "I'm staying in shape and that's very important to me and being healthy." Another runner talked about the health benefits and stress relief from running, "I could easily probably just as easily go out and sit at a Starbucks and drink a crazy whatever and read a book. But I've chosen to do this instead cause I can do two things at once."

Run to stay healthy for family. Three participants brought up specifically how running helps them to stay healthy for their families. An example from one runner was, "[Staying healthy], but not only for me, for my family, knowing that I'm healthy, I'm doing the best I can for myself and for my family. That carries me a long ways."

Run to meet fitness needs. Participants also distinguished the importance of meeting their need to be fit. One runner talked about how great a workout running is. She said, "I think my, the easiest thing for me to say is because it's a great way to work out, I get a wonderful workout." Another runner discussed how she was surprised at how her fitness level improved from outdoor winter running training. She stated,

> It was amazing, I didn't try to improve my fitness, I was trying to have consistent runs, but my fitness in the spring is so much, so much improved its incredible. I ran [marathon] again and improved my time by a half an hour.

Run to participate in a physical activity. Women interviewed for the study were very interested in finding a physical activity that they could participate in and be successful. Running proved to be an activity that one could begin at the novice level and pursue to any degree desired. One participant talked about needing to get back into shape after years of inactivity and having children. She stated, "that's why I got into it was just kind of to, I needed to do something to get back into the physical realm." Another runner discussed how other physical activities do not provide the same benefits that running does. She noted, "I mean I really do have a need to be physically active. And when I do bike, it does not meet that feeling that running does. The Pilates and yoga I really can't compare because that's not cardio."

Maintaining fitness momentum. A few runners discussed how motivated they feel following races because they are at a high fitness level. For example,

> That's easy. After a race is the easiest time in the world, you are already in great shape, you've already done a tough one, and you just have to do real easy, get to it easy and get rid of the soreness. So, that's easy, I love sticking with it. It's a momentum issue, you've got that momentum, you've already done something that you're really proud of yourself for and then it's a piece of cake.

Other racers felt more pressure to continue training in order to not lose the fitness they worked so hard to gain. One runner said,

> I don't want to totally lose all my fitness. I mean I do take breaks after like a big race and stuff. But yeah, just not wanting to lose everything that I worked for. Like we were saying before, you trained for this, you keep running. So why would you just sit on the coach for like a year after and then you have to start again?

This runner felt as though taking an extended amount of time off between races would be like starting over in her training as a runner.

Enjoy the physical nature of running. Runners also discussed how enjoyable doing something physically challenging felt. One runner said, "Because it feels, it makes me feel good, physically." Another runner explained that the human body was made to run. From her experiences running marathons she noted,

> The more I research as far as reading and looking at runners who just really enjoy it, the human body was meant to run. I believe that now, because before I heard people saying things like "well this definitely damages your knees" and all this other stuff. Well, I'm seeing runners out there that are in their 60s, 70s, and 80s, 80s! I met a dude who was in his 80s, he finished before I did! The human body was meant to run, we were not meant to be eating McDonald's everyday, we were not meant to sit all the time, and like all these things that we kind of tend to do in society today. Those things are unnatural. Running is natural.

The physical nature of running is something enjoyable and what human beings were born to do in order to be healthy. Others demonstrating running throughout their lifespan provide evidence of how healthy running can be.

Overcome family health history. Many of the women interviewed discussed genetic health problems found in their families. One woman shared that overweight and obesity was a problem for other females in her family. She said,

> My mom and my sister, several of my female relatives actually tend to be overweight in my family. And I don't have one of those needs of, oh I have to be

> a certain size, but just for physically, it's not that healthy to be that big. And so I think, yeah definitely I need to have something to help me not go down that path.

Another woman shared information about her battle with hyperthyroidism. She said, "probably just to keep myself healthy. I do have hyperthyroidism so it, it's harder to keep the weight off because of that."

Running encourages healthy eating. While running provides a method of weight management, another component that often surfaces is changing eating habits in order to feel good while running. One participant noted,

> It's fun to say, "oh I'm a marathon runner, I can eat anything I want". But you can't gorge yourself on ice cream the night before and then think you are going to feel good on a long run or any run the next day. You are aware of nutrition.

Another runner talked about an increased awareness of how much work it takes to burn off extra calories. For example,

> I know this is not scientifically correct, but in general, a mile is about a hundred calories. Going slow, going fast, it's about a hundred. It's kind of just the great equalizer. So I like being able to look at a snickers bar and go that's three and a half miles. That sucks! I'm not eating that. So it's an easy, it's an easy way for me to equate, this is what I have to do in order to do that.

Motivated to Run for Physical Appearance

Running is an activity that can help with health and fitness, but also help improve one's physical appearance. Many runners in this sample described how great running is to improve their physical appearance and lose and maintain weight. Other runners were also preoccupied with a fear of gaining weight.

Running improves physical appearance. One runner discussed how running helped improve her overall body shape. She said, "I have liked the way it shapes my body. I mean this is the one thing that I have found that has really worked." Other runners spoke more specifically about how running gives them great legs. One runner provided

an example saying, "Just your legs start looking amazing like right away, like all the muscle definition." Making improvements on their physical appearance was a strong incentive to keep running.

Motivation to lose and maintain weight. Some runners started running in order to lose weight. One woman lost an incredible amount of weight by starting a half marathon training program. She said, "Yeah, that first year and then after that I lost about 70 pounds. So yeah, it was a good thing." Another woman kept a pair of pants from when she was overweight as a reminder when she needs motivation to run. She shared, "I have a pair of pants that I kept. I feel like one of those Jenny Craig or Subway, like look, look at these horrible pants that I used to fit in. I mean that's part of it."

Other women either initially got into running or returned to running in order to lose pregnancy weight. One woman who returned to running after having a daughter said,

> When I really made a concerted effort and seriously considered getting back into running, I think it was to control weight. I had a baby and I wanted to get in shape. Running is such a great way to get in shape, it trims your hips, gets rid of your rear end.

Another woman started running after taking a family photo and actually seeing herself on the photo screen. Although embarrassed that she let herself gain a significant amount of weight, she shared, "it was after I had my son and we went to have our picture taken. He was about 5 months old and when the picture came up on the screen I went, "oh my word, I need to lose weight."

Fear of gaining weight. Some runners mentioned they were preoccupied with gaining weight if they stopped running. One runner thought back to a time when she was not running and said,

> I'm afraid of being chubby and fat again, after my college career ended and I look back at those pictures I am like, oh my god, what was I doing? So that's a huge motivator for me. I think that's, although I don't want to admit it, it's probably the biggest factor.

Another runner brought up a similar fear of gaining weight by saying, "Or worse, you don't start [running] and then my fears of gaining all this weight and stuff can come true."

Motivated to Run for the Social Opportunity

The majority of the runners in the current sample were members of a local running club. While they each participated with varying frequency and intensity, the group membership and friendships built through running became a very important, yet unexpected benefit. The lower-order themes characterizing running for the social opportunity include: meeting new people through running, running group acceptance, running group enjoyment, gaining social opportunity, and spending time with other female runners.

Meeting new people through running. All participants discussed how in some way they have met new people through their experiences running. One woman who was looking to meet new people after moving said,

> About six years ago I moved to [city], and one of the things of course you want to do when you move to a new place is to meet people. And I was kind of thinking about joining a group, the [running] group, so I would have a group to run with, so it wouldn't be as challenging to, rather than run by myself, running with people , and the social aspect.

Other runners talked about meeting new people during races. One runner in particular talked about the sense of belonging she gets from just being a runner and talking to others out on the course. She explained,

> I get the sense of bonding, sense of belonging, sense of like I'm doing something to help others, you know, not just myself. The camaraderie on the course, every single race I run I always end up talking to somebody for at least a couple miles, where we exchange names and oh we do you do, what do you do? And there's just that camaraderie with a stranger I never see again. It's like wow, this is how the world should be.

Finally, participants also talked about being able to meet people from diverse backgrounds. One runner talked about how interesting it is to learn about what other runners do in their careers. She said,

> It's always been a big social thing. Here was a birthday party actually for me at a friend's home and everybody there was from the running community. And we had all at some point run together and we became a big social network so that was always a really fun time. You get to learn about other people, cause you tend to know them as a runner, but you forget they have careers and lives and other hobbies and interests. So, [name] is actually a gourmet chef and he's also a radiologist and you just see him in shorts and a t-shirt. So its kind of fun to have that nice core network to find things beyond running.

Running provides a vehicle to meet new people in the community that one might not have the opportunity to meet without running.

Running group acceptance. A few runners talked about initially feeling intimidated to join a running group because of a fear that other runners would not be accepting of beginners. The participants found, however, that the running group was fully accepting of new members and happy to help in any way. One runner said, "It's intimidating, especially when you show up with these people who are crazy fit. And I'm like, um not so much. I want to get there, so it was very nice." Runners discovered quickly that this particular running group was supportive of any runner no matter what speed. One runner explained it as, "I mean with their motto, "Any distance, any pace" it doesn't matter how fast you are, how slow you are, you have that camaraderie."

Running group enjoyment. Once part of the running group, all members discovered that the group camaraderie was very enjoyable. One runner explained her group involvement as a surprising experience,

> And one of the other things that I found that I did not expect to find was a group of people that are just out there who like to do this. I guess I just always thought it was such a singular sport, you know, just doing it by yourself. But I found kind of this community that lives right below the surface of insane people who run long distances for fun. And I like it.

Social opportunity. Whether a member of a running group or not, all participants discussed how running became a social opportunity to meet up with friends and spend quality time together. One runner described the social opportunity as, "The friendship piece, where you're just connected to these people. And maybe you only see them in practice or the people you see on the course but that's ok." Runners also talked about how motivating it was to know that a friend or group of friends was going to be running too. One runner explained it as, "camaraderie with other participants who were doing the same thing I was doing." Finally, runners spoke of the interaction of getting a workout in with friends. For example, a runner said,

> And then you can actually combine the two, and have a wonderful social event, while you are working out. And that just doesn't happen with any other activity, not with cycling when you go out with people, not at the [gym], even though I ran into friends last night you're not working out together doing the same thing. So it comes back to fitness and friends.

Opportunity for time with other female runners. The runners participating in this study also explained the importance of spending time with other female runners. One runner talked about the importance of "girl-time" as,

> Just getting together with the girls that I run with, just being able to have that time to talk between the two of us, or the three of us. I mean that's huge. I don't have to talk with a nine year old and a six year old. So yeah, the girl time.

Motivated to Train with Others

The motivated to train with others theme was characterized more by accomplishing a goal together than only the social component. Being motivated to train with others has to do with accomplishing training as part of a group, being accountable to running partners, and sacrificing pace to run with friends.

Accomplish training as part of a group. Another motivating factor for these participants was accomplishing a goal with friends. One woman talked about training for and finishing a race together. She said, "then as a group, we ended up, we ran the half, we ran the Bayshore. And it was such an accomplishment for us." Another participant who works with the running group discussed how her involvement with the group keeps her on own training and racing on track. She said, "In my five years of work with [running group] I've never ever not run for more than a few days. It just keeps me on track." For this runner, she was able to keep her own running on track by helping others.

Accountable to running partners. Finding a running partner or partners can also serve as a motive because if the group makes plans in advance, each member is expected to stick to the plans. Having someone to be accountable to helped most runners get out the door and meet up with their partner(s). One runner stated that she was motivated by, "my training partners, I know that they are waiting for me in the park. Yeah, and I don't want to let them down." She felt as though not upholding her commitment to her running partners would equate to letting them down.

Sacrifice pace to run with friends. Many running group members train at different paces. Some participants in this sample discussed how on occasion a runner from the group volunteered to run with them, even though it would mean running at a slower

speed. One runner talked about how important it was to have a member of the group volunteer to run with her. She said, "Just thinking about the different moments, where showing up to practice and then somebody runs with you, even though they can probably run a lot faster and they can just focus on their own training, but they run with you." Because many runners experienced someone else sacrificing pace for them, many chose to reciprocate to a new runner later. For example, seeing a new member join the group encouraged one runner to volunteer to slow down and run with her. She said,

> I was doing like I think 10 [miles], and there was a bunch of new people and it was like anybody here running a 10-minute mile pace? Nobody else was, and I was like I don't need to run my 9-minute mile. I'll just run with you and I'm going to keep going, but I'll slow it down at the beginning just so you feel, and I like that. I like that feeling, which I understand is not everywhere [running groups]. So I'm trying to encourage it.

This runner was intentionally trying to make new runners feel welcome and encouraged to run, no matter how fast their pace or how far their distance.

Motivated to Run to Give and Receive Support from Others

Another motivating factor for the recreational female marathon runners in this sample was the support that they received from others. Beyond receiving support, many runners spoke about giving support back to other runners as well. The lower-order themes characterizing giving and receiving support included: giving and receiving support from others, running partners help with motivation, appreciation for race spectators, recognition from others, family support, and family involvement.

Giving and receiving support from others. Participants discussed how important the support they received from other runners in the group was to their motivation. One runner talked about the importance of group support during long runs by saying, "I remember the first time I completed my 20 [mile] with some friends, who were very

encouraging, it was just so awesome." While the support received was a motive, it was also motivating to provide support to other runners. One participant talked about the give and take of support by stating, "just the support that we have. I like that, I really like that support. I mean it's a give and take, you give it back too. And that's what I really like about it."

Running partners help with motivation. Beyond feeling motivated from the support to and from others, many runners talked about how motivating having a running partner was. According to the women of this sample, part of the motivation from a running partner comes with having another person to help push them through tough spots in running. For example, one runner said,

> A lot of times when I've had tough runs I've had somebody with me. So I really like to run with somebody else and it's usually my running partners who will say, "come on we don't have that far, let's go!" So that's a huge part of my motivation for my run itself.

The other important aspect of running with a partner is the therapeutic nature of talking out your problems with someone else. One runner described this as,

> We also have our own stories. Even to this day, go out running on a Saturday, its therapy time for us. To go out on the trail running we are solving the world's problems. But we made a pact of confidentiality that whatever we say stays out on the trail, and then we go about our daily life when we leave the trail. It's such a unique friendship, friendships that I have built, it's just really cool.

This participant is really motivated by spending time with her running partners because of the multiple benefits she receives.

Appreciation for race spectators. Three runners brought up the importance of spectators during races. Not only do runners really appreciate the time sacrifice that the spectators made just to cheer them on, but some runners found they can push themselves harder with the spectator support. One runner said,

> I've been told it is one of the most fun to do because there are spectators along the way cheering you on almost the entire time. Which helps too, that helps tremendously. It's amazing that your legs are like jello but you run that last half mile because there are people screaming at you to finish and you just feel so good.

Recognition from others. Two runners identified feeling recognized by others for their efforts as a runner as an important motive. Because running is such a personal activity that does not get shared with very many people, when someone noticed the discipline and commitment invested to be a runner, runners were very appreciative to hear it. One runner said, "But you know there is some, sometimes there is approval from others. You are doing a great job."

