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AN EXAMINATION OF THE MOTIVES TO PARTICIPATE IN SPRINT DISTANCE TRIATHLON

BY

DAVID M. LOVETT

B.S., Elementary Education, LSU-Shreveport, 1997
MBA, Business management, UL-Monroe, 2005

Dissertation
Submitted in Partial Fulfillment of the
Requirements for the Degree of

Doctor of Philosophy
Health, Physical Education and Recreation

The University of New Mexico
Albuquerque, New Mexico

May, 2011

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DEDICATION

I dedicate this dissertation to my wonderfully supportive wife, Myra. This was only possible through your unselfishness and encouragement over many years. You made this all possible. I also dedicate this accomplishment to my awesome son, Silas, and my loving family members who knew it was worth it.

ACKNOWLEDGEMENTS

I truly appreciate the support and forbearance of my dissertation committee. Their support and feedback helped get me through the rigorous process. I would like to especially thank my chair, Dr. John Barnes, for his work, insight, and punctual response and correspondence with me across state lines. At no time were you less than 100% professional and available. I can’t tell you how much that meant to me.

I would also like to thank my UNM/fantasy football brotherhood: George Schaeffer, Alfredo Martinez, Glenn Hushman, Temo Carboni, Shane Huff, and Terry Olsen. In some way, each of you either helped the process or made it more enjoyable.

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ABSTRACT

The purpose of this study was to explore the motivational factors of triathletes in order to better understand the specific motives that drive them to consume the product/service of and participate in triathlon events. The study looked specifically at participants in sprint triathlon, the shortest of the three main triathlon competitions. The study utilized a slightly modified Motives of Marathoners Scale (MOMS), an instrument developed by Masters, Ogles, and Jolton (1992), to better understand the reasons for triathlon involvement. The study focused on differences based on gender, the triathletes' self-reported level of activity, and their previous experience in triathlon events. Participants in this study included 165 triathletes (male=98, female=67) from two sprint triathlons in Texas and one sprint triathlon in Florida. Separate factorial ANOVAs were performed on each of the dependent variables of interest with gender, age, level of activity, and level of experience as between-subjects factors and the two-way interactions of gender with age, level of activity, and level of experience. Results showed significant ($p<.05$) gender differences in the motives of *Affiliation* (females higher than males), *Life Meaning* (females higher than males), and *Personal Goal Achievement* (females higher

than males). Results also showed significant age differences in the motives of *Affiliation* (20s higher than 30s) and *Competition* (20s higher than 30s). Motivational differences also existed in triathletes based on levels of activity (competitiveness) and levels of experience. In addition, an interaction between age and gender was found and indicated that self esteem motives differed according to age and gender. A test of simple main effects revealed that females in their 40s had greater *Self-esteem* scores than males in their 40s. Practical and research implications are discussed.

An Examination of the Motives to Participate in a Sprint Distance Triathlon

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CHAPTER I—INTRODUCTION

Triathlon has become increasingly popular in recent years. In fact, it is the fastest growing sport in the world (Love, 2009). Though once thought of solely as a professional sport, triathlons have become commonplace in America among amateur triathletes. Triathlon involves a combination of three athletic competencies: swimming, biking, and running. Though the events are most often performed in that specific order, the rotation is sometimes rearranged to account for weather conditions, traffic flow, or simply variety.

The sport of triathlon was officially launched in San Diego in 1975 (Ehritz, 2004). At the time, swim-run biathlon events were being staged in Southern California. Two men, Jack Johnstone and Dan Shanahan, conceived an event that would incorporate not only swim-run stages but also a bike stage. The Mission Bay Triathlon, so-named by the founders and sponsored by the San Diego Track Club, was promoted and drew a crowd of only forty-six participants (Ehritz, 2004).

After this modest inauguration and over the next two decades, triathlon participation grew very slowly. However, USA Triathlon, the governing body of triathlon in the United States, has seen an explosion in participation rates just this century. In 2000, the number of USA Triathlon members hovered around 21,000 (Triathlon Participation, Growth Trends, and Demographics, 2009). But by 2009, USA Triathlon revealed that the number of participants had grown to 115,000 (Triathlon Participation, Growth Trends, and Demographics, 2009). It is difficult to say exactly how many individuals compete in triathlon events annually as many triathletes forego these annual membership costs and buy single-day licenses for the event. However, raw data suggests triathlon popularity has exploded this century.

Though historically a male-dominated sport, female participation has grown in recent years (Triathlon Participation, Growth Trends, and Demographics, 2009) from the low teens to approximately 27% of racers in 2009. This trend is interesting when one considers that females have historically preferred non-competitive events for physical health purposes (Triathlon Traditional/Road Participation Report 2009, 2009).

Experts agree that triathlon's inclusion in the 2000 Olympic Games in Sydney impacted the popularity of the sport in the United States (Triathlon Participation, Growth Trends, and Demographics, 2009). Triathlon was covered by the National Broadcast Company's (NBC) in primetime. In the 2004 Olympic Games in Athens, Team USA's triathletes were more popular and more successful. NBC's coverage of the women's triathlon had the third-highest rating for that week (Triathlon Demographics, 2005).

Another reason triathlon may have increased in popularity was the introduction of the sprint distance events (Triathlon Participation, Growth Trends, and Demographics, 2009). The standard triathlon distance had been the Olympic distance triathlon, which consisted of a 1500 meter swim, a 25 mile bike, and a 6.2 mile run. In addition, there was the infamous Ironman distance event (2.2 mile swim, 112 mile bike, 26.2 mile run) as well as the Half-iron distance events (1.1 mile swim, 56 mile bike, 13.1 mile run). According to Triathlon Participation, Growth Trends, and Demographics (2009), the sprint triathlons, usually comprised of roughly a 500 meter swim, 15 mile bike, and 3.1 mile run, made the sport more accessible to a larger population. In 2008, it was estimated that sprint distance triathlons composed around 65% of all triathlons in the United States (Triathlon Participation, Growth Trends, and Demographics, 2009).

Triathletes have been researched for years. Early on, triathletes were a model population for prolonged strenuous competition and helped scientists investigate acute physiological adaptations and trauma (Millet et al., 2007). Additionally, training regimens, measures of power, and recovery periods were examined. This type of research continued as triathlete populations grew. Few studies, however, have been conducted by sport researchers that examine triathletes from the perspective of motivation. Many psychologists view motivation as the *why* of behavior (McClelland, 1987). For the purpose of this study, motivation will be defined as the unobserved inner force that stimulates, compels, and directs a certain behavior response (Hawkins et al., 2007). Thus, the motivation of a triathlete is an important social and psychological component, especially when considering the tremendous costs associated with endurance event participation (Ogles & Masters, 2003), including social, economic, physical, and psychological.

One cost triathletes may incur is social. Training for a triathlon may have a serious social impact on triathletes (Croft, et al., 2007). Triathlon can be a serious undertaking, which may include months of daily training activities. Like other endurance sports, such as marathon running, it is often difficult to find training partners (Ogles & Masters, 2003). Thus, many triathletes may endure lengthy training sessions in seclusion. Oftentimes, the amount of preparation a triathlon necessitates is far beyond what necessitates the basic health benefits of a normal exercise program (Blair, et al., 1996). This means that schedules for work, family, and other social agendas may have to be altered to accommodate a proper training regimen (Croft et al., 2007).

Another cost associated with triathlon is monetary expenditure. The equipment needed to compete in triathlon is quite extensive and includes running shoes, triathlon-specific apparel, swimming gear, wetsuits, road or triathlon bikes and a number of accompanying accessories. In addition, triathletes spend money to belong to training clubs, purchase professional memberships, pay race entry fees, and travel to and from the events, some of which require traveling great distances.

Recent market research suggests there are socioeconomic and demographic features of triathletes which make them an attractive market segment. As a group, traithletes are in their late thirties, highly professional, advanced socioeconomically, and have an average household income of $126,000 (Tribe Group, 2009). Historically, a demographic with such discretionary income was more likely to play tennis and golf rather than participate in high endurance triathlons (Tribe Group, 2009). In addition, despite tough economic times, most triahtletes plan to spend more money on the sport than they have in the past (Tribe Group, 2009). At present, triathletes are a homogenous demographic. Therefore, the potential for growth into other demographics in the future is a possibility. This could be achieved through concerted marketing efforts, which could attract other segments of the population (Tribe Group, 2009)

Finally, the physical and psychological cost/impact of an endurance event such as triathlon can be significant. Ogles and Masters (2003) pointed out that marathon runners may experience fatigue following workouts and heighten the probability of suffering an injury and thus experiencing the typical sequela, including medical bills, pain, time off work, rehabilitation, etc. Triathletes may suffer similarly. Psychologically, training regimens are often boring because they are monotonous and often performed alone.

Triathletes, as do other athletes, may often set unrealistic expectations that are not met (Masters et al., 1993). This, combined with lack of sleep, vast energy expenditures, altered eating habits, pre-race jitters, and uncertain race outcomes can all impact a triathlete mentally and emotionally (Ogles & Masters, 2003).

Sport psychologists have posed the following question: Why do people train for and participate in triathlons? From a consumer behavior perspective, the query could be reframed as the following: Why would an individual choose to consume the sport of triathlon, given the monetary and opportunity costs required? According to the Overall Model of Consumer Behavior (OMCB), there are many influences—both internal (psychological) and external (social)—that interact to develop one's *self-concept*, or view of self, and create a lifestyle. *Lifestyle* is the particular manner in which we want to live given our resources (Hawkins et al., 2007). A consumer's self-concept and lifestyle aspirations create needs and desires that drive individuals to make consumption decisions (Hawkins et al., 2007), such as participating in triathlons. However, the decision to participate in a triathlon, as detailed earlier, involves much more than simply arriving at the start line on race day (Croft et al., 2007). The consumption of triathlon may include months of training and exercise.

It would be extrememly difficult—if not impossible—to examine all of the internal and external influences of the OMCB that interact to shape consumer choices in a single study. However, if several studies were conducted that focused on particular influences as they pertain to triathletes, a clearer picture of the triathlete as a consumer would take shape. This study seeks to focus on the motives of triathletes as consumers, one of the internal influences that constitute the OMCB.

Research has shown (Atkinson, 2008; Tribe Group, 2009) that triathletes view themselves as people who form a close community which defines their lifestyle. Hawkins et al. (2007) also suggest that lifestyle is simply the manifestation of one's self-concept and/or total image of self. Thus, it follows that motivation is one of the internal influences that impacts the self-concept and, therefore, lifestyle aspiration of triathletes. And because market segments are often grouped in accordance with similar need groups (Hawkins et al., 2007), a closer examination of triathlete motivation could be important to better understand triathlon participants as a customer market segment. The OMCB offers a framework in which psychological factors such as customer motivation could be sensibly framed.

A limited number of studies have looked specifically at motivation in triathletes (Croft et al., 2007; Bell & Howe, 1988). Most often, though, triathletes have been either grouped with other endurance athletes (Bueno et al., 2008; Weekes & Woods, 2005; Grove & Weigland, 1999) or motivation was a peripheral variable in the study (Stoeber et al., 2009; Case & Branch, 2001; Thelwell & Greenless, 2001; Chang & Johnson, 1995). In addition, most of this research was conducted in other countries or before the surge in triathlon popularity in the United States.

Bell and Howe's (1988) study of triathletes was conducted over twenty years ago in Canada while triathlon was still in its infancy and long before it experienced significant American growth. The focus of their study was the mood state of the triathletes, with particular attention given to the mood state of triathletes based on ability and gender (Bell & Howe, 1988). They concluded that the social aspect of triathlon was a low motivational factor. Though earlier research substantiated this premise (Curtis &

McTeer, 1981; Barrell et al., 1989), more recent studies into marathoners and other endurance athletes (Masters et al. 1993; Ogles & Masters, 2003; Croft et al., 2007) have shown that social factors and group affiliation may tend to be a stronger motive for endurance sport participation than once perceived, especially during the training phases (Ogles et al., 1995). This discrepancy in findings may hinge upon several factors, including social and/or cultural changes in triathletes that have transpired over the last two decades.

Croft et al. (2007) also examined the motives for participating in triathlon. However, their sample size was small (n=34) and the research was conducted in Australia. The study utilized an altered version (changed wording) of the Motives of Marathoners Scale (MOMS). Though an oft used instrument with endurance athletes, never had the MOMS been used to gather data on triathletes (Ogles & Masters, 2003). The researchers gave no indication as to whether the instrument was pilot tested with triathletes before administration.

These studies on triathlete motivation had another noteworthy shortcoming. The studies failed to assess the motives of triathlete's with regards to their perceived levels of activity. In the sport context, the level of activity is synonymous with level of competition or involvement competitiveness. Both Koivula (1999) and Masters and Ogles (2000) believed the level of activity was a factor that influenced the motivation to participate in sport activities. In fact, Ogles and Masters (2003) found that marathoners who rated themselves competitive endorsed far different motivational factors than did non-competitive marathoners (Ogles & Masters, 2003). The research of LaChausse

(2009) with swimmers also utilized the triathlete's self-rated level of activity and found that level of activity was a contributor to motivational factors.

Problem Statement

According to Ogles and Masters (2003), it is still not inherently obvious why people participate in endurance events such as triathlons. Most people do not enter recreational events with the purpose of inflicting physical, emotional, and psychological hurt on themselves (Atkinson, 2008). However, triathletes, with rigorous training schedules, are doing just that at an astonishing rate in the United States. Previous studies on triathlete motivation were either antiquated, focused on triathletes in other countries, had insufficient sample sizes, were unclear on methodological procedures, or did not look at potentially important independent variables of motivation. Consequently, the simple question still surrounds triathlon as to what motivates people to willingly invest vast amounts of time and money and effort to consume this sport.

Study Purpose

The purpose of this study was to explore the motivational factors of a group of triathletes to better understand the specific motives that drive them to consume the product/service of and participate in triathlon events. This study looked specifically at participants in a sprint triathlon, the shortest of the three main triathlon competitions. Because these events are shorter in distance, these are normally the events newcomers to triathlon choose. Because triathlon is presently in a growth stage, it was thought this triathlete sample may shed more light on the motivational draw to the sport. In addition, the researcher hoped to capture the motives of many first-time triathletes to better

understand, in consumer behavior terms, what caused these participants to consume a new product, in this case triathlon.