Family support. Family support became apparent for the runners interviewed in two different ways. The overall support and encouragement that women received from their families and husbands was extremely important. One runner summarized this importance as,

> My family, they came to my very first marathon and they're holding a sign. And of course I have that blown up because it worked, because whenever anything else gets me down in life, I look at that and [in a] marathon every step you take you're on your own, this is you doing it, it's so nice to have that support system.

Other women also shared the importance of having a supportive husband who would watch the children during training runs. Without this type of support, the training and racing would not happen. For example one woman talked about the "team effort" involved in marathon running,

> Marathon running, I shouldn't say its not a team sport because it is, if you have a family it takes somebody else, and I mean kids particularly when you have children who require babysitting, it takes a lot of people. My mom has watched them, the girls across the street were cross country runners know that like I need to get my run in and my husband is gone so they'll offer to sit for me. So it takes a village to run a marathon.

In order to get her training in, this runner elicits help from her husband, family, and neighbors to watch their children.

Family involvement in running. The final theme of the higher-order category related to involving the whole family in running activities. One runner talked about how her entire family became involved in running,

> My family runs, my son, my daughter, we all trail run. I've just got my husband into trail running, we're going to go do a race up in the [city]. That keeps me motivated. Because I love doing physical things. We do a lot of biking, a lot of bike touring. And it just allows me to spend time with the family.

Another runner shared a story about getting her children interested in running,

> She [my daughter] put on every single piece of running gear that I have, including my Garmin and my shoes and she's like "look I'm mommy, I'm running!" And this was when she was much younger, 2 and ½ or 3, she would say "run mommy run, run mommy run!" Which is really good encouragement on the treadmill.

Even though her daughter was young at the time, she was already developing an interest in running because of her mother's involvement.

Motivated to Run for Peaceful Time

Many participants were motivated to run for a peaceful and quiet time. The majority of the participants had a career and many of them also had a family to take care of. Going out to run provided women with a sense of peace, an opportunity for spirituality time, and a time to be alone with their thoughts.

Running provides a sense of peace. Through running many women were motivated to find a sense of peace or calmness. One woman simply said, "I found something in running that I didn't expect to find, which is kind of the peace I guess with myself." Another participant explained how much she enjoyed the silence of a run because it was one of the only times she could experience silence. She explained,

> I used to be one of these people who had to listen to music when I would run because I'd, and now it's just it's like, it's too much noise when I listen to music. And if I'm not chatting with people, I don't mind just listening to footfalls and my heartbeat. Um, it's just kind of, I like this, I run on the roads mostly but it's that kind of the feeling, of I like kind of communing, and just kind of hearing the silence.

This participant enjoyed the silence so much that she would rather listen to the sound of running than music.

Running provides an opportunity for spiritual time. Another motive participants had to run was to spend time praying or reflecting spiritually. One woman talked about using her runs as a time to pray. She said, "and if there's like somebody I want to pray for, or whatever, I can do it while I'm running." Another runner talked about using her runs as spiritual time because she was not able to relax at church with her children. She explained,

> For me running it allows me to have prayer time because like I have a 2 and a half year old and a 7 month old, its kind of loud in our house and like even if you bring them to church you're always watching them. So you know, you don't really have that time. But if I'm running, even if I have the baby in the stroller with me, at least I can kind of have time to self-reflect.

Run to have time for thoughts. Runners were also motivated to have a time when they were alone with their thoughts. One participant discussed how running provided her with a time to generate thoughts. She claimed to run, "to generate a lot of thoughts. It's amazing how many times I finish my run and I'm like, ah I just thought of this, whether it's with my family or something with my job." Another runner described, "running to me means serenity. It's my place, when I'm not running with people, it's my place I can get away and think about things and get away with my thoughts, and so I thought that was a perfect, calm." The time to think that women runners described occurred on runs was

something they did not find in the busyness of the day working or caring for their families.

Motivated to Run to Relieve Stress and Work Through Problems

All recreational runners interviewed used physical activity as a stress relief. Many runners did not quite realize the stress-relieving benefits of running when they started. As they became more committed to running, they depended more on using their running time to work through problems. Motivation to run to relieve stress was characterized by: a means to relieve stress, running is an escape from life stress, and that running is a vehicle to work through problems.

Running provides stress relief. All women discussed the importance of running to relieve the stress they experience from work, taking care of their families, and everyday life hassles. Participants proclaimed running to be a means to, "kind of burn off stress", "its my sense of stress relief", and "I can blow off steam". These women found a time that they could consistently utilize for stress relief, which created an important motive to continue running.

Running is an escape from life stress. While running provided an opportunity to relieve stress, it also was an escape from the chaos and stress of life. Many women talked about running being a time that they can decompress from the stress of raising small children. One woman said,

> I also run because I like to get away from the chaos. And it's uh one of the few times I get to be by myself or with a group of people who are not talking about their children as the only thing that we are doing or watching them play. Um, I love them but I need some time to decompress.

Another woman used the analogy of looking in the rearview mirror while driving. She said, "The rearview mirror is just kind of that's the road, I'm leaving it behind, that's

kind of like when I'm going to go run that's the feeling that I'm leaving all the stuff behind me." This woman liked the idea that she was leaving all of her stress behind her and heading out for a run.

Running provides a vehicle to work through problems. The activity of running provides an opportunity to relieve stress, but also enables the runner to use that time to work through problems that are causing them stress. One participant described running as empowering because she proved her capability to get through the struggle of running and therefore could get through other life struggles. She said,

> Now that I've done it, sometimes I think to myself when I'm faced with a hard situation whether it be at work or at home, I'm like, I ran a marathon, I can handle this, I ran a marathon. Its kind of silly, but a lot of truth to it I think.

Running also can parallel life in many ways. Another runner described running to be an analogy for life as having,

> Good days and bad days, good runs and bad runs. Just trying to work through problems, that you can have an outlet to go work out problems in your head or even talk them out. But that's life, like you're going to have to do that in life, you're going to have to work on problems.

For this participant, an incredibly motivating factor was to go out and run to have time to work through problems she may be experiencing.

Motivated to Run to Connect with the Outside World

Runners also were motivated to run in order to experience the outside world. Many careers are sedentary and confining to an office indoors, these runners were excited to find an opportunity to be outside. The lower-order themes characterizing connecting to the outside world included: run to be outdoors, appreciation of nature, and travel to new places.

Run to be outdoors. Most runners identified running to be a chance to spend time outside. Whether they are stuck inside at their job or use cold weather as an excuse not to spend time outdoors, these runners found being outside to be a motivator. One runner said, "sometimes I may not want to run but it's a beautiful day outside, so it's a chance to get outside." Another runner talked about how much she disliked running indoors, but that she put up with it in order to run her long distance runs outside on the weekends. She explained, "I hate, I do it, I run on the treadmill, with my kids down there, but I do it so that I can do the long runs on the weekend outside, alone." One other runner talked about how much she enjoyed exploring different neighborhoods. She shared,

> The minute I got a Garmin I was like, "Oh, I've never been in this neighborhood before". And if I don't know where it ends or where it goes to it doesn't matter, I'm into it, and it's somewhere different that I can go and look and see.

For her, she was motivated to find new places to run without worrying about how many miles she had completed.

Run to appreciate nature. Other runners were not only happy to be outdoors, but they also spent time while running to really appreciate the nature and beauty of their surroundings. One runner described that running allowed her to appreciate her surroundings unlike driving a car or riding a bike,

> Even running around the neighborhood you see houses or flowers, I like gardening, so I'll see flowers that I wouldn't see on my bike because I wouldn't be paying attention and you certainly wouldn't see in the car. So yeah, I think for me, I'm sometimes more into my surroundings.

Another runner talked about how appreciating nature was a motivator for her while on a trip. She said, "there was two days I didn't want to get up at 5:30am but I'm like, you're in Colorado I mean how much cleaner can the air be, how much more beautiful is your

scenery, and the sun's out." Even though it would have been easy to stay in bed and get more sleep, she was motivated to experience her surroundings.

Run to travel to new places. Several runners talked about using running races as an opportunity to travel to new places. One runner talked about how she was able to see a lot of different places through running races. She said, "running really involves a huge part of my life. Between you know, running, racing, and traveling to different events, met a lot of people and go to a lot of different areas. It's a huge impact in my life." Another runner discussed how she wanted to run different marathons all over the world. She explained,

> It's using marathons as an excuse to travel. Because my sights, I went as far as Canada, but there's some marathons in Germany, and obviously the London and the Paris marathon, I have got to do those. And the one in China, over the Great Wall of China, just to finish that.

This runner plans on running international races in order to both continue completing marathons but also to visit exciting cities around the world.

Barriers that Threaten Motivation to Run

While runners taking part in this study identified numerous motivating factors that help them to train and run marathons, they also divulged barriers that sometimes inhibit training and racing. Two types of barriers emerged as higher-order themes of this global category, internal and external barriers. Barriers did not always cause a runner to miss a training run or race, but served as another factor to overcome when trying to maintain a consistency in training and racing.

Internal Barriers to Running Motivation

Internal barriers were controllable barriers identified by participants to come from within themselves. These barriers included lacking motivation to run, running alone, self-negativity, and doubting ability to run a marathon.

Lacking motivation to run is a barrier. All runners explained that sometimes they just simply lack motivation to run. There is not necessarily one reason, rather hundreds of excuses to not run. One woman explained her lack of motivation as, "And sometimes I'm tired when I get home from work and I just don't want to put my shoes on and head out the door." Another runner described how sometimes that lack of motivation wins and she does not run. She said, "But believe me there are times when I don't go out too. When I look and say "Nah, forget it. I'm not that good". But, yeah we do try."

Running alone is a barrier. Four participants identified running alone to be a barrier. Finding the motivation to go out for a long run can be tough with a running partner, but even tougher if no one else is there for accountability. One runner said,

> We trained the marathon together and it's kind of been hard for me not to have them training for the [city] half and they're doing stuff completely different, so we're not training at all together. And so it's been hard for me trying to, ok, who else could I go with? Cause I don't like doing it by myself. I will, but it's not my favorite thing.

Other runners talked about not feeling as safe when they were out for a run alone, especially in a new place or at night.

Self-negativity is a barrier. The majority of runners talked about sometimes getting down on themselves as a barrier to running. One runner described self-negativity as,

> Just self-negativity, because if I start saying things like, "why aren't you faster, why aren't you stronger" and kind of pushing myself but in a negative way. Or, "God I can't believe you just pigged out at this buffet, all the training you are doing", like that's very negative.

Another runner talked about her self-negativity barrier was fear of not finishing a race. She described pushing through a marathon in pain in order to finish the race. She said, "I think if I can do it or will I bomb and not finish? I think that's one of my biggest fears. What if I can't finish? I think it's that sense of failure."

Doubt ability to run a marathon. Another form of self-negativity identified by participants was the doubt that they could run the marathon. Runners talked about feeling doubtful in their abilities during some training runs and others during races. One woman shared her experience by saying, "sometimes during a training run I may think how am I going to get that far and then I'll have to go back and I get doubts sometimes about whether or not I'll be able to make the distance."

External Barriers to Running Motivation

While internal barriers to running motivation were within a runner's control, external barriers were often factors outside of one's control. External barriers included inclement weather, time commitment, pain, lack of post-race support, and other barriers.

Inclement weather is a barrier to running. Most runners identified inclement weather to be a barrier to running. Some runners would skip a run or find an indoor workout alternative if the conditions were bad. One runner related by saying, "the weather, ok I can't go out because it's thirty below and its ice." Other runners however, ran outdoors in any condition. Another runner explained,

> I can't think of a time ever when I've been turned back by the weather and I've been out there in some really, really crummy conditions and you just think what am I doing? And you look around and you've got others with you and then you talk about it later on. So that's one of those challenging things.

For this runner, even though running in inclement weather conditions was tough, it was enjoyable to be with other runners and talk about how crazy it was to run in that weather later on.

Time commitment of training is a barrier. Many runners identified the large time commitment of training to be a barrier. One runner simply stated, "It's a chunk of time you sacrifice, there's just all these elements that goes into it." Another runner talked about completing her training by running twice a day. She said,

> I find with those training runs, like I'll have to break it up, like if I'm supposed to do six miles, a lot of times I'll do three in the morning and three at night because it just doesn't work. So yeah sometimes scheduling can be a barrier, but you make it work.

This runner did not let the time commitment be an excuse to not complete her training, instead she found a creative way to make it work.

Pain of running is a barrier. All runners talked about experiencing some types of pain through running, whether it was soreness and minor aches, to more severe injuries that require time off from running. One runner described her pain as, "I think physically just if I do have a nagging injury, like my hamstrings, just knowing its going to hurt and knowing maybe I can't go as fast." Other runners compared their pain running with something more painful. For example, one runner said, "I guess another thing too is like reflecting back to my kids is well, I had both of them through natural childbirth and I didn't have any drugs or whatever and I went through that. This is not that bad." Runners also discussed overcoming mental pain during running. Another runner talked about dealing with asthma through her running. She explained,

> I can tell you about mental pain with trying to deal with my asthma. And you go out and you can't go a quarter mile because you can't breath. That is mental pain.

> And I worked for months to get back out of that, I mean I have been dealing with different meds, so now I am feeling better.

Lack of post-race support is a barrier. One runner felt very adamant about the lack of post-race support that exists following races. Running groups and even race organizers provide a wealth of information pre-race in terms of how to train, race information, and nutritional ideas. Yet, one runner experienced a let down following the race from a lack of support from running groups and race organizers. She explained, "After the first marathon it was really hard because, even with [running group], it's so focused on building up to the race and there's no post-race support. And you get this great big high and you're like, well now what?"

Other barriers to motivation. The recreational female marathoners interviewed for this study also identified other barriers to their motivation. One runner talked about how being a runner minimized her social life. She explained,

> Sometimes it just messes up my Friday night. My husband and I, we want to go out with some friends on a Friday night, maybe you want to have a few cocktails or whatever it is. But no, you can't necessarily do that if you've got a Saturday morning 10 mile run. You can't have cocktails, by all means you can't stay up late. I've tried that, but I'm going to pay for it the next day, I'm going to feel crappy, and I feel like I'm running junky miles.

Other barriers included in this category were: raising children is a barrier to running full marathons, non-runners not understanding tough continuous training, and not being able to eat unhealthy before a race.

Strategies to Maintain Motivation in Running

While many barriers existed for recreational female marathon runners that sometimes caused them to skip a run, these women developed strategies to push through such barriers. Other runners suggested some strategies to them, but for the most part the

participants developed their own strategies based on trial and error of what worked best for them. The strategies to maintain motivation in running included, structuring the running experience, setting goals, and coping with pain.

Maintain Motivation to Run by Structuring the Running Experience

Many runners talked about the importance of having structure in order to keep accountable to the training needed to achieve race goals. The majority of runners in this study joined a running group to gain motivation from the collective group and be held accountable by running friends or partners within the group. Runners also benefitted from having a structured training calendar to follow.

Joined a running group to stay motivated. The majority of runners in this study joined a running group to help with their motivation. One woman said the group helped her motivation to run more so than running alone. She explained, "And I was kind of thinking about joining a group, the [running] group, so I would have a group to run with, so it wouldn't be as challenging to, rather than run by myself, running with people." Another one of the participants was a coach for the running group. She talked about how motivating for her it is to get new people involved in the running group to enjoy the sport of distance running. She shared, "It keeps me motivated because I'm always wanting to get people out there to enjoy what I enjoy. And so we've got a whole new group every time, pull them in and get them motivated and be a good example."

Following the structure of a training program. All runners discussed the importance of following a training program. Up front runners are given advice that if they follow the training calendar and complete the mileage, they will finish the race. Knowing the importance of the training helped runners find motivation to get out the door for each

run. One woman said, "But honestly, the calendars help me, they keep me focused." A wide variety of training programs exist at varying levels and intensities for runners of all speeds and goals. Another runner talked about trying out different training programs to keep her training fresh. For her,

> There's so many out there. But you can kind of mix it up, and like I've said, I've done the novice, I'm like alright this time I'll try the intermediate. But after I'm done ok, I'm going to give that senior one a try. Just to mix it up and make it a little bit different.

Maintain Motivation to Run by Setting Goals

Another strategy employed by all runners participating in this study was goal setting. Runners utilized various goal setting strategies including: implementing effective individual goal setting, setting process and outcome goals, finishing the run is a goal, setting the next race goal, signing up for the next race, and working on improving speed.

Implementing effective individual goal setting. Each runner was unique in setting goals that worked specifically for them. Runners set high goals like, "it seems so far out there but I'm so far gone down the one end, I may as well just set my sights high", while others set less challenging goals like, "we were going to walk, not even run at that point, we were going to walk it, that was part of our big goal."

Other runners set long-term goals including, "I have a sense of a long term goal, even if it is a year away. Next year I'm going to be doing a marathon in [city], I've at least got that something on my radar, down the road." While other runners liked having more short-term goals set a few months ahead, "I started setting a goal of something I have to do every month or every other month. I guess from June to January okay, I can do a race once a month so it's perfect."

Finally, runners also discussed having to adjust their goals. One runner talked about being under-trained for a race and deciding not to run. She said,

> And then you kind of have to talk to yourself and when I did pull out, I had some bad runs and the next day didn't get better. And I was like, I'm under-trained. I'm not ready for this. I had lost the respect. And so that's part of it. Being able to, it's over, I can close the chapter on that one, let's start anew.

Set process and outcome goals. Most runners in this sample were focused on the process of training and racing marathons. One runner talked about breaking things down into steps in order to complete the process. She shared,

> I break things down into little pieces. But just knowing that yeah I can do this. Here's the issue, this is where I need to get to with it, there is very little time spent worrying about how I'm going to get there. I know how to switch myself emotionally to focus on the process rather than worrying how it's going to get done.

Other runners also focused on the outcome goal of completing a marathon, winning a prize, or placing in their age group. One runner talked about the potential to place in her age group as,

> I'm 51, and what's really cool about this stuff, what we're catching on to is that we feel we're on the cutting edge of our age bracket. Because when we go to some of these races, there are a lot of women that are our age, more in the younger. But what is kind of cool about it is that we can place.

This runner thought placing in her age bracket would be an additional bonus to running races.

Finishing the run is a goal. All runners talked about the importance of achieving a short-term goal on each training run and race. That goal was just to finish the run. One runner talked about how not finishing was not an option for her. She said,

> I guess I don't give myself the option of not finishing it. To me that's part of the goal, whether it be a 5K or a marathon, your goal is always just to finish, and put the miles in. So, I guess I've never given myself the option to stop a race and just

> not run. Although I have told myself that if I have to kind of crawl across the finish line I'm going to.

This runner used the strategy of finish no matter what, even if it means walking or crawling across the finish line. Another runner talked about feeling accomplished even if she did not achieve pace goals. For her, "I mean there were times when oh I wished my time would have been better, I wish I would have broken 4 hours in that marathon, but even then its like well I finished and its fine."

Motivated by setting the next race goal. Many runners talked about feeling a lack of motivation following a race. One strategy to combat that lack of motivation was to set their next race goal. For some runners it took a little time to set the next race goal after running a marathon. One runner explained,

> I just want to get back out there and maybe I can run a six miler and talk to people about how their race went. And then you realize, ok I don't hate it as much as I thought I did at mile 25. And ok, it might be fun to do a half marathon next time. And then about 2 weeks later I'm like, who am I kidding, I'm going to do another full one.

Other runners finish a race and then immediately start setting their next race goal. For one runner who had a tough experience during a marathon shared,

> Yep, as hard as [marathon] was for me, my friend [name] ran with me during that. And he ran the first half with me, then he took off after that because he's faster than I am. I lost my cookies coming over the finish line; within 20 minutes we were talking about what we were going to do next. Its like childbirth, all those memories go away.

Motivated by signing up for the next race. Some runners needed a little more incentive than just setting their next race goal. For these women, actually signing up for another race provided motivation to start training. One runner simply stated, "And just the thought of, races are not cheap so you know I'm like I paid my money already so I better train." Another runner talked about signing up for the race as making a

commitment to that goal. She said, "So I signed up for [race] because I have to make myself do that. That's another thing too, its like I signed up for that race, I paid money for that race, I'm running it."

Work to improve on speed. Finally, many runners used the strategy of wanting to improve their time for their next training run or race. One runner stated, "I want to see if I can do it better. I want to see if I can beat the time that I did the day before." Another runner talked about improving her time during races and challenging herself to be better. She described her goal as, "And then I tried to work on the speed, so you can try to run those 5K's and get a [better] time, so just continue to push and see if I could be better, how much better could I be?"

Coping with Pain to Maintain Motivation

Another strategy to overcome motivational barriers to running was to find different and effective ways to cope with the physical and mental pain of running. Runners described pushing through pain, dissociating from pain, behavioral coping mechanisms to continue training and racing, breaking challenges into steps, and rewarding oneself after a run.

Pushing through pain. The majority of pain that runners experienced through training and racing was normal soreness and aches. One runner talked about putting up with her aches and pains as,

> This training that I just got done with, I had some IT band trouble on my right knee, I had some foot pain in my right foot, and I had some hip pain on my left side. Not to mention the blisters that I was dealing with. It's funny how much pain I put up with with my running. It's one of those things where I don't want to stop.

Most runners saw a doctor for injury-related pain and took the recommended time off running to heal. However, some runners did continue running through injury pain and

put themselves at risk for a more severe injury. One woman talked about ignoring her doctor's advice. She said,

> Oh boy, this past year and a half has been horrible with the IT band and it's like a hip flexor problem. But I can't stop. That's a real issue for me. I've been told you just need to take time off. Well that's something I just can't do. That's just who I am. I run through it, which I know that's not good. But if I don't do it, I'm not a good, I just can't handle not doing it.

While this runner would push through any amount of pain, other runners would take a break or pull out of a race if in pain. One runner described,

> I think like these people who run and are like, oh look I have a broken rib. I'm not, I've never experienced that, I will stop at that point...But yeah I have a friend that did one and they're like oh yeah I ran the Boston marathon with a broken rib. You're crazy! You can re-qualify. I'm a wimp, I'm not going to deal with that kind of pain.

Although this runner was not willing to push herself through a serious injury to finish a training run or a race, she did feel as though many other runners did.

Dissociate from pain during running. Runners came up with a variety of dissociation strategies to distract themselves from the physical and mental pain of a run. One runner described using positive self-talk to get herself through a tough run. She said,

> I hum the Rocky theme to myself. I say out, see you can talk to yourself on long runs, I'm ok with that. I'll say, "Yeah, you can do this! You see that stop sign over there, you are going to sprint to that stop sign and then walk for 30 seconds and then run hard again" so there is a lot of self-conversation going on out there.

This runner was not afraid to encourage herself out loud during her runs. Runners also talked about focusing on the process of running by taking the run one mile at a time. One participant explained her strategy as,

> You just take it a mile at a time. Anybody can run a mile, just one more mile. Anybody can run a mile. So, ok I have to do 15 and I'm at 8, I'm like well anybody can run until 9. We'll see what 9 looks like.

Another strategy was to use visualization to push through a tough run. One runner said, "I try to envision myself crossing the finish line." Finally, another runner talked about breaking the run down into manageable chunks. For example, "I kept thinking just a 5K home."

Behavioral coping with pain during running. Runners also used behavioral strategies to cope with pain. Some participants used medication to help take the edge off of the pain. One runner explained, "Once in a great while I would take like a Tylenol. When I would do marathons I would actually bring some with me and pop it at about the half marathon point or something." Another runner discussed how the more she runs, the better her body feels. She said,

> But the longer I'm out there and overall when I look at it, I have less pain now than I had five or six years ago when I got back into it again. Your running kind of waxes and wanes over the years, but I got back into it pretty heavily about five years ago and I'm feeling great.

Finally, within the behavioral coping strategies some runners would slow their running down in order to deal with pain. A runner explained her strategy as, "But there are times when I just stop and I'm like this sucks, I'm just going to sit here and walk in a circle for you know, 10 minutes until I catch my breath."

Breaking challenges into steps. Each marathon runner interviewed discussed the strategy of breaking challenges down into smaller, more manageable pieces. At the onset of setting the goal to run a marathon, it can seem very overwhelming at first. One runner said it helped her to think about the marathon as, "But you break it down and you break down the training and I realized that it's really not too bad." Another runner talked about breaking her challenge of losing weight down by focusing on doing something positive each day. She shared,

> So I really had to change my mental state to focus on ok this is where I'm at. And everyday that I get up and at that point walk-run, it's like it's one more step away from the negative and toward the positive. At first I started getting on the scale and that was just like it's too slow that way. I was like, I'm going to follow this marathon schedule and then before my first half I got on the scale and that was much better because I was down, I lost 50 pounds at that point, 50!

This runner reached an incredible feat through being patient and focusing on her daily goals.

Reward self after runs. Another strategy to cope with pain and fatigue was for runners to reward themselves after a run. Some rewards were a hot shower, "a lot of times I'll think about like how nice the shower will feel afterwards" or sleep, "maybe how well I'll sleep". Other runners rewarded themselves with a food or beverage treat. A runner said, "I'm like alright, I had a really good run today, I'm actually going to go to Starbucks afterwards. I'm like yeah, I, I deserved, I earned, I ran my extra mileage." Another woman put it this way, "Or sometimes like maybe if we have ice cream in the house or something I'll say ok I can eat something. So I guess it's just the thought of having a little reward at the end." For her, just the thought of a treat was motivating to get through a tough run.

Life Meaning Gained Through Running

For each of the runners interviewed, running became something more to them than just an exercise or a goal. Running became important to them on a more personal level, sometimes even integrating into how they define themselves. Runners gained life meaning through the process of integrating running into their lives and found several byproducts that were surprising benefits of running they did not realize would be so meaningful. Life meaning attained and motives to run were not viewed as mutually exclusive; rather some characteristics of life meaning could also be motives. The higher-

order themes characterizing the life meaning global category were more than something to help a runner get out the door, these characteristics were why runners loved running. The higher-order themes included: feeling motivated to run because capable of running, developing a mastery-oriented approach, finding a sense of inspiration, developing a sense of self, experiencing positive feelings, developing social relationships through running, forming a relationship with running, and factors that impede the development of meaning.

Discovering the Capability of Running

The marathon goal was a challenging and sometimes seemingly unattainable goal to each of the runners interviewed. Through a process of understanding and self-awareness the runners in this sample began to realize their capabilities and potentials. Lower-order themes included: realizing the capability to run a marathon, learn to push limits further through running, appreciate ability to run, running sets you apart, and age is not a limitation.

Realize capability to run a marathon. Many runners had a lifelong goal of someday running a marathon, but few truly believed at that time they were capable of achieving such a goal. One woman talked about it being an unreachable goal for a woman of her age. She said, "And just it seems so like kind of unreachable. Especially me being 37 years old." Another runner had a realization that regular people can train for and run marathons based on seeing a magazine article. She explained,

> And women over 40. That really caught my eye. And the picture looks kind of like me. Not someone that was like really lean, someone that looks like a regular person. And I thought, that kind of looks like what I do, or how I look. So that was kind of like the turning point.

Another runner realized after becoming a runner that basically anyone can train for and complete a marathon. She said, "really anybody, anybody can do it. If I can train myself to do this, anybody can do it."

Learn to push limits further through running. In addition to realizing their capability to train for and run marathons, the women interviewed for this study also realized marathon running could be something they were good at. One runner explained how pushing herself in running helped her realize she could push her limits in other areas as well. She said,

> It helped me do things that I think I never really imagined that I would do, that I never really thought about. It's opened up a different set of things in life and now I can maybe set my goals higher and I know they are going to be realistic.

Another participant talked about how running is a continuous challenge to push limits as she ages. She said, "I guess, maybe the element of just proving it to myself that I can do it. And I'm going to be 60 years old this year and the older I get the harder it gets." Even though running continues to get tougher, this participant continues to push herself.

Appreciate ability to run. A couple of women talked about how through the process of becoming a runner they have gained a deeper appreciation for their ability to run. One runner explained her switch in perspective as, "I think that's something that I try to remind myself everyday that I'm lucky that I have two strong legs and can go out and do it. I am always thankful that I can just do it everyday, and I need to realize that sometimes injuries hit." For this runner, she gained motivation and meaning from understanding how lucky she was to be able to run. Sometimes this realization was even clearer when she was injured and not able to run.

Running sets you apart. The participants interviewed also shared feeling special in that running sets them apart from other people. One woman explained,

> We need a sense of belonging and I belong to a somewhat elite group. I mean obviously there are more people doing marathons than there ever has been, but I know more people that have never done a marathon than that have. So I'm in like that top percentile of people that have been able to meet the challenge.

Runners know that not everyone out there has accomplished the goal of running a marathon, and thinking about being part of an exclusive group provides them meaning that they are doing something special.

Age is not a limitation. Two participants discussed how they initially believed they were too old to start a new activity like marathon running. Both runners were pleasantly surprised to find many other runners out there of all ages completing marathons. One such runner explained her new realization of her capability as, "to see the women who were even older than I was, accomplish this. So that just blew my mind. Just to see these women, when I went to my first meeting, that have already run mini-marathons." Another runner talked about what it was like for her to realize that she had the potential to run a marathon. She shared,

> You don't have to be a certain age in order to accomplish a goal. And I think that when I ran my first marathon, I realized I could do anything. If I could run 26 miles, I could do anything at that point. I mean it was just a huge break through for me. I ran my first marathon when I was 48.

Developing a Mastery-Oriented Approach

Through running, all of the women in this sample discussed developing specific mastery-oriented approaches that enhanced their running and their lives as a whole. For the most part, runners already had mastery-oriented characteristics, but running provided a vehicle for them to utilize such approaches on a regular basis. The lower-order themes

included: focus on personal improvement, importance of effort, developing discipline, mental strength needed to push through tough times, fill a competitive need, and competing with self.

Focus on personal improvement. Runners talked about focusing on improving from the last training run or race, whether that improvement was in running faster or feeling better. One runner talked about improving her runs in general. She said,

> Knowing that I can do a lot better, I've done it before so I know that I can do it again. And when I actually go out and do that I will feel a lot better, I'll get the satisfaction and just being able to overcome the bad feelings that I had.