The study utilized a slightly modified Motives of Marathoners Scale (MOMS), an instrument developed by Masters, Ogles, and Jolton (1992), to better understand the reasons for triathlon involvement. The study examined triathletes on several levels. First, it looked at whether motivational differences existed between triathletes who self-rated their level of activity as either competitive or non-competitive. Second, the study investigated potential differences in motivational factors of triathletes associated with gender. Finally, the study examined possible motivational differences between first-time triathletes and those with more experience. The modified MOMS was used to measure triathlete motivation (Masters et al., 1993) while the OMCB (Hawkins et al., 2007) was the theoretical framework in which the motives of triathletes, as a consumer group, were framed.

Research Questions

$RQ_{1:}$ Are there differences in the motives of sprint triathletes based on their age?

$RQ_{2:}$ Are there differences in the motives of sprint triathletes based on gender?

$RQ_{3:}$ Are there differences in the motives of sprint triathletes based on their self-reported level of competitiveness?

$RQ_{4:}$ Are there differences in the motives of sprint triathletes based on their amount of sprint triathlon experience?

$RQ_{5:}$ Are there differences in the motives of sprint triathletes based on the interactions of the gender and the three remaining independent variables of interest: age, level of competitiveness, and sprint triathlon experience?

Study Significance

From a research perspective, the study may add to the body of literature on sport motivation of the endurance athlete, specifically that of triathletes. It may help understand more fully why individuals undergo the high costs—socially, physically, mentally, and financially—to take part in triathlons. This was also the first large-scale study that applied a modified version of the MOMS to the triathlon demographic. Thus, it made it possible to evaluate two different groups of endurance athletes—marathoners and triathletes—using a comparable instrumentation.

The study may also be very beneficial to the companies that operate within the triathlon industry (Tribe Group, 2009). First, it could help to better understand the triathlete as a customer. By addressing the needs of consumers, firms are able to create and/or increase the demand of their products/services (Hawkins, 2007) and, in turn, increase market share. Thus, triathlon promoters and those companies that manufacture equipment for triathletes might increase efficiency by incorporating the study's findings into their advertising and promotional activities. Second, the study could assist in creating more specific market segments in accordance with motivational factors. Finally, the study may contribute to an increase in overall participation in triathlon events via more specific and effective marketing efforts.

Assumptions

The study was conducted under the following assumptions:

1. Triathlete motivation is a construct which can be measured.
2. All participants in the study were active triathletes.
3. All participants in the study answered truthfully.

4. All participants in the study understood the items on the instrument.

Limitations

The potential limitations of this study include:

1. The samples gathered in this study were done through convenience sampling. The results, therefore, may not be representative of the larger sprint triathlete population.
2. The participants were from one sprint triathlon in Florida and two sprint triathlons in Texas. Thus, the results may not be representative of the larger sprint triathlon population.
3. The triathletes that chose to participate in the on-line survey may be different in a significant way from those who chose not to participate. Thus, the generalizability of the results may be further limited.

Delimitations

The delimitations of this study were:

1. The data collection phase of this study occurred in August and September of 2010 at two sprint triathlons in Texas and one sprint triathlon in Florida that granted access to the researcher.
2. The units of analysis in this study were the motives of active sprint triathletes.
3. This study used a modified version of the Motives of Marathoners Scale (MOMS) with a triathlete population. A two-phase pilot study was conducted to establish internal consistency and content validity for the use of the MOMS with triathletes.

Definitions

Achievement Motives: a general category on the MOMS survey (Masters, Ogles, & Jolton, 1992). It consists of the following two scales:

Competition- the desire to compete with others, to see how high one can place, or to get a faster time than one's friends

Personal Goal Achievement- the desire to improve one's triathlon speed, to compete with one's self, to push one's self, to beat a certain time, or to try to run faster

Half-iron Distance: a triathlon consisting of a 2.4 mile swim, a 112 mile bike and a 26.2 mile run (Triathlon Participation, Growth Trends, and Demographics, 2009).

Olympic Distance: an Olympic triathlon consists of a 1500 meter swim, a 40k (25 mile) bike, and a 10k (6.2 mile) run (Triathlon Participation, Growth Trends, and Demographics, 2009). This is the triathlon format used in the Olympic Games.

Physical Health Motives: a general category on the MOMS survey (Masters, Ogles, & Jolton, 1992). It consists of the following two scales:

General Health Orientation- the desire to improve one's health, to prolong one's life, or the desire to become more physically fit

Weight Concern- the desire to look leaner, to help control one's weight, or to reduce one's weight

Psychological Motives: a general category on the MOMS survey (Masters, Ogles, & Jolton, 1992). It consists of the following three scales:

Psychological Coping- the desire to become less anxious, to distract one's self from daily worries, to improve one's mood, or to concentrate on one's thoughts

Self-Esteem- the desire to improve one's self-esteem, to feel proud of one's self, to feel a sense of achievement, or to feel mentally in control of one's body

Life Meaning- the desire to make one's life more purposeful, to make one's self feel whole, or to feel a sense of belonging with nature

Social Motives: a general category on the MOMS survey (Masters, Ogles, & Jolton, 1992). It consists of the following two scales:

Affiliation- the desire to socialize with other runners, to meet people, to visit with friends, or to share a group identity with runners

Recognition- the desire to earn respect of peers, people look up to me, brings me recognition, to make my family or friends proud of me

Sprint Distance: a sprint distance triathlon consists of a swim of 800 meters or less, a bike 20 miles or less, and a 5k (3.1 mile) run (Triathlon Participation, Growth Trends, and Demographics, 2009).

Abbreviations/Acronyms

MOMS: Motiveations of Marathoners Scale, developed by Masters and Ogles (1993).

OMCB: the Overall Model of Consumer Behavior, developed by Hawkins, Mothersbaugh, and Best (2007).

CHAPTER 2-LITERATURE REVIEW

Introduction

This purpose of this chapter is to insert the current study's problem statement into the related literature topics that exist in sport motivation and consumer research. More specifically, the researcher will attempt to frame the motives of triathletes in a consumer behavior model that will allow triathletes to be seen as a customer segment impacted by both psychological (internal) and sociological (external) factors. To do so, the chapter will address several topic areas, including:

- Past and present state of triathlon
- Triathlete demographics
- Historical perspectives of consumer research
- The Overall Model of Consumer Behavior (OMCB), the theoretical framework underpinning the study
- Motivation theory in consumer research, with emphasis given to (a) Maslow's Hierarchy of Needs and (b) McGuires's Psychological Motives
- Motivation theory in sport and physical activity with emphasis on the four broad motivation categories in the MOMS
- Development of the Motives of Marathoners Scale (MOMS)
- Utilization of MOMS with endurance athletes

Triathlon, Past and Present

The sport of triathlon, with a history only three decades old, is in its relative infancy. Triathlon officially began in San Diego in 1975 (Ehritz, 2004). Swim-run biathlon events were held in Southern California at the time. However, Jack Johnstone

and Dan Shanahan, two local athletes, decided to host an event that would add a bike stage to the run-swim duathlon. They called it the Mission Bay Triathlon and it was sponsored by the San Diego Track Club. This inaugural triathlon drew only forty-six participants (Ehritz, 2004).

Over the next two decades, triathlon showed modest, yet steady growth. During these years, although participation rates did not increase significantly, triathlon event distances did. Only three years after the first three discipline event, the world's most famous triathlon, now known as the Ironman Triathlon World Championship, began in 1978 (Ehritz, 2004). It included a 2.4 mile swim in the ocean, a 112-mile loop of Oahu, and a 26.2-mile marathon. Though only twelve participants finished the inaugural race, it gained worldwide recognition two years later when the American Broadcast Company covered the event in 1980 (Ironman Triathlon World Championship, 2007). Soon, other Ironman triathlons were taking place at venues around the globe. The event developed into a such a phenomenon that Anheuser-Busch, a sport advertising giant, decided to sponsor the event in 1982 (Ironman Triathlon World Championship, 2007) Today, there are twenty-two Ironman triathlons that serve as qualifiers for the Ford Ironman Triathlon World Championships held every February in Kona, Hawaii (Ironman Triathlon World Championship, 2007). Well over one thousand participants qualify annually.

USA Triathlon, the governing body of triathlon in the United States, has seen an explosion in participation rates just this century. In 2000, the number of USA Triathlon members hovered around 21,000 (Triathlon Participation, Growth Trends, and Demographics, 2009). From 2004 to 2007, their membership increased from 53,254 to 100,674 (Aschwanden, 2008). USA Triathlon stated in *Triathlon Participation, Growth*

Trends, and Demographics (2009) that the number of participants had grown to 115,000 in 2009. It is difficult to say exactly how many individuals compete in triathlon events annually as many triathletes forego these annual membership costs and buy single-day licenses for the event. USA Triathlon (Triathlon Participation, Growth Trends, and Demographics, 2009) estimated that in 2007 over 280,000 people purchased a one-day pass to participate in a triathlon event. As of 2008, there were over 1,700 USA Triathlon sanctioned events annually in the United States and many other triathlons that did not seek USA Triathlon sanctioning (Triathlon Participation, Growth Trends, and Demographics, 2009).

This rapid growth in triathlon can be attributed to several factors. First, many feel the 2000 Olympic Games in Sydney had a tremendous impact on triathlon's escalating participation rates, as this was the sport's first appearance at the international event (Triathlon Participation, Growth Trends, and Demographics, 2009). Never before had the sport garnered such national publicity, which included the National Broadcast Company's primetime network coverage and athlete appearances and profiles in major newspapers and magazines across the country (Triathlon Participation, Growth Trends, and Demographics, 2009). At the 2004 Olympics in Athens, Team USA's triathletes were not only more popular but also more successful, as Susan Williams won a bronze medal and NBC's primetime coverage of the women's triathlon had the third-highest rating for that week (Triathlon Demographics, 2005).

Another reason triathlon may have grown in popularity was the increasing number of the sprint-distance races, or short course triathlons, being staged across the country (Triathlon Participation, Growth Trends, and Demographics, 2009). Before the

sprint distance races, the standard triathlon was the Olympic distance triathlon, which consisted of a 1500 meter swim, a 25 mile bike, and a 6.2 mile run. In addition, there was the aforementioned Ironman-distance event as well as the Half-iron distance events (1.1 mile swim, 56 mile bike, 13.1 mile run). However, the sprint triathlons gained popularity about the same time as triathlon went mainstream via the 2000 Olympic Games. According to Triathlon Participation, Growth Trends, and Demographics (2009), the sprint triathlons, usually comprised of a 500 meter swim, 15 mile bike, and 3.1 mile run, made the sport more accessible to a larger population. According to Perez (n.d.), because triathlon was no longer relegated to the fittest and most dedicated athletes with vast quantities of time to train, participation rates began to climb. In 2008, it was estimated that sprint distance triathlons composed 65% of all triathlon events (Triathlon Participation, Growth Trends, and Demographics, 2009) with nearly 78% of all triathletes participating in at least one sprint triathlon (Tribe Group, 2009).

Finally, the popularity of triathlon could correspond to the growing number of individuals living more active, health conscious lifestyles. The last fifteen years have seen scores of studies that have tied the sedentary lifestyle of Americans to many diseases, including heart disease colon cancer, high blood pressure and Type II diabetes (Hatfield, 2004). As more Americans take an active interest in their health and strive for more balanced lifestyles (Triathlon Participation, Growth Trends, and Demographics, 2009), the competition and variety of triathlon could serve as an enjoyable activity through which their interests are served. In fact, when measuring attitudes of triathletes (Tribe Group, 2009), 87% say *staying in shape* is at least part of the reason they participate in triathlon.

Triathlete Demographics

The triathlete demographic is interesting in many respects. From a socioeconomic standpoint, triathletes are a well-educated, high-earning, group of professionals with a median age of thirty-nine (Tribe Group, 2009). Moreover, those who participated in the most triathlons in 2008 were older than the average, which may suggest triathlon has staying power among mature adults (Tribe Group, 2009). In addition, over 70% of triathletes are either married or in committed relationships (Tribe Group, 2009), suggesting an attractive level of stability within this segment. This somewhat homogenous group may also suggest potential growth opportunities into other groups. Because stability and growth potential are two important considerations for marketers (Hawkins, et al., 2007), triathletes tend to be a very attractive segment.

Though historically a male-dominated sport, much of triathlon's growth has come in the female sector, especially among women under the age of twenty-five (Triathlon Demographics, 2005). According to one study, female participation grew from a meager 11% of all triathletes in the early 1990's to comprise more than 29% of triathletes in 2005 to nearly 40% at present (Tribe Group, 2009). *Triathlon Participation, Growth Trends, and Demographics* (2009) reported similar growth rates among females, as women comprised 27% of their memberships in 2009. This trend is interesting when one considers that females tend to prefer non-competitive events to maintain physical fitness (Triathlon Traditional/Road Participation Report 2009, 2009).

What may be the most appealing consumer attribute of triathletes is their purchase intentions. Though in the midst of an economic downturn, most triathletes not only "remain highly committed to the sport and expect their participation to grow" (Tribe

Group, 2009, p. 31), but they expect their spending on the sport to be greater in the future. Though data suggests that many triathletes will be forced to cut from high-expense categories of triathlon such as the purchase of new bikes and travel expenses (Triathlon Participation, Growth Trends, and Demographics, 2009), the more essential components of triathlon—race fees and running shoes—anticipate growth (Tribe Group, 2009.

Historical Perspectives of Consumer Research

Consumer behavior became a topic of academic study in the mid-1930's, through the inquiry of researchers such as Duesenberry and Georgescu-Roegen (Loudon & Della Bitta, 1979). In those early days, the problems associated with consumers were addressed almost entirely through pure mathematical theory and treatment. This seemed a rational approach to those researching consumer behavior, for most were economists attempting to fit problems associated with consumers into a manageable string of variables for computation. Since the basis of economics at the time was supply and demand, early researchers studied how scarce resources were allocated to meet an unlimited amount of wants and needs (Loudon & Della Bitta, 1993). Even during this era of scientific approach to consumerism, however, it was noted by some that *introspection*, or the mental capacity of consumers, had bearing on all experimental outcomes (Georgescu-Roegen, 1936).