Another runner talked about how focusing on personal improvement helps her to find meaning in why she runs. She explained,

> I think its created meaning in wanting me to always do something more, like always what more can I do, can I now run to raise money for a charity, can I run one more marathon, maybe pull someone along who wants to run a marathon? And I think that's something that you do with your life too, what more can I do? Can I go down and hit extra ground balls for another hour before practice? Can I maybe go give more clothes to a shelter or Volunteers of America? So I think that a huge two parallels with running and to my work life and personal life.

This runner views running as a metaphor for life. She sees the value in striving for personal improvement in running, but also in other areas of life such as helping others. Striving for improvement gives her a sense of meaning that is very important in her life.

Importance of effort. The runners in this sample also discussed how important it was to give 100 percent effort. One runner talked about how she was not necessarily competitive with others, but she always wanted to give her best personal effort. She shared, "I'm not super competitive, I know I'm not going to win my age group or anything, but just I want to try my best."

Running helps develop discipline. Many participants identified discipline and commitment as important characteristics that running helps to enhance and, in turn, provides meaning to them. One participant in particular was emphatic about the importance of being disciplined in both her running and life as a whole. She discussed,

> I think that running is just being disciplined and a metaphor for my entire life. Because I think I am disciplined in how I eat and how I run and how I take care of my kids and how I take care of my family or relate to them. And I think that just inspires me each and everyday because I think discipline was instilled in me since I was born, I mean my mom and dad are very disciplined people. I think that just inspires me.

Another runner talked about how being committed to her training program helps her to maintain her commitment to other areas of her life. She shared,

> Basically making a commitment. Ok, I planned on running beginning at 7am and I planned on doing, say 6 miles or whatever, and I'm trying to stick to those self-commitments that I make. Because if I don't stick to those then it's more likely in the future that I may not you know comply with other, I guess plans that I have made, that I don't want to get lax in those commitments. So I try to as much as I can to fulfill the commitments I make.

Mental strength to push through tough times. When discussing how running provides meaning in their lives all these recreational marathon runners spoke of finding an inner strength to help them push through tough runs, as well as push through life struggles. One runner shared her experience of pushing through a marathon when she hit the wall early. She shared,

> I've some inner strength in there, that's got to be it. Because I know anybody who does long distance running you are always in a situation where you think I cannot take one more step. And it's happened to me in a marathon before where I really, I looked down at the finish line and thought there's not a chance that I can make that. I was so hurt. But you pull it together and that's what I like about running. It's one of the things that I like. I said I was going to do it, it doesn't matter what you have to go through to get there, you're going to get there.

Mental strength is also required to get through the training for a marathon. One runner talked about feeling overwhelmed out on a training run. She said,

> I think there is a little bit of mental pain when you're ten miles from home and you've got to turn around and come back and things are just not quite right. You're way out in the middle of nowhere, it might be getting dark, you might be feeling a little intimidated in your surroundings and you are there alone and you're tired. So it just, mentally, you've got to be mentally tough to be a runner.

The mental toughness developed through running was an important characteristic that runners identified as what defines them as a runner.

Fill competitive need. Several runners interviewed spoke of how running fills a competitive need that is not filled elsewhere. One runner noted, "Especially that, I've been an athlete all my life and that when you're done with your college athletics there's nothing to really get those competitive juices running again." Running for this participant gave her the opportunity to be competitive like she was in college athletics, whereas other activities to get involved with are more recreational and exercise oriented.

To compete with self. Beyond just filling a need for competition, participants identified that marathon running offered an area to compete with oneself. One runner shared how for her she runs to compete and better herself. She said,

> I'm not competitive against anyone else. I'm very competitive just to myself, trying to better myself. And I compete horribly against myself. And why I run, just for that, just for the competition, to see if I can improve myself, improve my times.

This runner is constantly striving to improve on her running pace, and more importantly constantly striving to better herself as a person.

Inspiration Gained Through Others

The recreational marathon runners interviewed in this sample all discussed the importance of inspiring others and being inspired themselves through running. Runners

indicated that such inspiration provided a deeper meaning in their lives because they are influencing others to make improvements in their lives or they are making positive changes in their own lives from the influence of others. The lower-order themes relating to inspiration included: to inspire family, to inspire others, family provides running inspiration, others provide running inspiration, inspired self by setting marathon goal, others suggested setting marathon goal, running for a good cause, and objects important to running.

Run to inspire family. Other runners wanted to inspire members of their family to run or be physically active. For example, one runner talked about how she inspired her brother and cousin to start running marathons. She shared,

> This is the [city] marathon when I supported him running the race. And I picked this picture out because part of running means inspiring other people to run. And ever since I ran my marathon in '98, my brother and my cousin specifically have gotten into running and gotten into races, and so [brother] has actually run like 6 or 7. But those are two people that I think I've inspired to run and so it's cool to share it with them.

Another runner talked about how her six-year-old daughter became interested in running. She said, "And my daughter has gotten the bug and she has done Girls on the Run and she is training now for her second 5K. So I see like it's like the ripple effect."

Runners also wanted to be a role model for both their children and all young children to demonstrate the importance of being involved in physical activity. One runner described, "And I like the fact that my kids see me putting on my shoes and see me going by myself and enjoying myself and coming back. Yeah I hope I'm being a good role model for them." Being a role model for children is a way to help give back to family and the community by sharing the enjoyment of doing something healthy.

Run to inspire others. While inspiring family was important to the runners interviewed, it was equally important to inspire other people. A couple runners talked about inspiring friends and co-workers. One runner stated,

> I have motivated some of my younger colleagues to run themselves. They're in their 20s, early 20s, and that's a huge factor. If I can motivate young people to run, that makes me feel really good that they look at me as a role model, that they want to do that. That I motivated two girls at work, they have participated in their first marathons, because they saw what I could accomplish. So I guess they looked at, if [I] can do this, we can do this.

Another runner talked about how she wants to inspire other people in general to take up running. For her,

> It's just a very cool thing to do. And I would encourage anybody that you do it. Anytime we see somebody that's new to the group, or always invite them to be part of my group because I know what its like when you first start out.

Many participants also discussed being a role model for their colleagues, students, or athletes with whom they work. One runner said, "And being an example for not only my family, but my players and hopefully other people." Being a role model to others was very important to runners because they had the opportunity to help someone else to better their lives.

Family provides running inspiration. While it was meaningful for runners to inspire others to run and be physically active, they also found themselves inspired by their families and others. One runner choked back tears as she recalled finishing her first marathon. She shared,

> I'm going to tell you this part and I'm not going to cry cause I've already told this a hundred times but, finishing in [stadium] for my first marathon, my mother, my husband, and my brother popped up along the way at various points that we agreed where they would be.

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She was inspired to keep running because of the support her family gave by coming to her marathon.

Others provide running inspiration. One runner was incredibly inspired by co-workers who set and completed physical fitness goals. She explained,

> Like [co-worker's daughter] did a mile race one time last year before one of our games. And she proudly wore that medal all day. So just, I think trying to impact, and the biggest impact is just impacting other people and motivating them to set goals for themselves and accomplish something, and they won't know until they do it. And to hear [co-worker] say that she was crying as she crossed the finish line because she knew that she set herself a goal, she trained for six months, and she did it. So, hopefully impacting other people to be like, ok you can do this.

This runner was inspired by the impact that accomplishing a goal had on her co-workers. She gained meaning from knowing that in a way she inspired them to set their fitness goal and have such a great experience.

Inspired self with setting a marathon goal. Most participants decided on their own to set the goal of running a marathon. One runner explained how she set her goal as, "I'm a very goal-oriented person and I was like I've got to stick something out there that's nice and high to reach for and that's how I got started." Another runner wanted to complete the pinnacle of running. For her, "I didn't know that ultras existed when I first did it. And I thought what is the pinnacle of running? It's the marathon. Ok, well then my goal is to run and finish a marathon, without walking at anytime."

Others suggested setting marathon goal. A few participants decided to run a full marathon because someone else suggested they set the goal. One runner had her brother suggest she do a full marathon. She said, "My brother was the one that kind of I don't want to say pushed, but he helped, oh you've got two halves under your belt you can certainly do a full." Another participant got involved in marathon running with a couple

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of friends. She remembered, "It was a collection of someone suggesting it and then it was like suggested to somebody else and I'm like ok, let's do it."

Run for a good cause. Many runners also started racing to raise money for various charities. One runner talked about the positive feelings she gains from raising money to help others. She shared, "Some of the races that I do are for charity. I raise money and do it for charity. It's just that overall feeling of doing something good. So it has impacted me in, oh gosh, so many positive ways." Another runner talked about running the same race each year to make a positive impact on the fight against breast cancer. She said,

> This is actually just this past years' Race for a Cure. We do Race for a Cure every year since my daughter who is now 20 was six, because a really, really good friend of ours had breast cancer. And she got us started with Race for a Cure in [city]. And so it's continued.

This runner wanted to continuously contribute to the charity in memory of a friend who fought the battle of breast cancer.

Objects important to running. For the most part people provided inspiration to the runners in this study. However occasionally objects such as books, pictures, or running clothes were the source of inspiration. One runner reminisced, "Just looking at these pictures which I said I have hanging up on my wall from the first marathon. It's like I want to go back there again." She was inspired to continue running just by looking at photos of her first marathon and this provided meaning for her.

Developing a Sense of Self

Another theme that emerged from this study was the important sense of self that developed through running. For the majority of participants, running was one of the only things they did just for themselves. Life meaning emerged through this category because runners became empowered by taking this time for themselves and enhancing their

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identity as a runner. The lower-order themes characterizing this theme included: run for self, sense of fulfillment, enhance self-confidence, and shape ones identity.

Run for self. Runners described how part of why they run is just for themselves. Runners said, "I run for myself. Yeah, no one else", "But for me, this is my time. Whether it's selfish or not, I don't think it is", and "I can get up at 5am, before work and do this run before anything else. And it's my, it's a sacred time. It's my sacred time." Another runner discussed how she learned that by taking care of herself, she actually was more effective with helping others. She said,

> And I've really come to realize that taking care of myself, if I do put myself first then I am able to take care of others. If I'm killing myself helping someone else, in the end who does that benefit? I work myself so hard I drop dead, who benefited from that, nobody.

Runners found meaning in taking time out of their days just for themselves.

Run for a sense of fulfillment. Participants also described how running created a sense of fulfillment in them. One runner talked about how much more self-aware she is from running. She said, "It just I'm almost talking about a religion, aren't I? I needed a purpose and the running gave it to me, only I really didn't have to join anything, just become self-aware." Another runner tried to describe how she gained a sense of fulfillment or purpose by saying, "I guess meaning in and of itself to me means that it serves a purpose, it serves multiple purposes."

Running enhances self-confidence. Another surprising benefit that participants shared came from running was enhanced feelings of self-confidence. Many of the runners reported being surprised at how much running improved their views of themselves. One runner shared how running, "made me feel better overall about myself because I am disciplined and because I am in shape. So it makes me feel better about my own persona,

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my own body, since us women we always think about that perspective." Another runner described feeling better about herself, as she gets older. She explained, "I think that does a lot for your self-image, especially now that I'm older to say, well, I'm 59, I really don't have friends that run. So they all think I'm nuts." Runners gained life meaning because through their involvement in running, inadvertently they also were participating in an activity that made them feel better about themselves.

Running shapes one's identity. Women described how over time running became part of who they are. One runner said, "I think overall in a nutshell, whether good or bad I think it defines me." Another runner shared just how important running was to her identity. She said,

> It has consumed my life. It's just because I love it so much. If you ask my husband or my kids, they will tell you it is kind of my number one focus, after them. But other than that, it fully consumes who I am. Between magazines that I have, articles I have, if anyone looked in my closet I have more running clothes than I do clothes. It's just who I am. I just love it.

For many of these women, running is much more than an activity they do or a goal they strive for. Running is part of what defines who they are.

Positive Feelings Created Through Running

While the runners interviewed for this study had plenty of tough, challenging, and frustrating stories to share about their experiences as a runner, all runners overall gain very positive feelings from being runners. The positive feelings gained through running were another surprising byproduct that many runners were not expecting to achieve. The lower-order themes characterizing the positive feelings category were: running for the feeling after a run, enjoying how running feels, enjoying the endorphin rush, feeling positive with running, becoming more accepting of self and others through running,

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running is an emotional experience, race enjoyment, and running provides perspective and balance.

Run for the feeling after a run. Part of the positive feelings from running come immediately following a run. One runner described this feeling as,

> I think just everything. It surrounds me in all areas. So I really, there are days when I don't want to, but I know that if I do I will feel so much better. So just knowing that you will feel so much better when you get home.

Another runner discussed how she feels after a run by saying,

> Sometimes when I'm running I don't like it, I'm like why am I doing this? And my training partners and I just we'll complain the entire time. But then when I'm done there is nothing like, it's the best feeling in the whole world is when you are done with a good hard run. I love that feeling, its wonderful.

Runners who enjoy the feeling after a run gain meaning that they just pushed through something that they may not have wanted to, but feel great when their task is complete.

Enjoys how running feels. Participants also discussed that they enjoy the overall feeling of running. One runner described this feeling as, "I swear every time I go it's just like, you just feel so much better. Even if it's 20, 25, 30 minutes." Another runner simply stated, "It makes me feel good. I don't feel great obviously every step of the way." For these participants, running was an activity that they did to feel good during and after.

Enjoys running endorphin rush. Runners also talked more specifically about enjoying the endorphin rush they receive from running. One participant said, "Well you can't beat the runners high. I mean the endorphins afterwards are awesome." Another participant explained how she felt running was like an anti-depressant. She said, "I do think when you're out running and you are doing something so beneficial for your system, you secrete different things in your brain. It just mellows me out. It's like an anti-

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depressant." Again running provides participants with added benefits that were unexpected for women when they initially took up the activity.

Feel positive with running. Participants also talked about how running made them feel more positive about life in general. One woman was surprised in how much running has affected her attitude. She shared, "It's kind of fun to observe. Fun, astounding, and a little scary to observe just how much impact, how profound the impact has been in my attitude toward other things." Another runner shared how running is uplifting for her when she is down. She explained,

> Just the positive feelings that I get, those times when I feel rotten or um just feeling tired and how a relatively short run I can get rid of that. I mean I can go past that and enjoy things rather than being down-hearted. So I think that's the aspect of it, the reward that I think I like that the best.

Some participants also experienced a noticeable change in their outlook after becoming a runner. One woman noted, "But yeah, I think since I've become a runner it's made me a lot more positive."

Become more accepting of self and others through running. Many of the runners interviewed indicated they became more accepting because of running. One runner shared an inspiring quote, "there'll always be neighborhoods you can't move into, schools that won't have you, people that won't be your friends because of cliques, but the roads will always be open. That's just very cool, I like that." Another runner talked about how she does not worry about other people judging her as a runner. She commented, "I don't particularly care if other people think I'm nuts for running."

Running is an emotional experience. A few of the runners interviewed described how running is an emotional experience for them. One runner became emotional during the interview by recalling her experiences during races. She shared,

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> Oh my gosh, and when you are out there running a long time you start getting emotional. So you're running by the Team in Training, the purple shirts, gosh, I just see lavender purple and I'll start crying. But you're out there and you're on mile 15 and you see somebody running by with "In Memory of" on their back shirt. I'm running a marathon and if I want to cry, I'm going to cry.

Another runner talked about how running has helped her to be more in touch with her emotions. She said, "I'm more in touch with my emotions and in a way I'm more ok with my emotions. Life doesn't bother me nearly as much. And if it does, I know how to switch myself emotionally to deal with it." This runner has learned to regulate her emotions better because she has an outlet to process her emotions.

Race enjoyment. Participants talked excitedly about running races. One runner spoke of the start-line excitement as, "just the high and the buzz of the beginning, right before that gun even goes off." Another runner mentioned how much she enjoys racing in general by saying, "I love running events. I really do, I love events." Finally a runner talked about enjoying a race, even though it was a tough challenge. She said, "Well you run one marathon I guess you think, well that was miserable, let's do another one!" The runners participating in this study truly enjoyed completing races and found meaning in such enjoyment.

Running provides perspective and balance. All of the runners interviewed spoke about how running helped them to keep their lives in balance. One runner talked about balancing raising children and still having time for herself. She said,

> I guess it keeps my life in balance, like going back to like the me time because a lot of times I feel with my kids I feel like I'm doing so much for them, which of course they are so little. So I guess it's a way to take care of myself too, so I don't feel like oh it's all about them.

Other runners talked more about how running gives their life a deeper perspective. One woman talked about feeling fortunate for everything that she has. She shared, "and keep

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things in perspective and remember how lucky I am to live here and not have to struggle with a lot of things that other people in the world have to deal with."

Developing Social Relationships Through Running

Another unexpected benefit all of the runners noted they gained through running was a new social network. This particular higher-order theme was double-coded with a motivation higher-order theme. The social aspect served as both a motivation to go running, as well as providing life meaning through sharing such a personal experience with others. The lower-order themes characterizing the development of social relationships included: meeting new people through running, running group enjoyment, gaining social opportunity, and spending time with other female runners.

Meeting new people through running. All participants were surprised about how many new and interesting people they had met through running. One woman who was noted how she met some of her best friends through running,

> It's so many things. I have the people that I have met when I became a runner, have been so supportive. I've made like the best friends in the world that would do anything for me. So that's probably part of the reason that I stick to it.

Other runners talked about the camaraderie among runners and more specifically how a running group offers a sense of belonging. She explained,

> I get the sense of bonding, sense of belonging, sense of like I'm doing something to help others, you know, not just myself. The camaraderie on the course, every single race I run I always end up talking to somebody for at least a couple miles, where we exchange names and oh we do you do, what do you do? And there's just that camaraderie with a stranger I never see again. It's like wow, this is how the world should be.

Running provided women with an opportunity to meet new people and feel like they were part of something special.

Running group enjoyment. All of the running group members interviewed described feeling a great enjoyment through their experience with the running group. One runner had completed marathons both with a group and on her own. She talked about training for her next marathon as,

> But the other part like I said I wasn't really expecting to find was the community, the group of people. Cause I trained for one with a group of people and I trained for my second marathon without the group of people, and I just started in on the third one with a group and I'm like, why am I not doing this more regularly?

Being part of a group seemed to enhance the running experience for some of the runners. While the act of running was enjoyable in and of itself, the camaraderie of a group of runners made the experience even more enjoyable.

Social opportunity. Whether a member of a running group or not, all participants discussed how running became a social opportunity to meet up with friends and spend quality time together. One runner described the social opportunity as, "The friendship piece, where you're just connected to these people. And maybe you only see them in practice or the people you see on the course but that's ok." For many runners, the time they spent running was a small window of opportunity to work out and also spend some time interacting with friends outside of their immediate family. Many women were able to gain a sense of meaning through their opportunity to have some individual social time.

Opportunity for time with other female runners. The runners participating in this study also explained the importance of spending time with other female runners. One runner talked about the importance of "girl-time" as,

> I have a whole new, a lot of new friends, that like the same things that I do and that go through the same things that I go through. That's what I love. And the girlfriend type friendships. I really enjoy that.

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This aspect offered many women an opportunity to connect with other women of similar ages and interests, which was viewed as an immense benefit for some who did not have many friends outside of their families.

Form a Relationship with Running

After spending so much time training and racing, all of the runners interviewed formed a relationship with running. This relationship further suggests running creates life meaning for runners because they give to running and running gives back to them. Lower-order themes included developing a love-hate relationship with running, positive relationship, relationship with running has evolved, and running becomes an addiction.

Love-hate relationship with running. The majority of runners described having a love-hate relationship with running and this variance in emotions is what provided life meaning. One runner described her relationship with running as, "Maybe in a word my relationship would be love-hate. I feel like it's something I have to do. Sometimes I enjoy it, sometimes I don't. But I'm trying to enjoy it every time, that's why I went to the trails." Another runner shared her experience as, "You have good days and bad days and you love every horrible minute of it. You love when you're done, but you love every horrible minute of it. It may be 6 am and cold, but you're still doing something." Runners loved all of the benefits and good runs they experienced, but hated the times when running was tough.

Positive relationship with running. Other runners explained that running was for the most part positive for them. One runner said, "I think it is overall, its positive...yeah I would say its positive overall." Another runner talked about her positive relationship with running as, "Even though there are times where I wonder if I should be doing this today.

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On those days where I just don't feel like I'll have fun and then I go do it and I do have fun, so it's just overall a good thing all the time." The runners that described a positive relationship with running realized sometimes running was tough, but saw the positive benefits during those challenges. Meaning was enhanced because running was an area of life that these runners could count on to be positive.

Relationship with running has evolved. A couple of runners noted that their relationship with running evolved over time. Simply put, one runner said, "my relationship with running, it changed probably, it kind of evolved." Another runner shared more specifically that her relationship started out as just trying to accomplish the goal of 26.2 miles once and evolved into multiple marathons. She shared,

> When I first started training, I said I didn't care if I only ran 26.2 on the back roads to the middle of nowhere. I just wanted to be able to say that I did it once. And then I thought I would move on to the next thing. Five years and an extra kid later, here I am.

Many runners started running for more extrinsic reasons like losing weight and becoming more fit, but then continued running for intrinsic reasons such as the sense of self, inspiration, and positive feelings. Runners developed meaning, as the activity of running became a more integral part of who they are and what they do. This evolution occurred over time, but through it running became an incredibly important and meaningful part of their lives.

Running becomes an addiction. While the majority of information yielded from the participants was positive, one potentially negative component was the addictive nature of running. One participant called running a, "Even though a tad of it is an addiction, but it's a good one." Another runner talked about how addicting marathons are. She said, "It's such a high to be able to, I think it's terribly addicting. Marathon running

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is addicting." Finally, a runner talked about registering for races as being an obsession. She said, "So I might be getting to the obsession addiction phase by trying to schedule something for each month, but I don't know what it is that I need a goal to do something." This runner used racing once a month to fill her need for accomplishing a goal on a regular basis.

Factors that Impede Developing Meaning

While running was overall a very positive experience for all of the participants, several factors existed that took meaning away from runners. Runners did not experience such factors frequently, but became very frustrated when they did. Factors impeding the development of life meaning in runners included: frustration when not improving, feeling negative without running, and experiencing disappointment following races.

Experience frustration when not improving. A couple runners mentioned the frustration of not improving in their training and racing. One of the participants shared her frustration as,

> I get frustrated with myself when my endurance level is not where I think it should be. My times are not fast, but I'm following the book. I'm doing exactly what the book is telling me to do. Following my nutrition guide, my nutritional, but its just not clicking. That's kind of frustrates me.

For this runner, even though she was doing all of the right things to follow her training program her running was not improving. The frustration experienced was taking meaning away from this runner, because she was not accomplishing her goals.

Feel negative without running. All women participants spoke of receiving positive feelings from running, but when they were not able to run participants felt very negative. One participant discussed how she felt depressed without running. She explained, "I think the emotional thing is that sometimes when you can't run that you feel

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like somebody is taking something away from you. I think that it puts you in a little depression." This runner truly felt that her emotional well-being was balanced by running.

Disappointment following race. A couple runners described feeling let down after a race because of all the anticipation and build-up. One runner replied, "its also kind of anticlimactic, I feel like it's a little bit of a let down. I have trained and trained and then now what?" Another runner who felt similar said, "Maybe that's just the way anything is, after the big thing is the let down. Cause really after that first one I felt like holy crap, I feel like I'm like adrift at sea here." After such a structured and amazing experience, runners were looking for what is next.

Chapter V

DISCUSSION

The purpose of this study was to understand why women train for and run marathons recreationally, and how their involvement in running provides personal meaning and life satisfaction. Quantitative data on both males and females were collected in order to understand whether or not life meaning was a motive to run for both males and females. Based on the results and consistent with previous research (Curtis & McTeer, 1981; Summers, Sargent, Levey, & Murry, 1982), health orientation, goal achievement, and self-esteem were identified as the most important motives from this sample. Furthermore, competition and recognition were the lowest two motives representing the current sample, which was also supported by previous research (Masters & Lambert, 1989; Masters & Ogles, 2003). Runners are much more likely to train and race marathons for health and psychological benefits than for outcome-based rewards. Life meaning was the seventh out of nine possible motives to be identified as important. No research has previously been conducted on life meaning in marathon runners for a comparison.

Gender differences among marathon runners have also been neglected in previous research. Based on the calculated means of the life meaning subscale, males and females both identified life meaning as an important motive. Although the hypothesis that females would score higher on the life meaning subscale than males was not supported, females were chosen for the study based on a variety of reasons including increased recreational participation in marathons, advent of the women's marathon (Nike womens in San

Francisco and MORE marathon in New York), and women's many other life roles (e.g., employee, wife, mother, friend). Future studies should be done on male marathoners to understand how men specifically develop life meaning through running and compare such findings to female runners.

During phase two of the study, 12 interviews were conducted with recreational female marathon runners. In order to truly understand how females gain meaning through marathon running, runners who highly identified life meaning as a motive were selected for the interview. Four global themes emerged from the inductive content analysis, which included motives to run, barriers that threaten motivation to run, coping strategies to overcome barriers, and life meaning gained through running.

Motivation to Run Marathons

Motives identified by the current sample of female recreational runners were consistent with previously identified motives (Barrell, Chamberlain, Evans, Holt, & Mackean, 1989; Curtis & McTeer, 1981; Johnsgård, 1985b; Masters, Ogles, & Jolton, 1993). The most representative motives from previous research included health and fitness, developing cognitive strategies to overcome barriers to motivation, goal achievement, and social opportunity. Specifically comparing the emergent themes with the Master's et al., (1993) motives, a high rate of consistency was evident. Paralleling the MOMS sub-scales, identified motives included: psychological (i.e., life meaning, positive feelings, self-confidence), achievement (i.e., pride of accomplishment, accomplish future goals, setting goals), social (social opportunity, give and receive support from others, inspiration), and physical (health and fitness, physical appearance, coping with pain).

Therefore the current results replicate previous findings on why runners participate in the marathon distance.

Unique motives emerging from the present study included running because one discovered their capability to run, training and racing characteristics, developing a sense of self, seeking peaceful time, connecting with the outdoors, and relieving stress. These motives may have been overshadowed in past research, not weighing as heavily as motives of competence, health, and affiliation. Furthermore, a previous lack of qualitative research in the area of motivation among marathon runners may have also kept such motives hidden. Finally, because interview questions were framed from a life meaning approach, new motives may have emerged. Such unique motives to run are important because most often when deciding on an exercise activity to take up, exercisers are interested in relieving stress and finding a peaceful time to relax. More people may becoming interested in the activity of running if they were aware of the stress relieving benefits, peaceful time away, and opportunity for introspection. Based on societal norms and financial recession, most people today experience significant stress and are constantly multi-tasking. Based on the results presented from this study, running offers individuals a healthy option to multitask by getting a workout in, relieving stress, taking some time for oneself, and connecting with the outdoors all within a short period of time.

Investigating literature outside of motives to run, more similarities emerged between previous research and the current study. The relationship between distance running and mood has been well-documented (Gondola & Tuckman, 1982; Lane, 2001; Lane, Lane, & Firth, 2002). The current research provided additional confirmation indicating the role of marathon running on creating a more positive mood. Runners in the

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current sample identified a higher-order theme of positive feelings that was composed of 10 lower-order characteristics, during which runners specifically emphasized the endorphin rush and therapeutic potential of running. From a practical standpoint, the activity of running can help people who struggle to maintain a positive mood through the general stressors of everyday life. Furthermore, practical applications of this finding can be applied in clinical settings with individuals experiencing depression, anxiety, and stress.

Another parallel between previous research (Conboy, 1994) to the current study was discovered. Runners in the current study reported feeling withdrawn and depressed when they were unable to run. Not only did distance running reduce depression for the current sample, but also runners who needed time off from running felt more depressed when they were not able to run. One of the many reasons that marathon runners exhibited a decrease in depression was the stress relieving benefit that running provided (Conboy, 1994). When runners were unable to run due to injury or needed time off, they experienced a double effect of not receiving the positive benefits they craved (i.e., feeling after a run, endorphin rush, positive feelings, and enjoyment), as well as not having a vehicle to let go of negativity upon which they consistently relied (i.e., relieve stress, time alone, and feeling negative without running). This finding stimulates the need for further research on avid exercisers who need to take time off to heal an injury.

Furthermore, feeling states have been positively related to successful performance (Berger & Molt, 2000; Terry, Lane, Lane, & Keohane, 1999), indicating that positive feelings and overall enjoyment of the activity have the potential to improve marathon race performance. All of the runners in the current sample spoke about how running

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created positive feelings for them, both during and after running. Some of the positive feelings were related to pride in accomplishment, while other positive feelings were more general positive affect. In short, long distance runners typically had a positive life outlook. For most runners, the act of running itself was enjoyable, as well as the positive feelings and endorphins produced through running. In a recent study by Boecker et al., (2008), researchers found both an actual and perceived effect from endorphins. Based on in vivo evidence, endogenous opioids were released in the prefrontal and limbic brain centers of long distance runners, inducing a physiologically stimulated "runner's high". Furthermore, researchers collected self-report measures of happiness and mood, which indicated that runners perceived themselves to be happier and more positive following long bouts of running. This finding provides evidence for the therapeutic utility of exercise-based intervention programs for clinically depressed and anxious patients.

While for the most part participants shared the positive aspects of their running experiences, runners also identified times when they perceived themselves to not be successful (i.e., not improving, not able to run because of injury, being undertrained for a race). During times of struggle, runners were very tough on themselves. Many runners spoke about feeling disappointed in their race performance, pushing through pain so they did not have to stop running, and being hard on themselves for skipping a run. Boecker et al., (2008) also indicated the possible relationship of endorphin release with running and exercise addiction. Because the brain is actually producing good-feeling opioids, distance runners can become addicted the "runner's high". Therefore, the current research provides further support that feeling states are linked to performance outcomes of marathon running.