In the 1950's, strides continued to be made in consumer research. Advancements in statistical techniques and computer technology made social research more complex, yet the focus of consumer experimentation was still scientific testing generated from theory (Helgeson, et al., 1984). As Hawkins et al. (2007) point out, research spotlighted

the buyer and the immediate antecedents and consequences of their purchasing practice. Consumer research was a forward-looking science that rarely accounted for pre-purchase variables.

However, in the late 1950's and early 1960's, academics began to view consumer behavior as somewhat of a psychological and sociological phenomenon rather than a mathematical one. Researchers found that there was an ever-growing array of independent variables that impacted the decisions of consumers (Helgeson, et. al., 1984), variables that came from both inside and outside the consumer. In addition, many of these variables could be logically grouped together into four broad categories: internal influences, external influences, purchase process, and miscellaneous. Each of these categories was further divided into sub-groups that experts felt exerted influence on the consumer. Collectively, these studies by various researchers on different variables began to form the basis of what we know as modern consumer behavior models. This not only led to a much broader view of consumer behavior but also the exponential increase in the number of consumer behavior studies and peer-reviewed publications that covered consumerism (Helgeson et al., 1984).

Several models have been proposed to explain and predict the buying behaviors of consumers (Smith & Wertheimer, 1996). It is important to note that there is no one true consumer behavior model. In fact, there are dozens of variations. Nearly all have similar theoretical bases but have slight distinctions, most of which are simply the implementation and/or exclusion of certain variables. Because several groups of researchers produced significant research from which most other models were derived (Rau & Samiee, 1981), it is important to consider their works.

The first of these, developed in 1966, was the Nicosia Model. This model approaches the consumer decision process from the standpoint of the marketing organization or supplier of the good/service (Rau & Samiee, 1981). Though a revolutionary and original model, most felt the Nicosia Model could not be validated for several reasons. First, as Rau and Samiee (1981) point out, the variables in the model were never clearly defined. The model simply defined the independent variables as either *firm attributes* or *consumer attributes*; these vague characteristics were immeasurable. In addition, the model did not define the consumer, the firm, or the relationship the two did/or did not have. However, the Nicosia Model was the first to include two important components present in nearly all subsequent models: attitudes and motivations of consumers, both of which were internal influences.

Another early model was the Howard & Sheth Model of Consumer Purchase Behavior. It was introduced in their 1969 book entitled *The Theory of Buyer Behavior*. According to this model, consumer purchases were driven by a combination of purchase intentions, brand attitudes, and brand comprehension (Howard & Sheth, 1969). Similar to the Nicosia Model, the Howard & Sheth Model was also deemed by most scholars to be immeasurable due to arbitrary variables (Rau and Samiee, 1981). Because brand attitude was measured through sets of many complicated attitudes, motives, and relationships, researchers found it very difficult to substantiate the theory in subsequent studies (Smith & Wertheimer, 1996). Farley and Ring (1970) revised the Howard & Sheth Model of Consumer Purchase Behavior in an attempt to give it more concrete variables and less complex relationships.

A final early consumer behavior model worth noting is the EKB Buyer Model. It was created by Engel, Kollat, and Blackwell (1973). Besides introducing many variables into the consumer decision process for the first time, the EKB Buyer Model sought to not only describe relationships between variables but also emphasize that a buyer's behavior was a dynamic (difficult to predict) and continual process (Engel et al., 1973). It described consumers as having a central control unit which facilitated thinking, memory, and decision making. Engel et al. (1973) asserted that this central control unit contained variables that made every consumer unique and included personality traits, motives, attitudes, experiences.

These early consumer behavior models form the basis of modern consumer research as well as the myriad consumer behavior models that have surfaced in the past three decades. One such model forms the theoretical support of this study.

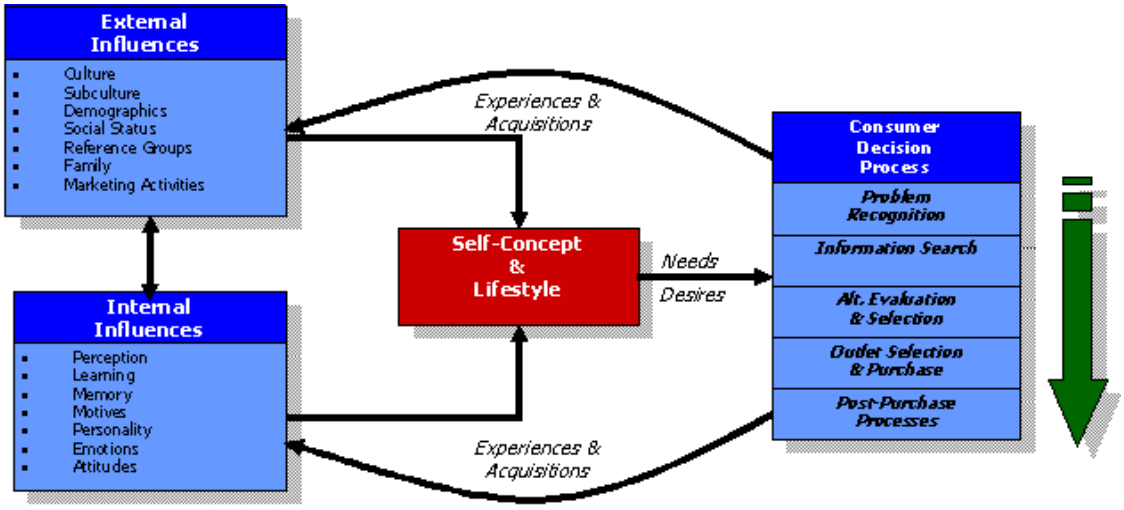
The Overall Model of Consumer Behavior

The consumer behavior model used as the framework to underpin this study is the Overall Model of Consumer Behavior (OMCB). Developed in 1997 by Hawkins, Mothersbaugh and Best, the purpose of this conceptual consumer model was not to predict specific behaviors but, instead, capture the authors' beliefs about the general nature of consumer behavior (Hawkins et al., 2007). Though the OMCB (Table 1) appears to be very structured, the authors concede that actual consumer behavior is very fluid and dynamic. Hawkins et al. (2007) suggest the decisions of consumers are very complex and rarely linear. It is evident this model drew from several previously discussed models, specifically the EKB Buyer Model. However, the OMCB differentiated itself in

that it is predicated on the theory that both internal and external factors exert positive and negative influence on the pre-purchase process of consumers.

The OMCB assumes that "individuals develop self-concepts and subsequent lifestyles based on a variety of internal (mainly psychological and physical) and external (mainly sociological and demographic) influences" (Hawkins et al., 2001, pg. 26-27). Self-concept is simply how each individual views himself and lifestyle indicates the manner in which these individuals live given their resources. Therefore, how a person views himself and how he tries to live is determined by the interactions of many internal and external factors. These different influences create a group of needs and desires that individuals bring into their daily purchase processes (Hawkins et al, 2007). Because there is a close relation between many of the internal and external influences—for example, personal attitudes and reference group—and because some of the factors could be either internal or external (individual learning as opposed to group learning), there is a two-direction arrow that connects both groups of influences (Hawkins et al., 2007). This decision to purchase or not purchase will impact internal and external influences that affect future purchases via learning, perception, reference group opinions, etc. The OMCB is, therefore, circuitous in nature.

Table 1: The Overall Model of Consumer Behavior (Hawkins et al., 2007)



Hawkins et al. (2007) suggest the factors that form the external influences of the OMCB vary from more general, large-scale macrogroups (culture) to more specific, small-scale microgroups (family). As the category suggests, all of these factors that influence the consumer purchase process come from outside the consumer. The external influences of the OMCB include the following: culture, subculture, demographics, social status, reference groups, family, and the marketing activities of firms. Consumers are influenced to make some purchases, based on, for instance, their demographics. For example, the level of a consumer's education, a demographic characteristic, influences not only customer needs and preferences for certain products (Best, 2005) but also affects what they can and cannot afford because of income (Hawkins et al., 2007). These seven major external influences, along with their countless sub-influences, are the sociological components of the OMCB.

The internal influences, on the other hand, comprise the psychological element of the OMCB. These internal influences include perception, learning, memory, motives (the focus of this study), personality, emotions, and attitudes. Internal influences are more

unique to the individual (Shank, 2005) and may be the intuitive explanation for siblings with very similar external influences (family, education, reference groups) behaving much differently as consumers.

The self-concept and lifestyle of a consumer, which are influenced by myriad external influences in society and internal influences within, comprise the hub of the OMCB. Hawkins et al. (2007, p. 434) define self-concept as "the totality of the individual's thoughts and feelings having reference to himself or herself as an object." Interestingly, there are four components to an individual's self-concept. They include their actual self-concept (*who they are now*), ideal self-concept (*who they would like to be*), private self-concept (*how they would like to be to themselves*), and social self-concept (*how they would like to be seen by others*) (Hawkins et al., 2007). For years, marketers have understood the importance of self-esteem (Best, 2005, Shank, 2005) and sought to create product brands and images "that are consistent with the self-concepts of their target markets" (Hawkins et al., 2007, p. 439). Of most importance to marketers are the ideal and social self-concepts, for these imply that a purchase is needed before a desired state can be realized.

Lifestyle, as discussed, is the manifestation of one's self-concept. People make many purchases based on their desired and social self-concepts, or how they would like to be or be seen by others. Hawkins et al. (2007, p. 441) describe lifestyle as the way "one enacts one's self-concept and is determined by one's past experiences, innate characteristics, and current situation". Because people want to feel a certain way about themselves, they often consume products/services that will create a lifestyle consistent with the desired and/or social self. Meeting perceived needs that satisfy lifestyle

aspirations is the crux of marketing and essential to understanding consumer behavior, for purchases are often a simple case of consumers to meet or satisfy perceived lifestyle needs/desires.

When discussing lifestyle and self-concept topics in consumer behavior, it is needful to discuss consumer image congruence. According to Barnes and Lough (2006), it is important that marketers understand how their brand image relates to the self image of the consumer in order to design marketing strategies that successfully build brand equity. “The task of constructing brand equity requires the creation of brand awareness with the consumer and building positive brand image with the target market” (Barnes & Lough, 2006). Likewise, Kang (2002) discovered that consumers who had high congruency between themselves and participants of a sport were more likely to join in and participate in that sport. It is very likely, therefore, that self image plays a significant role in prompting consumers to make purchase decisions, as consumers seek to simply align themselves with activities/sports/events whose brand images align closely with their own lifestyle aspirations and/or self-concept perceptions.

The consumer then enters the decision process, the final stage of the OMCB. The first step in this phase is *problem recognition*. Hawkins et al. (2007, p. 514) define problem recognition as “the result of discrepancy between a desired state and an actual state that is sufficient to arouse and activate the decision process.” It should be noted it is the job of marketing firms and marketing departments to make consumers aware of these discrepancies, although critics have frequently questioned the ethics of such problem activation (Hawkins et al., 2007). As it relates to triathlon, problem recognition could happen several ways. Some might simply view triathlon as a way to get in, or stay in

shape, while others may use triathlon to fulfill competitive or social needs (Tribe Group, 2009). The current study examined what motivates people to participate in triathlon; that is, why do they endure all economic and training costs to enter these events? Thus, because motives cause people to take action (Merriam-Webster's Collegiate Dictionary, 1993), this question of motivation is very closely related to the concept of problem recognition.

Once consumers are cognizant of the problem, they must make a number of decisions. First, they must decide if they are willing to exchange personal resources to fulfill the need/desire. Though some consumer decisions are frequently the result of a simple problem that take very little thought and money (quench thirst after a run) and thus require little involvement, other problems result from the convergence of several, more complex, costly problems (Hawkins et al., 2007). The more complex the problem and/or the more expensive the purchase, the more involved the consumer will become. In the case of these problems, the consumer will begin step two of the decision process, an *information search* (Shank, 2007). Consumers eventually determine the criteria by which they will select the product/service to satisfy the aforementioned need/want.

These criteria lead the consumer into the third step of the decision making process, *alternative evaluation and selection process.* Here, consumers decide between an often considerable number of products/services that could potentially meet the appropriate criteria and will meet their lifestyle needs/desires. Shank (2007) points out that, in their final analysis, consumers measure the various factors they deem important (price, brand, etc.) against all the alternatives in a decreasing order of importance. That is, the most important criteria are evaluated first against the product/services and move

down the ladder of importance from there. When a 'winner' emerges (Shank, 2007), the process ends.

The consumer then enters step four of the decision making process, or *outlet selection and purchase*. The most important consideration here is the sequence the consumer follows in making the purchase "There are three options: (1) brand (or item) first, outlet second, (2) outlet first, brand second, or (3) brand and outlet simultaneously" (Hawkins, 2007, p. 598). For example, a woman in need of running shoes could (1) decide on Saucony running shoes and locate businesses in town that sell that shoe, (2) decide to go to her favorite shoe store and find a pair of shoes there, or (3) compare a number of shoes at a number of on-line shops for the best price.

Finally, after the purchase is made, the consumer enters step five of the purchase decision process, the *postpurchase processes.* At this point, the consumer evaluates their purchase decision and may experience *dissonance*. Dissonance may occur because the purchase represents a relatively permanent commitment to one product that caused them to give up the attractive features of the non-purchased products (Hawkins et al., 2007). The more highly-involved and expensive the purchase, the more dissonance the consumer may experience. At this point, consumers decide if they are satisfied and intend to purchase that brand or from that outlet again (Best, 2005).

It is important to note that, once this entire process ends, the acquisition of, along with their experiences with, the product/service may affect learning, perception, memory, and/or social status, etc. These are the precise factors that constitute the internal and external influences which affect consumer self-concepts and lifestyles. Thus, as stated previously, the OMCB is circuitous in nature.

Motivation Theory in Consumer Research

The term *motivation* can be used by people in a number of contexts and refer to a number of different things. Weinberg and Gould (2007) identified three ways in which the term motivation is used and understood in daily life: (1) as an internal personality characteristic, (2) as an external influencer, and (3) as an explanation of behavior. Thus, it is important to have a very exact definition of motivation to be used in this study as we move forward.

Because human motivation is of conceptual interest to most disciplines in the social sciences, there are countless definitions in current literature. The Merriam-Webster Collegiate dictionary (1993) defines a motive as something that causes a person to act. Hoffman (2009), a kinesiology researcher, feels motivation is a complex set of internal and external factors that influence people to behave in certain ways. Sport psychologists have defined motivation as the direction and intensity of one's effort (Weinberg & Gould, 2007). In sport marketing, some understand motivation to be "the internal force that directs behavior toward the fulfillment of needs" (Shank, 2005, p. 136). For the purpose of this study, a consumer behavior definition of motivation will be accepted and understood as "the unobserved inner force that stimulates, compels, and directs a certain behavior response" (Hawkins et al., 2007, p. 364).

It is important for marketers to understand the motives of consumers for several reasons. First, marketing strategy should be designed around the appropriate set of motives (Hawkins et al., 2007). Potential consumer motives dictate the manner in which marketing managers attempt to market/communicate their products/services as solution to the gap existing between the consumer's actual state and desired state (Hawkins et al.,

2007). Thus, successful marketing campaigns should attempt to address all important purchase motives of the target market. Second, Hawkins et al. (2007, p. 372) explain that "consumers do not buy products; instead, they buy motive satisfaction or problem solutions." Though there is debate as to whether marketers can create needs, most agree that marketers who understand the motives of their customers and effectively market the solutions to those motives can create a higher demand (Hawkins et al., 2007).

Motivation theory is entrenched in consumer behavior research history and dates back to the early twentieth century. A number of psychologists and their purported motivational theories emerged and attracted contemporaries. Three of the earliest major categories of motivation theories were the instinct theories, the drive theories, and the psychoanalytic theories and serve as foundations of most modern theories of motivation.

McDougall was one of the first instinct theorists who emphasized human behavior was motivated by *instinctive energy* (Pincus, 2004). This instinctive energy was triggered by states such as hunger and sexual desire (Thomas, 1929; Pincus, 2004). These states were unlearned and encoded in every human and the purpose of all behavior was to achieve goals that satisfied these states (Pincus, 2004). Years later, researchers (Eibl-Eibelsfelt, 1984; Buck, 1988) continued to contribute to McDougall's premise of instinctive energy and human instinct.

Later, drive theorists suggested human behavior was an attempt to bridge the gap between human states of deprivation and satisfaction, named homeostasis (Hull, 1943; Britt, 1950; Woodsworth, 1958, Deci & Ryan, 1985). The need for humans to achieve balance was the motivation that drove humans to behave in certain ways (Pincus, 2004).

The model proposed by Hull (1943) was the first to introduce motives that were not directly observable and laid groundwork for later motivational theories (Pincus, 2004)

Consumer motivation research was strongly influenced by Freud and his psychoanalytic theory, as his was the first to introduce society as the facilitator of one's goal attainment (Pincus, 2004). However, it was Dichter (1964) that actually inserted Freudian ideas into studies on consumer motivation through groundbreaking qualitative methods. The psychoanalytic theorists sought the symbolic language and expression of interviewees utilizing projective techniques, as these expressions uncovered the hidden consumer motives (Pincus, 2004).

Two of the more popular and relevant motivation theories that have been applied to consumer behavior research are Maslow's Hierarchy of Needs (Maslow, 1954) and McGuires's Psychological Motives (McGuire, 1976). The former focuses on general motivation in terms of human behavior while the latter is a more detailed set of motives that are easily applied to consumer behavior (Hawkins et al., 2007). The remainder of this section will further discuss these.

Maslow's Hierarchy of Needs

In 1943, Maslow garnered a great deal of attention with his article entitled *A Theory of Human Motivation*. Maslow was the first to devise a needs-based framework of human motivation founded on clinical research of people, rather than Freud and Skinner, whose theories stemmed from experiments with animals (Maslow's theory, n.d.).

Maslow formulated his theory into a pyramid, with lower-level, or physiological needs that were most imperative, on bottom. These needs included food, water, shelter, clothing, and sex. The next level of needs individuals seek to satisfy was termed safety

needs, comprised of those things that keep individuals from the threat of physical and/or emotional harm (Maslow's theory, n.d.) These safety needs could include medicine, insurance, and sunscreen. Once these basic physiological and safety needs were met, Maslow suggested that higher-level needs would awaken (Maslow's theory, n.d.). This third category, social needs, involved creating friendships, giving and receiving love, and having identity in a group (Hawkins et al., 2007). The fourth level of needs were esteem needs and embraced concepts of self-respect, prestige, accomplishment, and attention.

As long as individuals are motivated to satisfy the needs in the first four categories, which Maslow (1943) termed deficiency needs, they could not reach the fifth level of self-actualization, which is comprised of truth, justice, and harmony. Unfortunately, Maslow felt very few ever made it to the pinnacle of the hierarchy. However, he suggested that motivation to pursue the satisfaction of needs was healthy, while preventing gratification made people sick (Maslow's theory, n.d.).

Hawkins et al. (2007) suggested that Maslow's Hierarchy can be summed up with four underlying premises:

> "1. All humans acquire a similar set of motives through genetic endowment and social interaction.
>
> 2. Some motives are more basic or critical than others.
>
> 3. The more basic motives must be satisfied to a minimal level before other motives are activated.
>
> 4. As the basic motives become satisfied, more advanced motives come into play." (pg. 364-356)

Maslow's Hierarchy of Needs has been widely accepted in the social science community as much more of an intuitive model of motivation than an ironclad rule (Hawkins et al., 2007). Even Maslow (1954) himself understood there would always be variations in individuals and termed these instances *reversals in the hierarchy*. Nevertheless, though exceptions do exist, most agree that the general assumptions of the hierarchy do explain human motivation and behavior (Hawkins et al., 2007). As mentioned earlier, because the terms motive and need are often used interchangeably (Hawkins et al., 2007), it is easy to understand why Maslow's Hierarchy of Needs is useful in consumer research to explain general behavior patterns of consumers.

McGuires's Psychological Motives

Where Maslow formulated a general human motivation theory, McGuire's Psychological Motives (1976) are a much more specific consumer psychology theory. A behavioral psychologist, McGuire (1976, p. 302) applied popular social psychology theory to the consumer context, and stated:

> "Of all the external forces acting on the person, and all the dynamic and directive aspects of human nature relegating the person's responses to such forces, there are few that do not also operate in the area of consumer choice."

He isolated human motivation into sixteen categories likely to be involved in various consumption situations and thereby tailor marketing strategy to address specific motives. McGuire was one of the first consumer behavior researchers to suggest motivation and personality were very closely associated; in fact, he felt the 16 different motives in his theory encapsulated the different types of human personality (McGuire, 1976).

The matrix of 16 categorical motives was divided first by asking two questions:

1. Is the mode of motivation *cognitive* or *affective*?
2. Is the motive focused on the *preservation of the status quo* or on *growth*?

Cognitive motives were those that drove a person to adapt to their environment and achieve a sense of meaning, while affective motives were those needs to satisfy feelings and reach goals (Hawkins et al., 2007). Those motivated to preserve the status quo sought a life of equilibrium, and people with growth motives emphasized development (Hawkins et al., 2007). These initial four categories were again subdivided on the bases of an additional two questions:

3. Is the behavior *actively initiated* or *in response* to the environment?
4. Does the behavior help the individual achieve a new *internal* or *external* relationship to the environment?

The third question addresses the origin of the behavior, whether it was internally aroused or simply a response to the situation (Hawkins et al., 2007). The last criterion is outcome based and is based on whether the achieving an internal or external relationship to the environment (McGuire, 1976). The result is a matrix of 16 potential motives and the corresponding need fulfillments of each that are based on considerable psychological research (McGuire, 1976). They include four domains with four cells in each:

Cognitive Preservation Motives

- *Need for Consistency:* the need to have consistent attitudes, behaviors, and opinions
- *Need for Attribution:* the need to attribute things that happen to us to themselves or outside forces
- *Need to Categorize:* the need to categorize large amounts of data into meaningful and understandable information
- *Need for Objectification:* the need to observable cues to signal what they feel and know

Cognitive Growth Motives

- *Need for Autonomy:* the need to have independence and display individuality
- *Need for Stimulation:* the need to have variety and difference for stimulation
- *Teleological Needs:* the need to choose products that match their view of how the world should work
- *Utilitarian Needs:* the need to solve problems

Active Preservation Motives

- *Need for Tension Reduction:* the need to effectively manage tension and relieve stress
- *Need for Expression:* the need to express one's identity to others
- *Need for Ego Defense:* the need to defend one's identity or ego when threatened
- *Need for Reinforcement:* the need to receive rewards for behaving in certain ways that brought rewards in past situations

Affective Growth Motives

- *Need for Assertion:* the need to seek competition, success, admiration, and dominance
- *Need for Affiliation:* the need to develop mutually helpful and altruistic, satisfying relationships
- *Need for Identification:* the need to gain pleasure from new, satisfying roles
- *Need for Modeling:* the need to conform to individuals or reference groups

(Hawkins et al., 2007)

McGuire (1976) stated that consumers often take into account more than one consideration (motive) and decide how much weight to give each one when making purchase decisions. The goal was to help researchers see consumer as driven by more than single, dominant motives because the consumer decision making process should "take a more eclectic view and consider how much each of a wide range of human motives affects the consumer behavior in question (McGuire, 1976, p. 314).

Motivation Theory in Sport & Physical Activity

Many researchers have indicated that sport participants have varying motives for participation, including participants of the same sport. The Motives of Marathoners Scale

(MOMS) has four broad categories of motivation, with nine more specific subscales embedded throughout these categories. These four broad categories, physical health motives (weight control, general health), achievement motives (competition, personal goals), social motives (affiliation, recognition), and psychological motives (coping/stress relief, life meaning, self-esteem), are based on a great deal of research. Popular sport psychology posits that motivation is a very broad and holistic topic with four specific vantage points, including achievement motivation, competitive motivation, intrinsic motivation, and extrinsic motivation (Weinberg & Gould, 2007). When one considers that intrinsic motivation pertains to the enjoyment and personal satisfaction an event brings, and extrinsic motivation brings social prestige, awards, and recognition (Leidl, 2009), these vantage points are very similar to the broad categories underpinning the MOMS. This section is devoted to discussing current literature of sport motivation in these four areas.

Physical Health Motives

It is estimated that 70 to 80 million American adults are overweight and that number seems to be increasing (Weinberg & Gould, 2007). Adult obesity rates now exceed 25 percent in 31 states and exceed 20 percent in 49 states (How obesity policies, 2009). In spite of these figures, American society values fitness, good looks, and thinness. Though dieting helps many individuals lose and maintain weight, research has shown that exercise may play an important and often underrated role (Weinberg & Gould, 2007). Thus, working out and caloric expenditure is a concern for many. However, enjoyment of the physical activity is necessary for prolonged continuance in that activity. Research has shown (Kimiecik, 2002) fun, happiness, and satisfaction are

key components of adherence to physical activity programs. This may be the reason there has been an explosion in recent years in alternative types of activity, including triathlon, yoga, and Pilates. Additionally, weight control can have an important health consequence besides improved appearance. Because obesity and physical inactivity are primary risk factors for coronary heart disease, a regular exercise program may eliminate inactivity as a risk factor (Weinberg & Gould, 2007).

Physical activity to lose and/or maintain weight, though it contributes to better overall health, may often be classified as a self-presentation motive (Weinberg & Gould, 2007). According to Hausenblas, Brewer, and Van Raalte (2002, p. 3), self-presentation "is the process by which people attempt to control and monitor how they are perceived and evaluated by others". People want to be seen in a positive way by others because it affects the way others treat us. Thus, self-presentation underlies much of our social interactions (Hausenblas, Brewer, & Van Raalte, 2002). Leary (1992) concluded that self-presentation was associated with exercise behavior. That is, exercise may be prompted by the desire to be seen as fit or lean.

Researchers have long suggested that females have higher weight concern motivations than men. It is believed that cultural pressures to attain lean bodies are stronger for women than men (Yeung &Hemsley, 1977). One potential explanation of this phenomenon may be social physique anxiety (SPA). SPA, found at a proportionately higher rate in female populations, is the anxiety experienced by individuals who perceive that their physique will be evaluated in a negative manner by others (Hart, Leary, & Rejinski, 1998). A negative relationship exists between SPA and exercise adherence (Hausenblas, Brewer, & Van Raalte, 2002). Therefore, women with high SPA exhibit

high levels of anxiety and stress over their appearance are less likely to adhere to a physical activity program. The work of Gill and Overdorf (1994) supports weight concern as a strong motive for female exercise participation. In the sport participation context, research has consistently shown similar results (Ogles & Masters, 2003; Ogles & Masters, 2000; Masters, Ogles, & Jolton, 1993; Masters & Lambert, 1989).

Achievement Motives

Achievement motivation is defined as an individual's ability to master tasks, achieve excellence, overcome obstacles, outperform others, strive for task success, persist in the face of failure, and take pride in their talents (Weinberg & Gould, 2007). Many argue that achievement motivation is the factor that allows athletes to perform at high levels. Over the years, two major theories of achievement motivation that have received great attention in sport research are need achievement theory and achievement goal theory.

Need Achievement Theory asserts that all people have underlying achievement motives to either achieve success or avoid failure. The theory discusses two types of individuals in terms their personality factors: high achievers and low achievers. High achievers are motivated to achieve success and have the desire experience pride through accomplishment. In addition, they are highly motivated to achieve success and low motivation to avoid failure (Weinberg & Gould, 2007). In addition, high achievers are not only much more likely to seek out challenging tasks, but they are also more likely to perform better in competitive situations (Weinberg & Gould, 2007). Conversely, low achievers seek to avoid experiencing shame or failure and have high motivation to avoid failure and low motivation to achieve success (Gill, 2000). Low achievers will avoid

competitive and evaluative situations when possible. Need achievement theory asserts that an individual's ultimate behavior is determined by these personality factors plus a combination of situational, behavior tendencies, and emotional reactions (Weinberg & Gould, 2007).