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Barriers that Threaten Motivation to Run

Unique to the current study was the emergence of specific barriers that threatened a runner's motivation to train and race marathons. Some runners identified internal barriers (i.e., lacking motivation, running alone, doubting ability) that were motivational barriers from within a runner's control. It was found that when internal barriers occurred, runners sometimes talked themselves out of doing their training runs and let negative thoughts overwhelm their thinking. Such negative thinking created doubt and the doubt led to participants making excuses to not run. External barriers (i.e., inclement weather, lack of time, pain) were also found to supply participants with excuses not to run. External barriers were often more situation-specific. For example, a runner could have felt very motivated to go outside to train, but after checking the weather may have decided it was too cold and stayed home instead.

The barriers that threaten motivation were an interesting finding due to the inconsistency and ambiguity amongst runners. Three runners discussed how they never experienced barriers to their motivation to run. Each day they had a training run or wanted to run they were excited to lace up their running shoes. Other runners were more middle of the road with their motivation, experiencing times when running came easily and other times when they struggled to be motivated. These runners most accurately describe the majority of runners out there. There are going to be ups and downs depending on the weather, injuries, race goals, and personal life stress. Finally, a third group of runners pushed themselves beyond what was healthy by running through pain and injury. Only two runners admitted to continuing past what was recommended by a

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doctor, but these runners ran the risk of more serious injury or even permanent damage to their bodies.

While it is not understood why some runners are motivated all the time, other runners struggle at times with motivation, and others yet push themselves to unhealthy levels, a case study methodology would help future researchers to identify personality traits and characteristics consistent with each runner group. Such results would yield important practical applications for current runners to understand their own motivational tendencies, as well as practitioners helping beginner runners to get involved in the sport. While the barriers themselves are interesting, it is more important to understand how runners who struggle with motivation are able to push through and continue running.

Coping Strategies to Overcome Barriers

While there is a lack of previous research outlining specific barriers to motivation for marathon runners, coping strategies to deal with internal and external demands have been identified specific to long distance running. The recreational marathon runners in this sample also developed specific coping strategies to overcome the motivational barriers that threaten their success in training and racing. Morgan and Pollock (1977) suggested that distance athletes utilize two primary cognitive coping strategies including association and dissociation. Dissociation strategies emerged as an important coping mechanism for the current sample of runners. Specific dissociation techniques included visualization, positive self-talk, mental tricks, and distracting thoughts. Furthermore, runners in this study also used behavioral coping strategies (i.e., medication, good hydration and nutrition, and running injury-free) to cope with the internal and external demands of running, consistent with the findings of Capen and Roberts (2001).

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Association strategies were not utilized by these participants, as consistent with previous research on recreational athletes (Brewer & Buman, 2006; Masters & Ogles, 1998). Previous researchers also suggested that non-elite athletes using dissociation coping strategies might be more susceptible to injury because they became good at zoning out the pain (Morgan & Pollock, 1977; Schomer, 1987). Repetitive use of dissociation with chronic pain could lead to overuse injuries and subsequently time off from running. Many runners in the current sample admitted to running through pain and injury. One runner even discussed how she used dissociation to remove herself from the pain by shifting her thoughts to other aspects of her life during her run. While consistent support for the notion that dissociation in recreational marathoners could lead to overuse injuries has not been found, the results of this study suggest future research is needed.

Further investigation regarding the concern about recreational female runners pushing themselves to continue running through injury was also warranted. The majority of participants were not interested in putting themselves at risk for a serious injury; however, some participants gave specific examples of continuing to run despite doctor's recommendations to rest during an injury. Although overuse injuries have been well documented in competitive sports (Nadler, Wu, Galski, & Feinberg, 1998), evidence has not linked overuse injuries with recreational exercise participants. Future research on recreational marathoners might investigate overuse injuries and self-prescribed rehabilitation strategies of this growing population. Perhaps those who chose to run marathons tend to be more achievement-oriented, and thus are more susceptible to over training then other exercisers.

Another consistency between the previous and current research involved understanding the addictive nature of long distance running. Previous researchers (Horton & Mack, 2000; Pierce, McGowan, & Lynn, 1993) have found addiction to running to be related to distance raced (i.e., ultra-marathoners and marathoners with the greatest addiction to running). Some participants in the present study described their addiction to running as a positive habit, consistent with previous researchers. Leedy (2000) found that positive addiction had the potential to relieve stress and promote adherence to training programs. However, other runners shared stories of obsessing over mileage and persistent training and racing through injury, which aligned with negative addiction characteristics. Further research should be conducted to focus on whether recreational runners are blurring the line between a positive habit and a negative addiction to marathon training and racing.

Life Meaning Gained through Marathon Running

From a theoretical standpoint, marathon running has the potential to be a vehicle for individuals to create meaning in their lives. Based on Snyder's (1997) postulation that individuals seek to manage and control their lives in order to achieve goals, marathon runners in the present study managed their training programs and maintained control in order to accomplish their race goals. Training became one area of a female runner's life that she had complete control over. The runner needed to push through the motivational barriers and develop effective coping strategies to maintain motivation. Frankl (1972, 1984) suggested through logotherapy that individuals are constantly in search of meaning, even during times of suffering. These marathoners understood that they would suffer both physically and mentally through the training process and race, yet that was

specifically where the majority of these runners found meaning. Runners talked about the mental strength needed to be a runner and how pushing through struggles as a runner helped them to push through struggles in life. Both theoretical perspectives were supported by the current research indicating that marathon running was an appropriate activity to seek out life meaning.

While previous researchers have found significant relationships to be the most important source of life meaning (Debats, 1996; Feldman & Snyder, 2005), other significant sources of meaning may come from health, self-actualization, the achievement of tangible goals, and development of talents. Because marathon running was found to serve as an outlet to improve health, achieve tangible goals, and develop talent, running could indeed be a significant source of life meaning for future practitioners to consider. Throughout the interviews conducted with recreational marathon runners, evidence that running was a source of life meaning for the participants in this sample included the higher-order themes including discovering the capability of running, developing a mastery-oriented approach, seeking inspiration, developing a sense of self, experiencing positive feelings, and forming a relationship with running.

Exercise has been identified as a source of meaning by previous researchers (Maslow, 1965; Metheny, 1968). Through exercise, individuals have the opportunity to test their capabilities, set and achieve challenging goals, and enhance their feelings of self-worth. Furthermore, consistent with Metheny's (1968) postulates on attaining meaning from goal-oriented movement, the recreational marathon runners in the current sample gained meaning from realizing their capability to run a marathon. While three of the women were runners in high school, the majority of women in this sample had never

previously viewed themselves as runners. To find that they possessed the potential to run for 26.2 miles was a life-altering discovery and appreciation for their abilities. Through this realization, runners were able to push their physical limits further than ever imagined before. The discovery of pushing limits was one that transferred to other areas of life for these women. Participants spoke about how running taught them they could handle the stress of work, family, and traumatic life events. Running became a very empowering activity for these women, as after completing a marathon or multiple marathons they realized they were capable of anything they set their minds to.

Another important characteristic of exercise that enhances meaning was that movement in and of itself produced positive physical and psychological effects (Metheny, 1968). Runners described positive physical effects such as, enjoying the feeling of running, enjoying the feeling after a run, and enjoying racing. Numerous positive psychological effects also emerged, which included feeling positive with running, gaining acceptance of self and others, and finding balance and perspective. However, along with all of the positive effects of exercise many individuals viewed exercise, particularly distance running, as boring, hard work, and not much fun. Based on Metheny's suggestions then, individuals interested in marathon running must find meaning in the positive effects, rather than allowing negative thoughts to be distracting. Those individuals who push through the motivational barriers receive self-gratifying benefits such as self-confidence, pride, and satisfaction of accomplishments.

Metheny (1968) voiced concern that some beginner exercisers may be demotivated to continue the activity because of a new awareness of just how far they have to go in order to achieve their goals. One example given by a participant to

counteract Metheny's concern was a beginner runner who took up running for weight loss. At the start of her half marathon training program her weight was fluctuating slowly and she became extremely frustrated. Instead of feeling inadequate and quitting the activity, she stopped closely monitoring her weight. After the sixteen week training program and the completion of the race, the woman discovered she had lost 50 pounds. For this runner, she had to focus her energy on the big goal ahead, instead of the daily grind of running and nutrition. In the end, she was able to maintain motivation, accomplish her race goal, and lose the weight she had hoped for.

Battista and Almond (1973) suggested four guiding characteristics of meaning including individual's commitment to seeking meaning, i.e., framing life goals, developing a life mission to fulfilling meaning, and fulfillment reached during the strive for meaning. Marathon runners in the present investigation behaved very similarly, demonstrating commitment to their training, through which marathon running became part of their identity, and subsequently pushed them to strive for race goals. All of the runners stated multiple times throughout the interview that running was part of who they are now. This identity relation was a positive association for runners because it gave them a unique and powerful characteristic to identify with. Runners also gained satisfaction through striving for overall success. Marathon running was an ideal avenue for these individuals to strive for and find meaning in their lives. Because very few people in the general population become involved in the activity of marathon running, it is furthermore important to better understand the characteristics of those who seek out such this challenging activity.

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The act of running itself is not inherently meaningful, but rather the individual must assign meaning to that action (Metheny, 1968). Running can be meaningless, as it is a constant motion repeated over and over again. Furthermore, running for exercise typically does not share the purpose of locomotion from one place to another. Also seemingly meaningless is the fatigue and pain the body feels as the duration of running increases. Meaning then comes from the participant assigning meaning to the meaningless task. Like Sysiphys, marathon runners must find meaning in the absurdity of their task. For example, the current participants assigned more meaning to running as they became more immersed in the sport. Through the process of becoming and identifying as a marathon runner, participants discussed developing and refining a mastery-approach, including a focus on improvement, effort, discipline, mental strength, and competitive drive. All of the runners interviewed continued running after their first marathons. The initial goal may have been to train for and run a marathon, but each woman in the present study found more than they expected in running. Their continued involvement in running gave them an avenue to improve physically, work hard at an activity, demonstrate commitment and discipline, model mental toughness to others, and activate a healthy competitive fire. Furthermore, running facilitated endorphin release, potentially making one feel better without really understanding why.

While little research has been done regarding gender differences in developing life meaning, Metheny (1968) suggested that females have the potential to gain meaning from both work and sport sources. Females taking part in this study gained significant meaning from the activity of marathon running because of their personal investment. Despite a slow start for females in the marathon race, the female marathon movement has

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blossomed. One participant in the current study organized races and noted that females outnumbered males in most of the races she chairs, as well as the races she ran. Furthermore, women only races have emerged across the country such as the Nike women's marathon in San Francisco and the MORE women's marathon in New York City. Women in the current study also talked about how much they enjoyed the "girl time" while they were running. Marathon running became an empowering activity to the runners involved in this study, where they could accomplish great success because of their femininity. As they became more consistent runners they began to realize their potential to accomplish any goals they had in any domain.

While support for marathon runners striving to achieve peak experiences did not explicitly emerge from the current study, several consistencies existed between the female runners interviewed and their striving for peak experiences. Runners talked about focusing on personal improvement, satisfaction of achievement, and how running feels. Running has potential to be an ideal avenue for recreational exercisers to attain peak experiences because runners typically view the activity as positive, experience emotions of humility, are intrinsically motivated, and receive self-validation from running (Maslow, 1968). Future research should assess marathoners' ability to attain peak experiences, as little research has been conducted on peak experience for exercisers.

Conceptually, life satisfaction is a very similar construct to life meaning. Marathon running also appeared to be an appropriate vehicle to provide individuals with life satisfaction as well as life meaning. Self-satisfaction was an overall understanding that life was as it should be (Ventegodt, Merrick, & Andersen, 2003). Marathon running provided a context for finding life balance and perspective, satisfaction with

accomplishments, and positive feelings. Furthermore, runners shared that even when they set their goals high and do not accomplish them, finishing the race or the run was satisfying. Running proved to be one thing that the participants could be sure to complete on each training day, which allowed women to be proud of accomplishing something.

The runners interviewed also discussed how marathon running filled multiple needs. Based on Maslow's (1959, 1968, 1971) hierarchy of needs, marathon running was found to have the potential to fill needs of acceptance and affiliation (i.e., social opportunity, inspiration, give and receive support), competence and self-esteem (i.e., accomplishment, self-confidence, capability), cognitive (i.e., time to think), and aesthetic (i.e., connection with the outside world). Furthermore, marathon running offered an opportunity to reach self-actualization because all other needs could be satisfied and self-actualized individuals seek personal growth. The final level of Maslow's model is self-transcendence, which many runners exemplified through inspiring others, striving to be a role model, and raising money for charities.

Transcendence in the case of marathon runners was seen in the female participants who became more than a wife, mother, and friend. These women found another way to be fulfilled personally, as well as help others in the process. All of the women interviewed for the current study described how helping others was very important to their life having meaning, which may be consistent with the sample, but also may be characteristic among females. Beyond the meaning female runners gain from helping others, marathons offer another unique aspect in that they are able to take time for themselves as well. All of the participants typically put themselves second or even third to their husbands, children, jobs, and friends. Running was one area where they took

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the time for themselves that was needed, which was sometimes lost in the hustle of taking care of everyone else. Therefore, marathon running is an activity that has great potential to provide women with a unique and meaningful source of life meaning.

In summary, running provided a vehicle for participants to attain life meaning and life satisfaction. Exercisers must find meaning in the absurdity of running, and then have the mental toughness to persist in the activity through challenges. Running also provided an avenue for people to feel satisfied with their performance and with their lives in general. Based on the findings of the current study, marathon running provides individuals with the opportunity to fulfill their higher level needs of self-actualization and self-transcendence.

Grounded Theory Approach

Existing theories on achievement motivation including Eccles' expectancy-value theory (Eccles, et al., 1983) and self-determination theory (Deci, 1971; Deci & Ryan, 2000) partially explained participant motives toward marathon running. Eccles expectancy-values theory contends that choice, persistence, and performance can be explained by perceived value of the activity and perceptions of success in that activity. Participants in the current study highly valued the activity of running as indicated by race enjoyment, developing a relationship with running, and the idea that running sets them apart from others. Runners also believed they had the ability to be successful in races, both from personal improvement as well as sometimes placing in races. Runners also spoke of their capability to run marathons and focused on improvement of race and training run pace.

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Looking to self-determination theory, runners in the current study identified numerous themes fulfilling the three basic needs of competence, autonomy, and relatedness. Runners spoke of accomplishing goals (competence), developing a sense of self (autonomy), and experiencing social opportunities (relatedness). Furthermore, participants discussed various degrees of intrinsic and extrinsic motivation to train and complete marathons. While participants mostly ran for intrinsic motives (i.e., sense of self, mastery-oriented approach, and to connect with the outside world), runners also enjoyed the extrinsic benefits of improving their physical appearance, winning awards, and collecting race t-shirts and jackets. Marathon running proved to be an avenue to pursue an activity that offered the opportunity to fill the needs of competence, autonomy, and relatedness.