According to Achievement Goal Theory, individuals may have differing motivation orientations depending on situational cues (Ntoumanis, 2001). The two achievement goal orientations are task (mastery) and outcome (competitive) which are linked to one of two different concepts of ability, either differentiated and undifferentiated (Ntoumanis, 2001). Task-oriented individuals focus on improving relative to their past abilities (Weinberg & Gould, 2007) and "do not judge their self-worth based on the adequacy of their ability and the demonstration of superiority" (Ntoumanis, 2001, p. 398). These task-oriented individuals tend to be those who set personal goals and focus on the attainment of those goals regardless of the outcome achieved in doing so. Research has shown that high task-orientation has a positive relationship with pro-social views of sport (Duda, 1989), high sport enjoyment and interest (Hom et al., 1993), sportsmanship (Lee et al., 1999), and coping with stress (Ntoumanis et al., 1999). The self-esteem of these individuals is positively impacted when they attain mastery of these goals (Weinberg & Gould, 2007).

In contrast, outcome-oriented people focus on comparing themselves with and beating others (Weinberg & Gould, 2007). "These individuals strive to achieve success by demonstrating superior ability" (Ntoumanis, 2001, p. 398). Those with an outcome orientation tend to feel good about themselves when they win and not so good when they lose. Because outcome-oriented individuals tend to judge themselves based on the

adequacy of their ability and superiority (Ntoumanis, 2001), most researchers feel it is best for athletes to adopt a task orientation because it is easier for them to feel good about themselves (Weinberg & Gould, 2007).

As noted, closely associated with Achievement Motivation Theory is the concept of competition. Martens (1976, p. 3) viewed competitiveness as "a disposition to strive for satisfaction when making comparisons with some standard of excellence in the presence of evaluative others." In other words, competitiveness is achievement behavior displayed in a competitive context (Weinberg & Gould, 2007). Thus, it is not possible for a person to compete against themselves; it is only possible to compete in socially evaluated situations. Researchers have posited that an athlete's achievement motivation orientation brings out the competitiveness which influences their behavior (Weinberg & Gould, 2007; Scanlan & Ragan, 1978). Research suggests that athletes high in need achievement are not only more likely to prefer competitive situations but also to choose competitors of higher abilities (Scanlan & Ragan, 1978).

Social Motives

Social Motivation Theory is a newer area of study in its overarching achievement motivation theory. Researchers have begun looking at the influence of social goals and motivation as a determiner of sport and exercise participation (Weinberg & Gould, 2007). According to Gill and Overdorf (1994), social incentives operate in the sport and exercise setting when people participate in physical activity as an opportunity for interaction with others. Stuntz & Spearance (2007) also suggest friendship and group acceptance influence athlete's sport motivation. People high in social goal orientation derive sport enjoyment from affiliation from the group and recognition from being liked by others

(Weinberg & Gould, 2007). Thus, two of the most researched motivating factors in Social Motivation Theory are affiliation and recognition.

Affiliation is simply the desire to be connected or associated with others. Research in the sport context has long supported the belief that the connection with others is a reason for participation. Carmack and Martens (1979) identified affiliation and social influence as reasons people run. King and Burke (2000) also found that runners rated affiliation as one a reasons they run, especially females. Gill and Overdorf (1994), in their study on female adherence to exercise programs, suggested that not only were group affiliation motives important, but they increased with age.

Social recognition is a type of extrinsic reward that motivates individuals in myriad situations (Maer & Braskamp, 1986). Social recognition motivation is the need to be recognized and appreciated by some type of group. Social recognition seems to be strongly linked to age and gender. Research (Duda, 1991; Duda & Tappe, 1989) has found that older adults rated high in recognition motives. Similarly, Gill and Overdorf (1994) found recognition to be an important factor in young females who exercised. In a study of older runners, Ogles & Masters (2000) found affiliation as one of the strongest motives for training for and completing marathons. Consequently, those who strongly endorsed recognition were more likely to train in groups and less likely to train by themselves (Ogles & Masters, 2000).

Psychological Motives

Psychological motivation is the last broad category in the MOMS. One of its subscales is coping/stress relief. Coping represents the behavioral and cognitive efforts by which a person attempts to manage the demands of a stressful situation (Lazarus, 1999).

Though much research suggests sport may be a potential stressor, sport participation may also serve as a stress reliever (Landers & Arent, 2001). In this study, triathletes with psychological motives to participate in triathlons did so to help alleviate stress and anxiety; triathlon was a recreational activity that helped participants cope with the daily demands and stresses of life.

A considerable amount of research has been conducted on how exactly aerobic exercise and/or sport participation affects anxiety and stress levels. Most experts agree that there are overwhelming psychological benefits to physical activity. Berger & Molt (2001) and Landers & Arent (2001) showed positive correlations between exercise and anxiety reduction. Taylor (2001) also found that adherence to exercise programs resulted in lower anxiety rates and higher levels of engagement/socialization. In addition, a study with joggers (Long, 1984) showed a reduction in anxiety when compared to non-exercise groups.

Depression levels in sport and exercise participants have also been well-documented. Depression, a psychoneurotic disorder, tends to affect females at a rate six times that of men (Weinberg & Gould, 2007). In an early study by Griest et al. (1978), results showed depressed participants who jogged three times a week over a ten week period showed significantly lower levels of depression as compared to those participants involved in psychotherapy only. Blumenthal et al. (1999) had similar findings and showed that exercise participants reduced depression rates at comparable levels to participants taking medications. Finally, Croft (2005) showed how exercise potentially reduces clinical depression. A number of additional studies showed that exercise and/or

sport participation seem to have these positive effects across age groups, race, socio-economic status, and gender (Weinberg & Gould, 2007).

Though self-concept, self-esteem, and self-efficacy are distinct, they are interrelated when describing how one feels about herself and her capabilities (Weinberg & Gould, 2007). As the social sciences took a harder look at these variables, so too did sport psychologists. White (1959) suggested that when people mastered their surroundings, regardless of the activity, it brought about internal feelings of pleasure, fun, and satisfaction. These feelings can lead to higher levels of self-esteem. Research has shown that exercise programs are associated with increased self-esteem levels (Sonstroem & Morgan, 1989) and may be the result of the improvement of biological or psychological factors that exercise programs provide (Sonstroem, 1997). As opposed to research on special populations, such as those with depression or those who exhibit heightened levels of state anxiety, more recent research has shown positive changes is self-esteem in normal populations (Weinberg & Gould, 2007). These changes seem to become stronger as adherence to exercise and activity programs become longer. Some suggest this is because, over time, participants develop senses of achievement, belonging, and social interactions (Weinberg & Gould, 2007).

Life meaning is another theme running through sport motivation literature. However, it can be a vague concept with a multitude of meanings and explanations depending on the particular sport and athlete. White (1959) proposed that behavior was an intrinsic need to deal effectively with the environment and that this behavior began at childhood. Leidl (2009) suggested people may participate in sport for a variety of complex, psychological reasons which include finding meaning in life and advancing and

actualizing the self. Segrave (2000, p. 71) felt "one of sport's seductive charms: it can offer what life cannot, a clear sense of purpose and meaning". Campbell (2003) held that sport was an experience of truth. Dean Karnazes, a famous ultra-marathoner, when explaining his reasons for running extreme distances, said running made life more vibrant and intense (Karnazes, 2005). In addition, he suggested it brings a sense of balance and peace to his life. In her book on sport philosophy, Reid (2002, p. 3) wrote that sport can benefit people "beyond social and financial rewards—even beyond physical health". A number of coaches over the years have spoken in the veins of Maslow and others and related themes of self-actualization and social pursuits to sport (Leidl, 2009). Though difficult to measure, it seems many people are motivated to participate in sport because it leads to better lives (Reid, 2002).

Development of the Motives of Marathoners Scale

Researchers have developed motivational theories of sport based on broader psychological theories of motivation, although the development of sport-specific motivational theories using athlete samples can lead to more relevant findings (Masters et al., 1993). Thus, the specifics of what motivates marathon runners to voluntarily engage in long distance training sessions and races was first investigated by Curtis and McTeer (1981). Through qualitative design, the investigators interviewed runners and asked open-ended questions about concerning their desire to increase running distance to that of a marathon (Havenar & Lochbaum, 2007). They discovered that the motives of runners were the physical benefits and mental benefits, such as stress relief (Curtis & McTeer, 1981). Summers et al. (1982) also used open-ended questioning and distributed pre-race and post-race questionnaires to first time marathon runners. They concluded that pre-race

runners were motivated on physical and mental grounds as well as to gain a sense of accomplishment (Summers et al., 1982). Post-race runners, however, were strongly motivated to run another marathon to improve their time. This was the first research to propose that marathon runners were a potential heterogeneous group with different motives based on age and/or experience (Havenar & Lochbaum, 2007). Barrell et al. (1989) had similar findings. They found that marathon runners were initially motivated to stay in shape. However, with running experience, their major motives changed somewhat to that of competition and running faster times (Barrell et al., 1989).

The Motives of Marathoners Scale (MOMS) was developed by Masters, Ogles, and Jolton (1993) to investigate the specific motives of long distance runners. Though the content of the MOMS instrument was derived from previous studies of long distance runners (Ogles & Masters, 2000), the scale was developed in large part because the researchers were unsatisfied with available instrumentation. First, few researchers used participants who were actual runners in a designated marathon (Ogles & Masters, 2003; Masters & Lambert, 1989). In addition, there were potential problems with the open-ended question format used with small samples (Ogles & Masters, 2003; Masters, Ogles, & Jolton, 1993). Finally, the psychometric properties of the questionnaires used in many of the previous studies were unpublished (Ogles & Masters, 2003).

During the initial survey development phase, Masters et al. (1993) identified four general reasons for running which were based on previous studies of long-distance runners: psychological, physical, social, and achievement. Next, a conceptual framework was used to break these general categories broken into nine specific reasons that were based on six previous and relevant running studies (Masters et al., 1993). A pool of 120

items were formulated that constituted the nine subscales and given to 9 male and 3 female marathon runners. A 7-point Likert scale was used to measure “the extent to which each item represented a reason for training and running a marathon” (Masters et al., 1993, p. 136). The runners were asked to review the questionnaire for things such as ambiguity, wording, and coverage of content. All respondents agreed the scale was too long and redundant. Thus, 24 items were eliminated from the scale in addition to changes in wording. The end result was a 96-item questionnaire used in the first sample (Masters et al., 1993).

The participants in the first sample (n = 482; male = 387, female = 95) were recruited during prerace registrations at three marathons in the Midwestern United States (Masters et al., 1993). They filled out the surveys and returned them via mail. The usable return rate was 43%. Cronbach’s alphas were calculated for all nine scales. Though all scales were greater than .75, the researchers sought to shorten the survey if possible. Thus, items remained on the MOMS only if their adjusted item-scale correlation was greater than .60. Item-scale correlation is the correlation between an individual item and the sum of the remaining items on the scale (Masters et al., 1993). The result was the deletion of an additional 40 items. The final MOMS was a 56-item questionnaire that demonstrated adequate internal consistency, with alphas ranging between .80 and .92 (Masters et al., 1993). To gather reliability measures, the researchers readministered the MOMS to 180 subjects from this initial sample via mail three months after the initial assessment. A 63% response rate (n = 113) was realized after a month. Intraclass correlations were calculated from the 56-item MOMS, with overall adequate reliability scores ranging from .71 to .90 (Masters et al., 1993).

Utilization of the Motives of Marathoners Scale

The MOMS has been used in several marathon motivation studies since its development. Ogles and Masters (1995) investigated motives of runners based on gender, race distance, and training habits. The motives of runners were also compared based on behaviors that grouped them as either obligatory runners or recreational runners. Results showed that the shorter 5k and 10k races were comprised largely of women. In addition, females were disproportionately identified as recreational runners who endorsed weight concern, affiliation, self-esteem, psychological coping, and life meaning as their primary motives for running (Ogles & Masters, 1995). Conversely, males were disproportionately identified as obligatory runners who participated in longer races and were characterized the achievement motives of competition and personal goal achievement (Ogles & Masters, 1995). One noteworthy disadvantage of this study was a small sample size (n=99).

Ogles and Masters (2000) also researched marathoner motives based on age. They classified *older* runners as those over age 50 (n=104) and *younger* runners as those between the ages of 20 and 28 (n=110). Runners in both groups had similar weekly training regimens in terms of mileage and time, but older runners trained more months of the year and leading up to races and completed more races (Ogles & Masters, 2000). Additionally, significant differences existed in their motives for doing so. Older runners were more likely to be motivated by affiliation motives, weight concern motives, general health orientation motives, and life meaning motives (Ogles & Masters, 2000). Results also showed that runners who were high in competition motives "had personal best finish

times regardless of the age group to which they belonged (Ogles & Masters, 2000, p. 137-138).

Havenar and Lochbaum (2007) were the first researchers other than Ogles & Masters to utilize the MOMS with marathoners. They explored the motives of runners preparing for their first marathon. Specifically, they used the MOMS to compare the potential motivational differences of marathon dropouts (n=75) with marathon finishers (n=31). Participants, who were tracked over twenty weeks, filled out the MOMS prior to their first training session. Havenar & Lochbaum (2007) reported significant differences (p<.05) between the two groups in affiliation motives, social recognition motives, and weight concern motives. In particular, those who failed to complete the marathon training and race rated higher motivations in these two categories (Havenar & Lochbaum, 2007). Thus, those who dropped out began the marathon training with higher motivations to lose/maintain weight, socialize with other runners, and earn the respect of peers.

In addition to runners, the MOMS has been used to examine the motives of a variety of other endurance athletes. The rationale for using the MOMS instrument to measure motives of non-runners is the similarity in training patterns of endurance athletes (LaChausse, 2006). Regardless of the sport, endurance athletes do more than just show up to race. Instead, they undergo hours of rigorous training and suffer physical exertion (LaChausse, 2006). Like marathon runners, other endurance athletes may have difficulty in finding training partners (Ogles & Masters, 2003) and endure lengthy training sessions alone. In addition, the amount of preparation for most endurance events is far beyond what necessitates the basic health benefits of a normal exercise program (Blair, 1996). Thus, similar to marathoners, other endurance athletes must alter schedules for work,

family, and other social agendas to accommodate a proper training regimen (Croft et al., 2007).

Doppelmayr and Molkenthin (2004) investigated motivational differences between marathon runners and those who participate in longer distance runs, ultramarathoners and adventure ultramarathoners. By definition, an ultramarathon is any organized footrace beyond the standard marathon running distance of 26.2 miles (Blaikie, n.d.). However, most ultramarathons begin at 50 kilometers and can extend to extreme distances (Blaikie, n.d.). While ultramarathons are usually limited to paved roads, dirt roads, and/or marked trails, adventure ultramarathons are extreme distance events that cover several days and involve more inhospitable terrains, such as deserts (Chung, 2004). The results showed significant differences between the three groups (Doppelmayr & Molkenthin, 2004). Marathoners placed greater importance on competition motives and less importance on the nature and life meaning motives than did adventure ultramarathoners (Doppelmayr & Molkenthin, 2004).

LaChausse (2006) used the MOMS to examine the motives of competitive and non-competitive cyclists in the United States. The participants were adult male (n=944) and female (n=295) cyclists (LaChausse, 2006). The participants were not part of a specific cycling event. Instead, LaChausse (2006) used a variety of Internet-based websites to announce the secure survey. The MOMS instrument was slightly modified with words like ‘run/running/runner’ replace with ‘cycle/cycling/cyclist’. The results showed that “competitive cyclists were significantly more likely than non-competitive cyclists to endorse goal achievement (p<.01), competition (p<.001), and recognition (p<.001) as reasons for cycling” (LaChausse, 2006, p. 309). These results corroborate the

findings of Masters et al. (2003) that endurance athletes may participate in sport for a variety of reasons based on age, gender, and competition level.

Finally, there MOMS has been utilized with triathletes. Croft et al. (2007) used the MOMS to examine the motives of elite and non-elite participants in a triathlon. In accordance with LaChausse's (2006) study with cyclists, the researchers made minor changes in wording to make the MOMS applicable to triathletes. The study, however, proved to be potentially problematic. First, the distance of the triathlon was not disclosed. Additionally, the study (n=34) included only nine females, had a response rate of 42.5%, was conducted with an Australia population, and gave no indication as to whether the instrument was pilot tested with triathletes before administration (Croft et al., 2007). Nevertheless, Croft et al. (2007) showed that triathletes ranked highest in personal goal attainment motives and competition motives. Their initial hypothesis, which stated there would be a difference between elite and non-elite triathletes on four of the nine subscales, was not supported. The only difference found between groups was in life meaning motives (Croft et al., 2007). However, their inability to detect differences between elite and non-elite triathletes could be based on any of the methodological problems discussed.

Given the potential problems with Croft et al.(2007), it seems important to revisit triathlon utilizing the MOMS for a more complete and detailed explanation of triathlete motivation. In addition to sampling problems, Croft et al. (2007) failed to account for two potentially important variables. First, they did not investigate triathlete motives based on the distance of the triathlon. Other studies have shown that endurance sport motives may vary according to age (Ogles & Masters, 2000), level of competition (LaChausse, 2006), gender (Ogles & Masters, 2003) and experience (Ogles et al., 1995). It follows that

motives may also vary in accordance with the distance event in which endurance sport athletes choose to participate. Second, the studies failed to assess the motives of triathlete's with regard to their perceived levels of activity. The level of activity is synonymous with level of competition or involvement competitiveness. Koivula (1999), Masters and Ogles (2000) and LaChausse (2009) all believed the level of activity was a factor that influenced the motivation to participate in sport.

CHAPTER 3—METHODOLOGY

Introduction

In this chapter, the methodology of the proposed study is explained. This chapter includes sections on sample population, methods, human participant protection, instrumentation, pilot testing procedures, statistical power analysis, and research questions.

Methods

Data collection commenced in August of 2010. Because the study sought to assess the motives of sprint triathletes only, the researcher gathered data from the participants of sprint triathlons. Thus, the participants in the study were sprint triathletes who took part in one of two sprint triathlons in Texas and one sprint triathlon held in Florida.

These specific triathlons were targeted for two reasons. First, they were well-established sprint triathlons with historically high numbers of male and female participants. In addition, sprint triathlons are meant to attract newcomers to the sport Second, all the triathlons were sanctioned by USA Triathlon (USAT) and, therefore, met all safety and procedural guidelines of the national governing body. These factors could potentially contribute to a stronger study. Permission was granted by the organizers of these three triathlons to collect data.

Access to the triathletes participating in these events was obtained through correspondence with the triathlon organizers in April-June 2010. An initial email was sent *(Appendix ___)* asking the organizers to grant the researcher limited access to the triathletes registered for the event. The emails included information about the purpose of

the study, use of data, and protection of participant identities. Once permission was granted, data collection arrangements were made with the organizers.

To ensure confidentiality, all triathletes that entered the sprint triathlons were sent an email by each event organizer, who served as the gatekeeper. The email was sent approximately two weeks before each race. In the email *(Appendix ___),* the triathletes were informed of the study and were asked to participate. If the triathletes chose to participate, they clicked on the web link embedded in the email which linked them to a website where the online survey was housed. Adhering to Dillman's (2007) suggestions for improving response rates, the emails were sent a second time (one week later) via the gatekeeper. Participants were able to complete the questionnaire up to one week after the second email was sent. Thus, the total data collection period spanned two weeks.

The researcher chose surveymonkey.com to create the survey and collect the data. The software on surveymonkey.com was straightforward and the technological knowledge needed to conduct the study was minimal. It was also a relatively inexpensive service to use. There were no limitations on the number of questions or survey pages. Surveymonkey.com, a secure site, also pledged to protect the privacy of both survey data gathered and survey respondents.

Human Participant Protection

Prior authorization was given by the University of New Mexico Institutional Review Board on July 26, 2010 (Protocol #10-233). After this authorization was granted, the study commenced. The data was to be kept for three years and then destroyed by the researcher. The survey directions assured participants that they could stop the survey at any time without any risk to themselves or their participation in the upcoming triathlon.

Great care was taken to ensure minimal risk to the participants of this study. First, in order to protect identities, the survey instrument did not ask for participants to report their name or disclose any information which could potentially lead to the discovery of their identities. Because the study was conducted via surveymonkey.com, and because the organizers of the triathlons served as the gatekeeper and simply forwarded the researcher's invitation to participate, participant anonymity was assured throughout the course of the study. At no time did the researcher become privy to the identities of any participants. Since respondent identities were not discovered, handling their information in a confidential manner was not needed.

Second, the content of the survey also posed minimal risk to participants. The survey instrument asked about their reasons for participating in a sprint triathlon. The study could benefit the sport of triathlon in the future because, if the motivational factors of triathletes were better understood, it could potentially help race promoters, equipment manufacturers, and retail outlets more fully understand this market segment and provide better products and services to triathletes. None of the data collected was considered sensitive.

Finally, full disclosure of the study purpose, confidentiality measures, and researcher contact information was given in the gatekeeper's email to participants. This email contained the informed consent. For those choosing to participate, an *I agree to participate* button had to be selected before being granted access to the survey instrument link.

Instrumentation: Motives of Marathoners Scale

The motivation for sprint triathlon participation was assessed using a slightly modified Motives of Marathoners Scales (MOMS). Created by Masters, Ogles, and Jolton (1993), the original MOMS was a 56-item instrument that assessed reasons for participation in marathons based on our broad categories and nine subscales. The content of the MOMS instrument was derived from previous studies of long distance runners (Ogles & Masters, 2000). The nine subscales fall under the four broad categories: *Psychological* motives, *Physical Health* motives, *Social* motives, *and Achievement* motives. Scores on these subscales, or dependent variables, are derived from the means of the questions that constitute each subscale. Each construct in the MOMS is measured with a different number of questions, ranging from three to seven. Ogles and Masters (2000) held that

> "Psychological motives are comprised of maintaining or enhancing self-esteem, providing a sense of life-meaning or aesthetics, and problem solving or coping with negative emotions. Physical motives for marathon running include general health benefits and health concerns. Social motives include affiliation with other runners, and recognition or approval from family and friends. Finally, achievement motives for marathon running include competition with other runners and personal goal achievement." (pg. 134)

In a study of marathon runners, Ogles and Masters (2000) recorded the nine scales of the MOMS and demonstrated reliability in terms of internal consistency scores (range .80 to .92) as well as test-retest estimates (range .71 to .90). The MOMS instrument includes fifty-six statements, and the participants are asked to rate each on a Likert-type

scale from 1 (not a reason) to 7 (a very important reason). The scores are obtained by calculating each item in the nine subscales (LaChausse, 2006).

Because this study proposed to use the MOMS with triathletes as opposed to marathoners, it was important to review the use of the MOMS in motivation studies with non-marathoner endurance athletes. LaChausse (2006) used the MOMS in his study of competitive and non-competitive cyclists. He replaced the words “running” or “runner” with the words “cycling” or “cyclists” where necessary (LaChausse, 2006). He observed a Cronbach’s Alpha of .81 to .92 with this cycling population. In addition, Van der Nest (2008) used the MOMS with ultramarathon runners. His conclusions showed alpha coefficients ranging from .74 to .87. Finally, Croft et al. (2007) distributed the MOMS to elite triathletes in Australia. However, they did not publish psychometric findings.

The present study utilized the MOMS instrument with a new population: sprint triathletes. When Van der Nest (2008) proposed to distribute the MOMS to a group of cyclists, he made slight modifications in wording to make the MOMS applicable to the cyclists as opposed to marathoners. In the present study, the researcher followed the techniques of Van der nest and made slight modifications in wording to make the instrument applicable to triathletes. Thus, the word “runner” was replaced with “triathlete” and the word “run” was replaced with “participate in triathlons”. The modified MOMS used in this study (and corresponding word changes) can be found in the Appendix.

Because the MOMS instrument resides is in the public domain, permission to use the survey in this study was not needed.

Pilot Testing Procedures

Since the MOMS survey was employed with a new population, validity had to be established for the instrument. A pilot study, therefore, was conducted. The purpose of this pilot study was to evaluate the instrument's efficacy and to gather information that could improve the study's overall quality. The goal was to administer an instrument to triathletes that produced reliable scores and contained evidence of validity (Martin, 2007). The researcher sought to establish this evidence of internal consistency (reliability) and content validity of the modified MOMS instrument in the following two phases: (a) a review by a panel of experts in academia to establish evidence of validity based on the content of the instrument and (b) piloting the instrument with a group of triathletes to establish evidence of internal consistency/reliability.

Panel of Experts in Academia

The modified MOMS was first presented to a panel of experts in academia. The five instructors constituting the panel of experts were from an exercise science department at a university in Texas. The group was selected because they were not only academics in the sport and exercise field but also triathletes. According to Kline (2005), utilizing the critiques and opinions of experts in a given area can help strengthen the evidence of validity of an instrument. Expert opinion during the item development stage aids in items capturing the construct of interest (Martin, 2007). In this study, it was thought the panel's professional knowledge of research techniques, survey development, and psychometric domains as well as their practical knowledge of triathlon training and participation would contribute to a productive review of instrumentation. The researcher

sought input from the panel on instrument features such as instructions, wording, readability, structure, constructs, and content knowledge.

The panel was assembled and given a hard copy of the instrument. They were instructed to read over the questionnaire in detail. At the conclusion, the researcher led an open forum to discuss their comments and suggestions. If an improvement and/or change was met with consensus, the adjustment was made to the instrument. The byproduct of the expert panel was a modified MOMS survey that was deemed acceptable and was utilized in the next phase of the pilot study. Changes included slight wording and demographic question order.

Pilot Study with Triathletes

Phase two of the pilot study sought to establish evidence of internal consistency of the modified MOMS. Once primary changes from the panel of experts had been made, an electronic version of the modified MOMS was put online at surveymonkey.com. Arrangements were made to pilot the study with members of a triathlon club in Central Texas who have either (a) completed a sprint triathlon or (b) were planning on completing a sprint triathlon in the near future. An email with a link to the survey was provided to these willing participants. The email assured participants they would remain anonymous and the sole purpose of the information being gathered was to further modify the final MOMS instrument. A feature of the host website allowed the researcher to gauge the time it took for each participant to complete the survey. A follow-up email was sent shortly after initial pilot data were collected to assess opinions on the length of the survey, the number of question on the survey, and the readability of questions/instructions.

Cronbach's alpha is a conventional and accepted way of measuring instrument reliability in the social sciences (Martin, 2007). Because Cronbach's alpha can be calculated from a single sample (Kline, 2005), it is a sound choice to assess the internal consistency of a piloted survey.

Pilot Study Results

The overall response rate of the pilot participants was undetermined because the triathlon club coordinator did not reveal how many people were active members in the club. The total number of collected responses from the pilot was n=21 (male=13, female=8). The total number of completed surveys was 100% and included no missing data.

A factor analysis was conducted based on internal consistency of the nine subscales. The results included α=.789 for the *General Health Orientation* scale (6 items), α=.843 for the *Weight Concern* scale (4 items), α=.898 for the *Affiliation* scale (6 items), α=.866 for the *Personal Goal Achievement* scale (6 items), α=.834 for the *Competition* scale (4 items), α=.844 for the *Recognition* scale (6 items), α=.924 for the *Psychological Coping* scale (9 items), α=.852 for the *Self-esteem* scale (7 items), and α=.900 for the *Life Meaning* scale (8 items). Because an instrument with fewer items can be viewed as a way to lessen the burden on respondents, the researcher analyzed each subscale in light of the alpha-if-item-deleted coefficients. However, analysis showed that there were no deletions that would make any significant impact to the reliability coefficients of this instrument.

A follow-up email was sent to the participants asking them do discuss any part of the survey they felt needed clarity, but no responses were received. Therefore, the researcher was satisfied and proceeded with data collection.

Demographic Data Questionnaire

The final addition to the instrument used in this study included a demographic questionnaire which consisted of six *(Appendix ____).* The data were deemed necessary because it allowed the researcher to investigate the relationships between several important variables that might further segment the MOMS into potentially meaningful categories of triathletes. The demographic questionnaire assessed the age, gender, ethnicity, level of competitiveness, and amount of sprint triathlon experience.

Research Questions & Analyses

$RQ_{1:}$ Are there differences in the motives of sprint triathletes based on their age?

$RQ_{2:}$ Are there differences in the motives of sprint triathletes based on gender?

$RQ_{3:}$ Are there differences in the motives of sprint triathletes based on their self-reported level of activity?