From a grounded theory approach, self-determination theory (Deci, 1971; Deci & Ryan, 2000) provides a significant theoretical framework for understanding motivation and life meaning among recreational female marathon runners. Furthermore, including the perceived value of the activity from Eccles' and colleagues (1983) model helps to explain why runners choose the marathon distance over other shorter distances. The combination of the two theories provides an acceptable framework to understand what motivates recreational individuals to train for and run marathons.

Limitations and Future Research Recommendations

While the present study filled a gap in the literature and provided a starting point to understanding how marathon running helps build life meaning, several limitations to the study did exist. Participants completed a range of marathons from one to five, at significantly different paces. Some runners were much more competitive qualifying for

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Boston, while others were run-walkers who were not focused on speed. Furthermore, all of the runners except for two were members of a local running club. Finally, all runners planned on completing additional marathons except for one participant who suffered an injury and had a possible career-ending surgery. A more homogonous sample may have improved the trustworthiness of results.

Another limitation of the study had to do with data collection. All participants were interviewed face to face except for two interviews conducted over the phone. While the same interview guide was utilized, a face-to-face connection was not established during the phone interviews. Participants interviewed over the phone may not have felt as comfortable divulging personal information about their running experiences.

Future studies on life meaning in marathon running should focus on the experiences of male marathon runners, allowing for gender comparison. Additionally, more probing questions relating to peak experiences and flow states achieved during running should be asked to gain insight into areas with little empirical support for the exerciser population. Also a series of questions asking participants about other sources of life meaning would provide hierarchical organization of sources of meaning. Finally, other levels of marathon runners (Boston qualifiers, elite, and professional) should be interviewed to understand the similarities and differences of life meaning across competitive level. It would also be interesting to speak with other endurance athletes of various sports (cycling, triathlon, swimming) to understand their experiences in relation to the development of meaning.

In sum, while running is a healthy physical activity to improve fitness, lose weight, and attain a goal, commitment to marathon running has the potential to provide a

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greater sense of life meaning. Even after becoming aware of the importance and impact running had for participants, all runners sometimes struggled to overcome motivational barriers. Runners developed effective coping strategies to push themselves through such barriers. With persistence, discipline, and commitment, running long distances can be an enjoyable experience throughout ones entire life.

Appendix A

DEMOGRAPHICS AND RUNNING HISTORY QUESTIONAIRES

Age: _____ Occupation: _____

Circle one: Single Married Divorced

Do you have children: Yes (how many? _____) No

Did you play any sports in high school or college? Yes No

If yes in high school list sports: _____

If yes in college list sports: _____

How long have you been running (months or years)? _____

How many and what type of races have you completed?

5K _____ 10K_____ Half Marathon_____ Marathon_____ Other_____

What are your personal best race finishing time(s)?

5K _____ 10K_____ Half Marathon_____ Marathon_____ Other_____

How many days per week do you train? _____ On average how many miles/run? _____

What is your approximate training pace? _____

Do you train with partners, a group, or alone? _____

Do you participate in other sports and activities? YES NO

If yes, what activities? _____

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Appendix B

MOMS

Motivations of Marathoners Scales (MOMS; Masters, Ogles, & Jolton, 1993)

Please rate each of the following items according to the scale below in terms of how important it is as a reason for why you trained and ran a marathon. A score of 1 would indicate that the item was "not a reason" for training and running the marathon; a score of 7 indicates that the item was "a most important reason" for your training for and running the marathon; and scores in between represent relative degrees of each reason.

Not A Reason						Most Important Reason
1	2	3	4	5	6	7

1. _____ To help control my weight.
2. _____ To compete with others.
3. _____ To earn respect of peers.
4. _____ To reduce my weight.
5. _____ To improve my running speed.
6. _____ To earn the respect of people in general.
7. _____ To socialize with other runners.
8. _____ To improve my health.
9. _____ To compete with myself.
10. _____ To become less anxious.
11. _____ To improve my self-esteem.
12. _____ To have something in common with other people.
13. _____ To add a sense of meaning to life.
14. _____ To prolong my life.

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Not A Reason						Most Important Reason
1	2	3	4	5	6	7

15. _____ To become less depressed.

16. _____ To meet people.

17. _____ To become more physically fit.

18. _____ To distract myself from daily worries.

19. _____ To make my family or friends proud of me.

20. _____ To make my life more purposeful.

21. _____ To look leaner.

22. _____ To try to run faster.

23. _____ To feel more confident about myself.

24. _____ To participate with my family or friends.

25. _____ To make myself feel whole.

26. _____ To reduce my chance of having a heart attack.

27. _____ To make my life more complete.

28. _____ To improve my mood.

29. _____ To improve my sense of self-worth.

30. _____ To share a group identity with other runners.

31. _____ It is a positive emotional experience.

32. _____ To feel proud of myself.

33. _____ To visit with friends.

34. _____ To feel a sense of achievement.

35. _____ To push myself beyond my current limits.

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Not A Reason						Most Important Reason
1	2	3	4	5	6	7

36. _____ To have time alone to sort things out.

37. _____ To stay in physical condition.

38. _____ To concentrate on my thoughts.

39. _____ To solve problems.

40. _____ To see how high I can place.

41. _____ To feel a sense of belonging with nature.

42. _____ To stay physically attractive.

43. _____ To get a faster time than my friends.

44. _____ To prevent illness.

45. _____ People look up to me.

46. _____ To see if I can beat a certain time.

47. _____ To blow off steam.

48. _____ Brings me recognition.

49. _____ To have time alone with the world.

50. _____ To get away from it all.

51. _____ To make my body perform better than before.

52. _____ To beat someone I've never beaten before.

53. _____ To feel mentally in control of my body.

54. _____ To get complements from others.

55. _____ To feel at peace with the world.

56. _____ To feel like a winner.

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Appendix C

INFORMED CONSENTS

UNDERSTANDING MEANING AND LIFE SATISFACTION IN RECREATIONAL FEMALE MARATHON RUNNERS
INFORMED CONSENT

You are being asked to participate in a research study conducted by Angela Fifer from the Michigan State University for her dissertation research. The purpose of this study is to understand the motivations of recreational marathon runners. In this study you are asked to complete the following survey, which will take approximately 20-30 minutes to complete. Your responses will remain confidential; no one except the primary investigator will have access to these responses. While, your name will be asked, no individual names will appear in the results and only group-based findings will be made available to those who are interested. Your confidentiality will be protected to the maximum extent allowable by law. There are no known risks associated with participation in this study and you will not benefit from your participation in this study. All data, including demographic questionnaires, running histories, and surveys will be stored in a locked file cabinet and maintained by the primary investigator for a period of three years after the final report is submitted. All data will be accessible only by the primary investigator, dissertation committee, and Internal Review Board.

Your participation in this study would be greatly appreciated. Our hope is that the information gathered from the project will be used to help motivate other exercisers to maintain their exercise program or begin a new exercise program. Please know that your participation is voluntary and assumed by your completion of the online survey. You must be 18 years of age or older to participate. Your participation in the study will enter you into a drawing to receive a $25 gift certificate from Playmakers. You may withdraw from participation at any time without penalty. Furthermore, you may refuse to answer specific questions that you feel uncomfortable answering and can still be a part of the study. If you have any concerns or questions about this research study, such as scientific issues, how to do any part of it, or to report an injury, please contact the primary investigator Dr. Daniel Gould at (517) 432-0175 or drgould@msu.edu or Angela Fifer at (517)353-9691 or fiferang@msu.edu. If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 202 Olds Hall, MSU, East Lansing, MI 48824.

I agree to participate in this research study.
Yes
No

UNDERSTANDING MEANING AND LIFE SATISFACTION IN RECREATIONAL FEMALE MARATHON RUNNERS
INFORMED CONSENT

Purpose
The purpose of this study is to understand how marathon running provides personal meaning and life satisfaction to recreational female runners. Additionally, to understand why these runners participate in marathons despite knowing the physical pain and psychological anguish associated with running long distances.

Procedures
If you volunteer to take part in this study, first you will be given a disposable camera to take pictures of what running means to you. You will drop off the camera to the running store and the pictures will be developed for the interview. During the interview, you will be asked questions regarding demographics, your running history, and why you run marathons. The interview should take approximately 60-90 minutes. You are welcome to stop the interview at any time and can also ask that the tape recorder be turned off for any reason.

Confidentiality
All of your responses in this study are confidential. Your confidentiality will be protected to the maximum extent allowable by law. At no time will your name be associated with any statements made during the interview. Following the interview, your transcript will be assigned a number to protect your identity. All data, including photographs and transcriptions will be stored in a locked file cabinet and maintained by the primary investigator for a period of three years after the final report is submitted. Digital audio files of the interview will be password protected. All data will be accessible only by the primary investigator, dissertation committee, and Internal Review Board.

Voluntary Participation
Please know that you may withdraw from participation at any time without penalty. Furthermore, you may refuse to answer specific questions in the interview that you feel uncomfortable answering and can still be a part of the study. You may also request the audio tape to be stopped at any point. Refusal to participate will involve no penalty or loss of benefits.

Risk and Benefits
There is minimal risk for emotional or psychological harm should you choose to participate because of the sensitive nature of the interview questions. You may, but it is unlikely that you will, experience some embarrassment, upset, or discomfort while completing the interview.
This research might provide you with a better understanding of your experience and the knowledge that you are not alone in your feelings.

Compensation
For your participation in this study, you will receive a $10 gift certificate to Playmakers immediately following the interview.

Contact Persons
If you have any concerns or questions about this research study, such as scientific issues, how to do any part of it, or to report an injury, please contact the primary investigator, Dr. Dan Gould in the Department of Kinesiology at (517) 432-0175 or by email at drgould@msu.edu. You may also contact Angela Fifer at (517) 353-9691, or by email at fiferang@msu.edu. If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 202 Olds Hall, MSU, East Lansing, MI 48824.

Consent
I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study.

Please retain this document concerning your rights for your records.

Participant's Signature _____ Date _____

Consent to Audio Tape_____

Consent to use Audio clips for Educational Purposes

_____

Appendix D

INTERVIEW GUIDE

Part I: Photo Interpretation

1. Tell me about these photos. How do they describe your experience running?
2. What does running means to you?
3. Which photo best describes why you run? Why?
4. For what other reasons do you run, that maybe were not captured in the photos?

Part II: Interview Questions

1. What motivates you to run?
    a. What motives you to start a run when you might not want to run?
    b. What motivates you to keep running during a tough run?
    c. What motivates you after a really tough run?
2. Why do you run?
    a. What do you get from running?
    b. In what ways do you feel running satisfies or fulfills you?
    c. How does the activity of running effect you? (e.g., provides a tremendous sense of accomplishment, allows me time to be by myself and self reflect, gives me confidence).
    d. Does running meet any needs for you?
    e. How much pain do you experience while training (in races)? How do you cope with the pain you experience?
3. Why did you choose the marathon distance?

4.

5.

6.

7.

Part I

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4. Describe your relationship with running?
    a. Is running always positive for you? Why or why not?
5. How has running impacted your life?
6. What motivational barriers do you face when running and training for marathons?
    a. Physical?
    b. Emotional?
    c. Environmental?
7. What motivates you to continue running after completing a marathon?
    a. What motivational barriers have you experienced?

Part III: Conclusions and Thank You

1. Is there anything else that you would like to discuss regarding your experiences as a runner?
2. What are your future goals as a runner?
3. Thank you for your participation in this research!

REFERENCES

Atkinson, J.W. (1964). *An introduction to motivation.* Princeton, D. Van Nostrand Company, Inc.

Battista, J. & Almond, R. (1973). The development of meaning in life. *Psychiatry, 36,* 409-427.

Barrell, G., Chamberlain, A., Evans, J., Holt, T., & Mackean, J. (1989). Ideology and commitment in family life: A case study of runners. *Leisure Studies, 8,* 249-262.

Berger, B.G., & Motl, R.W. (2000). A selective review and synthesis of research employing the Profile of Moods States. *Journal of Applied Sport Psychology, 12,* 49-68.

Biddle, S.J.H. & Hill, A.B. (1991). Relationships between attributions and emotions in a laboratory-based sporting contest. *Journal of Sports Sciences, 10,* 65-75.

Boecker, H., Sprenger, T., Spilker, M.E., Henriksen, G., Koppenhoefer, M., Wagner, K.J., Valets, M., Berthele, A., & Tolle, T.R. (2008). The runner's high: Opioidergic mechanisms in the human brain. *Cerebral Cortex, 18,* 2523-2531.

Brewer, B.W., & Buman, M.P. (2006). Attentional focus and endurance performance: Review and theoretical integration. *Kinesiologia Slovenica, 12,* 82-97.

Brockner, J., Wiesenfeld, B.M., & Raskas, D.F. (1993). Self-esteem and expectancy-value discrepancy: The effects of believing that you can (or can't) get what you want. In R.F. Baumeister (Ed.). *Self-esteem: The puzzle of low self-regard* (pp. 219-240. New York: Plenum Press.

Buman, M.P., Omli, J.W., Giacobbi, P.R., & Brewer, B.W. (2008). Experiences and coping responses of "hitting the wall" for recreational marathon runners. *Journal of Applied Sport Psychology, 20,* 282-300.

Burfoot, A. (2007). The history of the marathon: 1976 to present. Conference paper. *Sports Medicine, 37*(4-5), 284-287.

Byrne, A., & Byrne, D.G. (1993). The effect of exercise on depression, anxiety, and other mood states: A review. *Journal of Psychosomatic Research, 37,* 565-574.

Caldcleugh, W.G. (1870). *The Iliad,* by Homer. translated to English. Philedelphia, J.B. Lippencott & Co.

Camerack, M.A., & Martens, R. (1979). Measuring commitment to running: A survey of runners' attitudes and mental states. *Journal of Sport Psychology, 1,* 25-42.

Campen, C., & Roberts, D.C. (2001). Coping strategies of runners: Perceived effectiveness and match to precompetitive anxiety. *Journal of Sport Behavior, 24*, 144-161.

Chan, C. & Grossman, H. (1988). Psychological effects of running loss on consistent runners. *Perceptual Motor Skills, 66*, 875-883.

Clough, P.J., Shepherd, J., & Maughan, R.J. (1989). Marathon finishers and pre-race drop-outs. *British Journal of Sports Medicine, 23*(2), 97-101.

Collinson, J.A. (2005). Emotions, interaction and the injured sporting body. *International Review for the Sociology of Sport, 40*(2), 221-240.

Conboy, J.K. (1994). The effects of exercise withdrawal on mood states in runners. *Journal of Sport Behavior, 17*, 188-203.

Csikszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology, 56*, 815-822.

Curtis, J., & McTeer, W. (1981, January). The motivation for running. *Canadian Runner*, pp. 18-19.

Deaner, R.O. (2006). More males run relatively fast in U.S. road races: Further evidence of a sex difference in competitiveness. *Evolutionary Psychology, 4*, 303-314.

Debats, D.L. (1996). Meaning in life: Clinical relevance and predictive power. *British Journal of Clinical Psychology, 35*, 503-516.