$RQ_{4:}$ Are there differences in the motives of sprint triathletes based on their amount of sprint triathlon experience?

$RQ_{5:}$ Are there differences in the motives of sprint triathletes based on the interactions of gender and the remaining three independent variables of interest: age, level of competitiveness, and sprint triathlon experience?

Analyses: Separate factorial ANOVAs were performed on each of the dependent variables of interest with gender, age, level of activity, and level of experience as

between-subjects factors and the two-way interactions of gender with age, level of activity, and level of experience.

Statistical Power Analysis

Parks et al. (1999, p. 140) suggest "power analysis involves designing and interpreting research with attention to the statistical power (probability) of the study to detect an effect of a specific size." According to Houle et al. (2005), the power in a study is the probability that a test will yield significant results. Power inadequacies can largely limit the interpretation of such studies. The result could be a study whose results consumers approach with uncertainty.

The essential factors to calculate power are sample size, alpha level, beta level, and the effect size. According to Houle et al. (2005), however, a power analysis can be conducted to find the required sample size to achieve some value of acceptable power. This was the case in the present study. A prospective power analysis was conducted to ascertain a sample size that would yield power = .80. This power level was chosen because, although there is no formal standards in research, "a widely used convention for acceptable levels of power (and inferred corresponding β) is .80" (Houle et al., 2005, p. 415). Therefore, β, the probability of retaining a false null hypothesis, was .20. The alpha level was set at the $p<.05$ level.

The final factor for the power analysis was the effect size, or Cohen's *d*. Effect size has several meanings. According to Parks et al. (1999), effect size can refer to (a) the magnitude of the difference in groups expressed in standard deviation units, (b) the strength of an association, or (c) the proportion of variance in the dependent variable explained by the independent variable. The effect size is essentially a measure of

practical significance or meaningfulness (Parks et al., 1999) and helps assure that a significant finding is also meaningful. The effect size used for the power analysis in this study was d_1 =.40 and was calculated based on the use of the MOMS with cyclists. This study (LaChausse, 2006) examined gender differences in cyclists, finding a significant difference in five of the nine MOMS subscales.

Using Piface, a statistical analysis tool, the researcher solved for *n.* This program, with $p<.05$, $d_1=.40$, standard deviation of 1.30, and power of .80, yielded the need for 152 subjects in a one-tailed test, based on an equal allocation per group. Therefore, the goal of the present study is to acquire a useable sample of 160 sprint triathletes.

Analyses

Once the two week data collection period concluded, survey responses were exported from surveymonkey.com into Microsoft Office Excel. Next, raw scores were cleaned. The researcher checked all categorical variables for anomalies and continuous variables for normalcy. Once all values were confirmed, the scores were then transported from Excel into Statistical Package for Social Sciences (SPSS) version 17 for statistical analysis. The significance level for the analyses of each research question was set at the $p<.05$ level. Participant demographics and central tendency scores are summarized in the results section in the following chapter.

Missing Data

The instances of missing data were minimal. However, because several of the completed surveys had missing data cells, the researcher had to decide how to manage the missing data. The researcher opted to use listwise deletion of missing data during analysis. This method dismisses a respondent if there are any instances of missing data in

their responses. Since the number of missing data cells in the sample was small, and therefore the number of excluded cases was small (*n*=4), the listwise option was chosen.

Table 1. Missing Data

	N	Minimum	Maximum	Mean
Gender	165	1	2	1.41
Level of experience	165	1	3	2.31
Race/Ethnicity	164	2	7	5.04
Age Category	163	1.00	4.00	2.4847
Level of activity	164	1.00	3.00	2.4634
Valid N (listwise)	161			

Measurement Reliability

The researcher assessed the internal consistency of the scores. Because Cronbach's alpha can be calculated from a single sample (Kline, 2005), it was used in this study. Cronbach's alphas were calculated for each of the nine subscales, including the *General Health Orientation* scale (6 items; present sample α=.824), the *Weight Concern* scale (4 items; present sample α=.814), the *Affiliation* scale (6 items; present sample α=.856), the *Personal Goal Achievement* scale (6 items; present sample α=.843), the *Competition* scale (4 items; present sample α=.860), the *Recognition* scale (6 items; present sample α=.938), the *Psychological Coping* scale (9 items; present sample α=.916), the *Self-esteem* scale (7 items; present sample α=.850), and the *Life Meaning* scale (8 items; present sample α=.880).

Primary Analyses

Separate factorial ANOVAs were performed on each of the dependent variables of interest with gender, age, level of activity, and level of experience as between-subjects

factors and the two-way interactions of gender with age, level of activity, and level of experience. This model allowed the researcher to examine the main effects of the four independent variables (i.e., are there differences in means) as well as the interaction of gender with the three remaining variables (i.e., does gender modify the relationship between the IV and DV).

CHAPTER 4-RESULTS

The purpose of this study was to explore the motivational factors of triathletes in order to better understand the specific motives that drive them to consume the product/service of and participate in triathlon events. The study looked specifically at participants in a sprint triathlon, the shortest of the three main triathlon competitions. Because these events are shorter in distance, these are normally the events newcomers to triathlon choose. Triathlon is presently in a growth stage, it was thought this study may shed more light on the motivational draw to the sport. In addition, the researcher hoped to capture the motives of many first-time triathletes to better understand what caused these participants to consume and participate in triathlon. The study utilized a slightly modified Motives of Marathoners Scale (MOMS), an instrument developed by Masters, Ogles, and Jolton (1992), to better understand the reasons for triathlon involvement. The study focused on differences based on gender, the triathletes' self-reported level of activity, and their previous experience in triathlon events.

Demographic Profile of Participants

The three triathlons used in this study had a combined total of 799 participants that received an invitation to participate in the study. A total of 173 triathletes responded to the invitation for a response rate of 21.6%. Of the 173 responders, 8 abandoned the survey (4.6%) for a total of 165 (20.7%) useable surveys. The final sample for the study (n=165; male=98, female=67) were sprint triathletes who took part in one of three sprint triathlons held in Texas and one sprint triathlon held in Florida.

Participants were grouped by age in ten year increments. Triathlon results, usually based upon age groups, are typically given in increments of five years. However, because

of the study's limited sample size and because the researcher sought to save degrees of freedom in the analyses, the triathletes were put into a smaller number of groups of larger size. There were two missing cells for age (n=163; μ=).

Regarding race/ethnicity, this sample was fairly homogenous. There was a single missing cell for age (n=164). Of the 164 respondents, 154 (93.3%) were white, 8 (4.8%) were Hispanic, 1 (.6%) was Asian, and 1 (.6%) was two or more races. According to USA Triathlon's data (Triathlon participation…, 2009), 88.2% of triathletes are Caucasian/White, 3.2% are Hispanic, 2.1% are Asian, 1.5% are Multi-racial, and 0.5% are African-American.

Level of activity was assessed through a Likert-scale question asking how competitive the triathletes were. The initial instrument was a 5-point Likert scale that ranged from not at all competitive (1) to very competitive (5). However, because the researcher again chose to save degrees of freedom, the category was condensed to three categories, including low competitiveness, medium competitiveness, and high competitiveness. There was a single missing cell for level of activity (n=164). The sample showed that, for the most part, the triathletes tended to be more competitive: low competitiveness (n=17; 10.3%), medium competitiveness (n=54; 32.7%), and high competitiveness (n=36, 21.8%). The mean for the sample was (μ=3.65).

The triathletes were placed into one of three groups for levels of experience (n=165). Most triathletes had completed either between 1 and 5 sprint triathlons (n=86; 52.1%) or over 6 triathlons (n=65; 39.4%) However, this was the first triathlon for some triathletes (n=14, 8.5%). Table 4 gives level of experience descriptives of participants.

Analyses

Separate factorial ANOVAs were performed on each of the dependent variables of interest with gender, age, level of activity, and level of experience as between-subjects factors and the two-way interactions of gender with age, level of activity, and level of experience.

Where significant differences were found, the reported data includes the omnibus *F*, the *p* value, eta-square (η^2), the mean scores of the groups, and Cohen's *d*. Eta-square Affiliation

Gender

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. The model showed three statistically significant main effects.

First, the main effect of gender was statistically significant, $F(1,153) = 10.518$, $p < .001$, $\eta^2 = .058$. Follow-up pairwise comparisons revealed that females ($M = 3.716$) had greater *Affiliation* scores than males ($M = 3.038$), Cohen's $d = .54$.

Second, the main effect of age was statistically significant, $F(3,153) = 3.329$, $p < .021$, $\eta^2 = .055$. Follow-up pairwise comparisons revealed that triathletes in their 20s ($M = 3.677$) had greater *Affiliation* scores than triathletes in their 30s ($M = 2.868$), $p = .028$, Cohen's $d = .65$.

Finally, the main effect of level of activity was statistically significant, $F(2,153) = 3.900$, $p < .022$, $\eta^2 = .043$. Follow-up pairwise comparisons revealed that triathletes who self-reported low levels of activity ($M = 2.958$) had lower *Affiliation* scores than

triathletes who self-reported high levels of activity (M = 3.794), p = .047, Cohen's d = .67.

Weight Concern

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. The main effect of level of experience was statistically significant, $F(2,153) = 4.344$, p = .015, η^2 = .051. Follow-up pairwise comparisons revealed that first-time triathletes (M = 3.318) had lower *Weight Concern* scores than triathletes with had completed 1-5 sprint triathlons (M = 4.562), p = .015, Cohen's d = .85.

General Health Orientation

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. Results showed there were no significant main effects on triathletes' *General Health Orientation* scores.

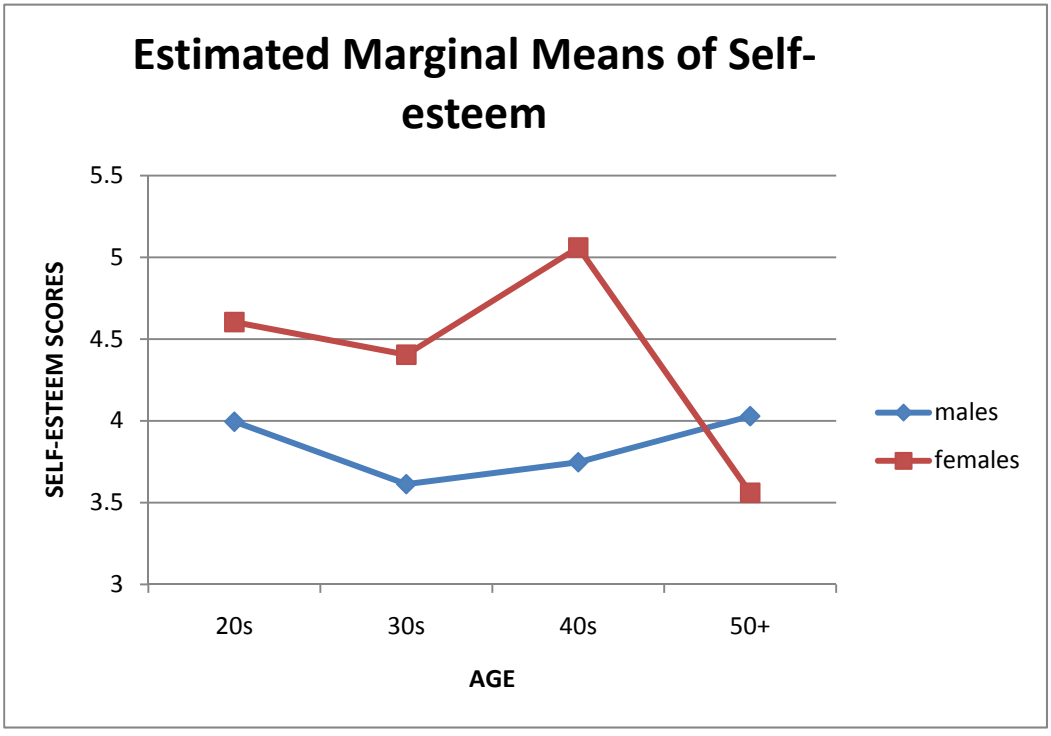
Psychological Coping

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. Results showed there were no significant main effects on triathletes' *Psychological Coping* scores.

Self-esteem

The first model with the interaction of gender by the three independent variables of interest indicated a significant interaction between gender and age $F(3,146) = 2.81$, $p = .041$, $\eta^2 = .047$. This indicates that self esteem motives differed according to age and gender. The interaction, illustrated in Table 5, was further investigated through a test of simple main effects. The analysis indicated there was a nonsignificant difference in *Self-esteem* scores between males and females in their 20s, 30s, and 50+. However, between males and females in their 40s, there was statistical significance, $F(1,146) = 8.131$, $p = .005$, $\eta^2 = .045$. Follow-up pairwise comparisons revealed that females ($M = 5.060$) had greater *Self-esteem* scores than males ($M = 3.747$), Cohen's $d = .88$.

Table 1.



.Life Meaning

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. The main effect of gender was statistically significant, $F(1,153) = 6.300$, $p = .013$, $\eta^2 = .038$. Follow-up pairwise comparisons revealed that females ($M = 3.505$) had greater *Life Meaning* scores than males ($M = 2.970$), Cohen's $d = .42$.

Competition

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. The model showed three statistically significant main effects.

First, the main effect of age was statistically significant, $F(3,153) = 2.964$, $p = .034$, $\eta^2 = .036$. Follow-up pairwise comparisons revealed that triathletes in their 20s ($M = 3.568$) had greater *Competition* scores than triathletes in their 30s ($M = 2.774$), $p = .039$, Cohen's $d = .62$.

Second, the main effect of level of activity was statistically significant, $F(2,153) = 36.983$, p = .000, $\eta^2 = .299$. Follow-up pairwise comparisons revealed that all three groups were different. Triathletes with low levels of activity ($M = 1.683$) had lower *Competition* scores than triathletes with mid levels of activity ($M = 3.034$), $p = .001$, Cohen's $d = 1.06$. Triathletes with low levels of activity ($M = 1.683$) had lower *Competition* scores than triathletes with high levels of activity ($M = 4.326$), $p = .000$, Cohen's $d = 2.07$. Triathletes with mid levels of activity ($M = 3.034$) had lower

Competition scores than triathletes with high levels of activity (M = 4.326), p = *.000,* Cohen's d = .1.12.