Debates, D.L. (1999). Sources of meaning: An investigation of significant commitments in life. *Journal of Humanistic Psychology, 39*(4), 30-57.

Deci, E.L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18*, 105-115.

Deci, E.L., & Ryan, R.M. (1980). The empirical exploration of intrinsic motivational processes. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13, pp. 39-80). New York: Academic.

Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum.

Deci, E.L., & Ryan, R.M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation: Vol. 38. Perspectives on motivation* (pp. 237-288). Lincoln: University of Nebraska Press.

Deci, E.L., & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268.

DuFault, K.J., & Martocchio, B.C. (1985). Hope: Its spheres and dimensions. Nursing Clinics of North America, *20*(2), 379-391.

Eccles, J., Adler, T.F., Futterman, R., Goff, S.B., Kaczala, C.M., et al. (1983). Expectancies, values, and academic behaviors. In T.J. Spence (ed.) *Achievement and achievement motivation.* San Francisco, Freeman, pp. 75-146.

Feldman, D.B., & Snyder, C.R. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal-directed thinking and life meaning. *Journal of Social and Clinical Psychology, 24*(3), 401-421.

Ford, M. (1992). *Motivating humans: Goals, emotions, and personal agency beliefs.* Boston: Sage.

Frankl, V. (1972). The feeling of meaninglessness: A challenge to psychotherapy. *American Journal of Psychoanalysis, 32*, 85-89.

Frankl, V. (1984). *Man's search for meaning.* New York: Pocket Books.

Gill, D.L. (1980). Cohesiveness and performance in sport teams. In W.F. Straubb (Ed.), *Sport psychology: An analysis of athlete behavior* (2nd ed.). Ithica, NY: Movement Publications.

Glaser, B.G. (1978). *Theoretical sensitivity.* Mill Valley, CA: Sociology Press.

Glasser, W. (1976). *Positive addiction.* New York: Harper and Row.

Gondola, J.C., & Tuckman, B.W. (1982). Psychological mood state in "average" marathon runners. *Perceptual and Motor Skills, 55,* 1295-1300.

Hall, A., & Terry, P.C. (1995). Predictive capability of pre-performance mood profiling at the 1993 World Rowing Championships, Roudnice, the Czech Republic. *Journal of Sport Sciences, 13*, 56-57.

Haskell, W.L., Lee, I.M., Pate, R.R., Powell, K.E., Blair, S.N., Franklin, B.A., Macer, C.A., Heath, G.W., Thompson, P.D., & Bauman, A. (2007). Recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Medicine and Science in Sports and Exercise,* 1423-1434.

Havenar, J., & Lochbaum, M. (2007). Differences in participation motives of first-time marathon finishers and pre-race dropouts. *Journal of Sport Behavior, 30*(3), 270-279.

Horton, R.S., & Mack, D.E. (2000). Athletic identity in marathon runners: Functional focus or dysfunctional commitment? *Journal of Sport Behavior, 23*(2), 101-119.

Hull, C.L. (1943). *Principles of behavior*. New York: Appleton-Century-Crofts.

Jackson, S.A. (1992). Athletes in flow: A qualitative investigation of flow states in elite figure skaters. *Journal of Applied Sport Psychology, 4*, 161-180.

Jackson, S.A. (1995). Factors influencing the occurrence of flow state in elite athletes. *Journal of Applied Sport Psychology, 7*, 135-163.

Jackson, S.A. (1996). Toward a conceptual understanding of the flow experience in elite athletes. *Research Quarterly for Exercise and Sport, 67*, 76-90.

Jackson, S.A., & Csikszentmihalyi, M. (1999). *Flow in sports: The keys to optimal experiences and performances.* Champaign, IL: Human Kinetics.

Jackson, S.A., & Eklund, R.C. (2002). Assessing flow in physical activity: The Flow State Scale-2 and the Dispositional Flow Scale-2. *Journal of Sport and Exercise Psychology, 24*, 133-150.

James, W. (1892). *Psychology: The briefer course*. New York: Holt.

Jenkins, C. (1998). Russian feud adds spice, no sugar, to women's race. *San Diego Union-Tribune,* p. C-17.

Johnsgård, K. (1985a). The motivation of the long distance runner: I. *Journal of Sports Medicine, 25*, 135-139.

Johnsgård, K. (1985b). The motivation of the long distance runner: II. *Journal of Sports Medicine, 25*, 140-143.

Jones, C.G., Hollenhorst, S.J., Perna, F., & Selin, S. (2000). Validation of the flow theory in an on-site white water kayaking setting. *Journal of Leisure Research, 32*(2), 247-261.

Jones, J.G., Swain, A.B.J., & Cale, A. (1990). Antecedents of multidimensional state anxiety and self-confidence in eliete intercollegiate middle-distance runners. *The Sport Psychologist, 4,* 107-118.

Kimiecik, J.C., & Stein, G.L. (1992). Examining flow experiences in sport contexts: Conceptual issues and methodological concerns. *Journal of Applied Sport Psychology, 4,* 144-160.

Kostrubala, T. (1977). *The joy of running*. New York: Simon and Schuster.

Lane, A. (2001). Relationships between perceptions of performance expectations and mood among distance runners: The moderating effect of depressed mood. *Journal of Science and Medicine in Sport, 4(*1), 116-128.

Lane, A.M., Lane, H., & Firth, S. (2002). Performance satisfaction and postcompetition mood among runners: Moderating effects of depression. *Perceptual and Motor Skills, 94*, 805-813.

Lange, S.P. (1978). Hope. In C.L. Carlson & B. Blackwell (Eds.), *Behavioral concepts and nursing intervention.* Philadelphia, Lippencott.

LaRossa, R. (2005). Grounded theory methods and qualitative family research. *Journal of Marriage and Family*, 67, 837-857.

Lazarus, R., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Leedy, M.G. (2000). Commitment to distance running: Coping mechanism or addiction? *Journal of Sport Behavior, 23*(3), 255-270.

Lyons, H., & Cromey, R. (1989). Compulsive jogging: Exercise dependence and associated disorder of eating. *Ulster Medical Journal, 58*, 100-102.

Marathon Guide. www.marathonguide.com. Retrieved on January 20, 2009.

Marathon. http://en.wikipedia.org/wiki/Marathon. Retrieved on January 20, 2009.

Markoff, R.A., Ryan, P., & Young, T. (1982). Endorphins and mood change in long-distance running. *Medicine and science in sports and exercise, 14*(1), 11-15.

Marshall, C., & Rossman, G.B. (2006). *Designing qualitative research* (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.

Maslow, A.H. (1959). Cognition of being in the peak experience. *The Journal of Genetic Psychology, 94*, 43-66.

Maslow, A.H. (1965). Self-actualization and beyond. *Proceedings of the Conference on the Training of Counselors of Adults*, 108-131.

Maslow, A.H. (1968). *Toward a psychology of being.* New York: D.van Nostrand.

Maslow, A.H. (1971). The farther reaches of human nature. New York: The Viking Press.

Masters, K.S., & Lambert, M.J. (1989). The relations between cognitive coping strategies, reasons for running, injury, and performance of marathon runners. *Journal of Sport and Exercise Psychology, 11*, 161-170.

Masters, K.S., & Ogles, B.M. (1995). An investigation of the different motivations of marathon runners with varying degrees of expertise. *Journal of Sport Behavior, 18*(1), 69-73.

Masters, K.S., & Ogles, B.M. (1998). The relations of cognitive strategies with injury, motivation, and performance among marathon runners: Results from two studies. *Journal of Applied Sport Psychology, 10*, 281-296.

Masters, K.S., Ogles, B.M., & Jolton, J.A. (1993). The development of an instrument to measure motivation for marathon running: The Motivations of Marathoners Scale (MOMS). *Research Quarterly for Exercise and Sport, 64*(2), 134-143.

McAuley, E., Rejeski, W.J., & Russell, D. (1985, May). The issue of control in attribution theory: The Revised Causal Dimension Scale (CDS-II). *Paper presented at the annual conference of the North American Society for the Psychology of Sport and Physical Activity*, Gulf Port, MS.

Metheny, E. (1968). *Movement and meaning*. New York, McGraw Hill.

Moneta, G.B., & Csikszentmihalyi, M. (1996). The effect of perceived challenges and skills on the quality of subjective experience. *Journal of Personality, 64*, 275-310.

Morgan, W.P. (1978). The mind of the marathoner. *Psychology Today, 11*(4), 38-49.

Morgan, W.P. (1979). Negative addiction in runners. *Physiological Sports Medicine, 7*, 57-70.

Morgan, W.P., Horstman, D.H., Cymerman, A., & Stokes, J. (1983). Facilitation of physical performance by means of a cognitive strategy. *Cognitive Therapy and Research, 7*, 251-263.

Morgan, W.P., & Pollock, M.L. (1977). Psychological characteristics of the elite distance runner. In P. Milvey (Ed.), *The marathon: Physiological, medical, epidemiological, and psychological studies.* Annals of New York Acadamy of Sciences. New York: New York Academy of Sciences, pp. 382-403.

Murray, H.A. (1938). *Explorations in personality*. New York: Oxford University Press.

Ogles, B.M., Lynn, S.J., Masters, K.S., Hoefel, T.D., & Marsden, K.A. (1993). Runners' cognitive strategies and motivations: Absorption, fantasy style, and dissociative experiences. *Imagination, Cognition, and Personality, 13*(2), 163-174.

Ogles, B.M., & Masters, K.S. (2000). Older vs. younger adult male marathon runners: Participant motives and training habits. *Journal of Sport Behavior, 23*(2), 130-143.

Ogles, B.M., & Masters, K.S. (2003). A typology of marathon runners based on cluster analysis of motivations. *Journal of Sport Behavior, 26*(1), 69-85.

Ogles, B.M., Masters, K.S., & Scott, A.R. (1995). Obligatory running and gender: An analysis of participative motives and training habits. *International Journal of Sport Psychology, 26*, 233-248.

Okwumbua, T.M., Meyers, A.W., & Santille, L. (1987). A demographic and cognitive profile of master runners. *Journal of Sport Behavior, 10*, 212-220.

Pate, R.R., & O'Neill, J.R. (2007). American women in the marathon. Conference paper. *Sports Medicine, 37*(4-5), 294-298.

Patton, M.Q. (2002). *Qualitative research and evaluation* methods (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Pierce, E.F., McGowan, R.W., & Lynn, T.D. (1993). Exercise dependence in relation to competitive orientation of runners. *The Journal of Sports Medicine and Physical Fitness, 33(*2), 189-193.

Ravizza, K. (1977). Peak experiences in sport. *Journal of Humanistic Psychology, 17*(4), 35-40.

Rejeski, W.J., & Kenney, E. (1987). Distracting attentional focus from fatigue: Does task complexity make a difference? *Journal of Sport and Exercise Psychology, 9*(1), 66-73.

Roberts, G.C. (1992). *Motivation in sport and exercise*. Champaign, IL: Human Kinetics.

Roberts, G.C. (2001). *Advances in motivation in sport and exercise*. Champaign, IL: Human Kinetics.

Sachs, M., & Pargman, D. (1979). Running addiction: An in-depth interview examination. *Journal of Sport Behavior, 2*, 143-155.

Sacks, M. (1981). Running addiction: A clinical report. In M. Sacks, M. Sachs (eds.) *Psychology of running*. Champaign, IL: Human Kinetics.

Sage, G. (1977). *Introduction to motor behavior: A neuropsychological* approach (2nd ed.), Reading, MA: Addison-Wesley.

Santamaria, V.L., & Furst, D.M. (1994). Distance runners' causal attributions for most successful and least successful races. *Journal of Sport Behavior, 17*(1), 43-47.

Schomer, H.H. (1987). Mental strategy training programme for marathon runners. *International Journal of Sport Psychology, 18*, 133-151.

Schüler, J., & Langens, T.A. (2007). Psychological crisis in a marathon and the buffering effects of self-verbalizations. *Journal of Applied Social Psychology, 37*(10), 2319-2344.

Slusher, H.S. (1967). *Man, sport, and existence: A critical analysis*. Philadelphia, Lea & Febiger.

Snyder, C.R. (1997). Control and the application of Occam's Razor to terror management theory. *Psychological Inquiry, 8*, 48-49.

Snyder, C.R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*, 249-275.

Snyder, C.R., Feldman, D.B., Shorey, H.S., & Rand, K.L. (2002). Hopeful choices: A school counselor's guide to hope theory. *Professional School Counseling, 5*, 298-306.

Snyder, C.R., Harris, C., Anderson, J.R., Holleran, S.A., Irving, L.M., Sigmon, S.T., et al. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*, 570-585.

Sparkes, A.C., & Partington, S. (2003). Narrative practice and its potential contribution to sport psychology: The example of flow. *The Sport Psychologist, 17*, 292-317.

Stevinson, C.D., & Biddle, S.J. (1998). Cognitive orientations in marathon running and "hitting the wall". British Journal of Sports Medicine, 32, 229-235.

Strauss, A. & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.

Summers, J.J., Sargent, G.I., Levey, A.J., & Murray, K.D. (1982). Middle-aged, non-elite marathon runners: A profile. *Perceptual and Motor Skills, 54*, 963-969.

Terry, P.C., Lane, A.M., Lane, H.J., & Keohane, L. (1999). Development and validation of a mood measure for adolescents: POMS-A. *Journal of Sports Science, 17*, 861-872.

Trappe, S. (2007). Marathon runners: How do they age? Conference paper. *Sports Medicine, 37*(4-5), 302-305.

U.S. Department of Health and Human Services. (2000). *Physical activity and health: A report of the Surgeon General Atlanta, GA*: U.S. Department of Health and

Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.

United States Centers for Disease Control. (1988). *Physical fitness promotion.* Los Angeles: Author.

Ventegodt, S., Merrick, J., & Andersen, J. (2003). Quality of life theory I. The IQOL theory: An integrative theory of the global quality of life concept. *The Scientific World Journal, 3*, 1030-1040.

Vroom, V.H. (1964). *Work and motivation.* New York: Wiley.

Weinberg, R.S. (1985). Relationship between self-efficacy and cognitive strategies in enhancing endurance performance. *International Journal of Sport Psychology, 17*, 280-292.

Weinberg, R.S., Smith, J., Jackson, A., & Gould, D. (1984). Effect of association, dissociation, and positive self-talk strategies on endurance performance. *Canadian Journal of Applied Sport Science, 9,* 25-32.

Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology, 71(*1), 3-25.

Wilson, V.E., Morley, N.C., & Bird, E.I. (1980). Mood profiles of marathon runners, joggers, and non-exercisers. *Perceptual and Motor Skills, 50*, 117-118.

Wuthnow, R. (1978). Peak experiences: Some empirical tests. *Journal of Humanistic Psychology, 18*(3), 59-75.

Yalom, I.D. (1980). *Existential psychotherapy.* New York: Basic Books.

Yates, A. (1991). *Compulsive exercise and eating disorders: Toward an integrated theory of activity.* New York: Brunner Mazel.

Zika, S. & Chamberlain, K. (1992). On the relation between meaning in life and psychological well-being. *British journal of Psychology, 83*, 133-145.