Finally, the main effect of level of experience was statistically significant, F(3, 153) = 4.267, p = .016, η^2 = .035. Follow-up pairwise comparisons revealed that those triathletes participating in their first triathlon (M = 3.054) had lower *Competition* scores than those triathletes who had competed in more than six sprint triathlons (M = 3.953), p = .047, Cohen's d = .71.

Personal Goal Achievement

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. The model showed three statistically significant main effects.

First, the main effect of gender was statistically significant, F(1,153) = 5.178, p = .024, η^2 = .026. Follow-up pairwise comparisons revealed that males (*M = 4.670*) had lower *Personal Goal Achievement* scores than females (*M = 5.063*), Cohen's d = .381.

Second, the main effect of level of activity was statistically significant, F(2,153) = 14.253, p = .000, η^2 = .144. Follow-up pairwise comparisons revealed that all three groups were different. Triathletes with low levels of activity (M = 4.096) had lower *Personal Goal Achievement* scores than triathletes with mid levels of activity (M = 4.984), p = .009, Cohen's d = .862. Triathletes with low levels of activity (*M =)* had lower *Personal Goal Achievement* scores than triathletes with high levels of activity (M = 5.519), p = 000, Cohen's d = 1.38. Triathletes with mid levels of activity (M = 4.984) had

lower *Personal Goal Achievement* scores than triathletes with high levels of activity (M = 5.519), p = .010, Cohen's d = .519.

Finally, the main effect of level of experience was statistically significant, $F(2, 153) = 3.622$, p = .029, η^2 = .037. Follow-up pairwise comparisons revealed that those triathletes participating in their first triathlon (M = 4.347) had lower *Personal Goal Achievement* scores than those triathletes who have participated in 1-5 triathlons (M = 5.165), p = .025, Cohen's d = .79.

Recognition

The first model with the interaction of gender by the three independent variables of interest indicated nonsignificant interactions. Therefore, the interaction terms were removed from the model and a model consisting solely of main effects was tested. Results showed there were no significant main effects on triathletes' *Recognition* scores.

CHAPTER 5-DISCUSSION

This study explored the motivational factors of triathletes in order to better understand the specific motives that drive them to participate in triathlon events. It involved a sample of 165 triathletes participating in one of three sprint distance triathlons in Texas and Florida. Five research questions were formulated and the data were analyzed using ANOVA and factorial ANOVA. The study identified whether the nine motivational subscales, which served as the dependent variables, varied based on age, gender, level of activity, or level of experience. The following chapter discusses the results of these analyses in light of each research question, implications of the study, and recommendations for future research.

Research Questions

Five research questions drove the study:

RQ_1: Are there differences in the motives of sprint triathletes based on their age?

RQ_2: Are there differences in the motives of sprint triathletes based on gender?

RQ_3: Are there differences in the motives of sprint triathletes based on their self-reported level of activity?

RQ_4: Are there differences in the motives of sprint triathletes based on their amount of sprint triathlon experience?

RQ_5: Are there differences in the motives of sprint triathletes based on the interactions of gender and the remaining three independent variables of interest: age, level of competitiveness, and sprint triathlon experience?

Research Question$_1$

The study found that differences existed in the motives of triathletes based on age. First, triathletes in their 20s had higher *Affiliation* scores than triathletes in their 30s. The *Affiliation* scale is based on items such as: to socialize with other triathletes, to visit with friends, to share a group identity, etc. (Masters & Ogles, 1993). It may be that people initially begin triathlon in their 20s for the purpose of meeting others and making friends. However, with experience or as they get further into the sport in their 30s, socializing become less of a reason. It could also be that people who begin triathlon later in life already have an established network of friends. Triathletes in their 30s may get involved for weight concerns that may be less pressing in younger triathletes. In fact, triathletes in their 30s had by far the highest *Weight Concern* scores than any other age group. Perhaps as triathletes get older, they become healthier, are less concerned about weight, but continue to participate for other reasons. Haase (1987) reported that long distance runners usually began running for health and weight reasons but tended to become motivated by psychological reasons later in their careers, although he did not provide data on age. However, this is inconsistent with Ogles and Masters (2000) who found older male marathon runners were more motivated by *Weight Concern* motives than younger male marathon runners. This inconsistency could indicate a motivational difference between runners and triathletes.

In addition, triathletes in their 20s had much higher *Competition* scores than did triathletes older than 40. The *Competition* scale is based on items such as to compete with others, to get a faster time than my friend, to see how high I can place, etc. (Masters & Ogles, 1993). The study showed that competing is a more important motive for younger

triathletes. It seems that older triathletes are less focused on beating others than their younger counterparts. These findings would seem to contradict the research of Ogles and Masters (2000) who found that marathon runners did not differ in *Competition* motives across age groups and were, in fact, not very competitive as a group. The present study found that as a whole, triathletes were somewhat competitive and may have substantiated another important difference between the runners and triathletes. This potential difference was first reported by Virnig and McLeod (1996) who compared training and eating habits of triathletes and runners. In their study, both male and female triathletes endorsed higher *Competition* motives than did their running counterparts.

It is interesting to note that, although no differences existed between groups, triathletes across all age groups rated *Personal Goal Achievement* motives very high. The *Personal Goal Achievement* subscale, along with the *Competition* subscale, constitutes the *Achievement Motives* scale. The *Personal Goal Achievement* subscale has items that represent one's intrinsic competition with self. It seems triathletes across all age groups tend to highly endorse these motives.

***Research Question*$_2$**

The results of the study indicate there are differences in the motives of male and female triathletes. First, females reported higher *Affiliation* scores than did males. The *Affiliation* scale measures the desire to socialize with other runners, make friends, and meet people. These findings are consistent with previous research. Gill and Overdorf (1994) found that females are more highly motivated to participate in sport and exercise for social purposes. King and Burke (2000) found the same to be true of female runners while LaChausse (2006) reported similar results in cyclists. Research seems to point to

females being more motivated to exercise or participate in sport for more social reasons than males.

In addition, female triathletes had higher *Life Meaning* scores than did males. The *Life Meaning* scale is centered on the idea that triathlon adds a sense of meaning, peace, and/or purpose to life. It seems female triathletes use triathlon to answer deep-seated questions. At the very least, triathlon helps them make sense of the world. This is consistent with other research on gender and *Life Meaning* motives (LaChaussse, 2006) in cyclists and runners (Ogles & Masters, 1995). These non-fitness motives for participating in triathlon would seem to add positive benefits of participating in grueling training regimens (Ogles & Masters, 2000) and increase potential participation.

Finally, female triathletes had greater *Personal Goal Achievement* motives than did men. As mentioned earlier, *Personal Goal Achievement* measures personal competition and one's intrinsic desire to improve. This is an interesting finding. It may be assumed that males would be more competitive and driven in sport. Previous research on runners and cyclists that utilized the MOMS suggests males are more motivated by *Competition* and *Personal Goal Achievement* motives (LaChausse, 2006; Ogles & Masters, 1995). It should be noted that in this study triathletes as a whole rated *Personal Goal Achievement* motives high, much higher than *Competition* motives. Croft et al. (2007) found the same with Australian triathletes. It could be that individuals drawn to triathlon are motivated differently than those who choose other sports, though future research in this area is needed. Perhaps triathlon, because it is a multi-discipline sport, forces participants to focus on personal improvement in each discipline. This inward focus could be associated with the heightened *Personal Goal Achievement* motives.

However, because triathlon is composed of five parts (a swim, transition #1, a bike, transition, #2, and a run), the sport seems to lend itself to personal improvement in specific areas. Thus, it may be that the sport dictates specific, measureable improvement, thereby promoting these personal achievement motives.

These gender differences in triathlon motives could be important to understand for those promoting triathlons or marketing equipment. USA Triathlon reported that 37% of their members in 2009 were female, up from 27% in 2000 (Triathlon participation…, 2009). Promoters have begun to provide venues and equipment accordingly. There are a growing number of female-only triathlons as well as female-specific equipment, including bikes, running shoes, wetsuits, attire, and training programs. Although marketers know what to market to female triathletes, this study may provide more insight into the *how*. The overall Model of Consumer Behavior stated that motives are one of the internal components that influence purchase decisions. Thus, marketers must understand how male and female triathletes differ and create events, programs, and equipment that advertise to, embodies, and empowers those varying motives.

Research Question$_3$

There appears to be differences in triathletes based on their self-reported levels of activity, or competitiveness. It should be noted at the outset that triathletes, as a group, tend to be very competitive. However, *Affiliation* motives were much higher for those triathletes with higher competition ratings than those triathletes with lower competition scores. It would make sense that triathletes with competitive personalities may enjoy being affiliated with other triathletes with similar competitive interests and drives. This time invested may then lead to greater relationships and *Affiliation* motives to continue

those relationships. Those triathletes that are not competitive may shy away from the social aspect of training and triathlon clubs where many competitive personalities are present. This is counter to the LaChausse (2006) study on cyclists that found that noncompetitive cyclists listed *Affiliation* reasons as strong motives. This may indicate a fundamental difference between triathlete and cyclist groups.

Understandably, there was a difference in *Competition* motives of triathletes with higher competition ratings than those triathletes with lower competition ratings. This would make sense because triathletes who are more competitive in nature would likely be motivated by *Competition* motives, or to compete with others. Less competitive triathletes rated weight control and health much higher than did more competitive triathletes. It may be that people with higher *Competition* scores are drawn to triathlon to compete, while less competitive people see triathlon as a way to manage weight and stay healthy.

Finally, *Personal Goal Achievement* motives differed according to the self-reported level of competitiveness, as more competitive triathletes had much higher scores than did the less competitive group. This is consistent with the findings of LaChausse (2006) and his research with cyclists. Competitive triathletes seek not only competition with other triathletes, but they are also motivated to compete with and challenge themselves (Ogles & Masters, 1995; 1993).

As mentioned earlier, the triathlete group seems to endorse *Personal Goal Achievement* motives more than any others endurance athlete group. This is significant for triathlon marketers and race promoters. Consumers purchase products/services that meet physical and psychological needs and desires, which are shaped by motives. This

means triathletes are more likely to spend money on equipment, races, and training programs that promote, among others, personal goal achievement motives. These include motives such as: to improve run/bike/swim speed, to compete with myself, to push myself, to beat a certain time, and to try to run/bike/swim faster. For instance, triathletes do not strongly endorse *Psychological Coping* (decrease anxiety, distract from daily worries, improve mood, solve problems, etc.) or *Recognition* (to earn respect, to make others proud of me, etc.). Thus, marketing strategies that urge purchases based on these motives are potentially faulty and could prove move effective if they move toward *Personal Goal Achievement* motives, as triathletes more strongly endorse **these.**

***Research** Question$_4$*

The study revealed several differences existed within triathlon groups based on level of experience. First, there were differences in the *Weight Concern* subscale based on triathlete experience. Triathletes who had completed 1-5 triathlons had higher scores than did first time triathletes. The *Weight Concern* subscale measures an individual's desire to look lean and control/reduce weight (Ogles & Masters, 1993) *Weight Concern* results may suggest that after training for and participating in triathlons, triathletes begin to see physical benefits and become motivated to continue participation in the sport for the associated physical benefits. More triathlon participation could also be indicative of older participants. This would be consistent with Ogles and Masters (2000) who found that older runners had greater *Weight Concern* and *General Health Orientation* motives than their younger counterparts.

In addition, triathletes who had completed 1-5 triathlons had higher scored on the *Personal Goal Achievement* subscale than did first time triathletes. Because the *Personal Goal Achievement* subscale measures a person's desire to compete with themselves or the

drive to beat previous times/personal bests, it would make sense that people who have completed at least one triathlon may desire to improve in future events. It could also be that first time triathletes, with no prior frame of reference, aren't motivated to run a faster time or swim faster without previous results for comparison. Interestingly, triathletes who have completed at least six triathlons show declining scores in the *Personal Goal Achievement* subscale.

Finally, differences in the *Competition* motives also existed between first time triathletes and those who had completed more than six triathlons. Those triathletes who had completed more than six triathlons endorsed *Competition* motives much more so than did first time triathletes. It may be that first time triathletes are more concerned with finishing, avoiding injury, and/or enjoying themselves. First-time events may be intimidating for participants and limit the amount of attention they give to direct competition with other triathletes.

Research Question$_5$

The study found that a significant interaction between gender and age existed in the *Self-esteem* subscale. The self esteem includes items such as: to feel more confident, to feel proud of myself, to feel a sense of achievement, etc. (Ogles & Masters, 1993). Further analysis revealed the difference was between females and males in their 40s, with females endorsing self esteem as a stronger motive for triathlon participation than males. Both LaChausse (2006) and Ogles and Masters (1995) reported higher *Self-esteem* for female runners and cyclists than males. Research has shown the link between runners' self-esteem levels and body image (McLaughlin, 2003). As women age, perhaps self-esteem levels are increasingly attached to body image. The more they exercise, the better

they look and, consequently, the better they feel about themselves. They may, therefore, seek out sport and exercise participation because it increases their concept of body image and, by default, overall self-esteem level.

In addition to the statistically significant difference between females and males in their 40s, it is interesting to note that females in their 20s and 30s, though nonsignificant, also had higher *Self-esteem* motives than their male counterparts of the same age. However, males 50+ had higher *Self-esteem* motives for triathlon participation than did female triathletes 50+. This was the only group where the above trend was reversed. This suggests self esteem may emerge as a motive in male triathletes as they age, while the opposite occurs in female triathletes.

It could be that females more readily accept life changes that come with age. They may feel more confident in who they are and look for personal improvement in triathlon which are *Personal Goal Achievement* motives. Men, on the other hand, may use triathlon as a means to hang on to youth or feel better about themselves in general. Triathlon may make them feel confident and still in control of their bodies, which indicates *Self-esteem* motives, though more research is needed. Ogles and Masters (2000) found that older male runners did endorse higher *Self-esteem* motives than younger male runners, though specific ages were not given. When Ogles and Masters (2003) did include female runners, however, they found the highest *Self-esteem* motives were generally reported by older females with low P*ersonal Goal Achievement* motives. As discussed, female triathletes tend to have high *Personal Goal Achievement* motives. These two studies of runners and triathletes show further inconsistencies, signaling more potential differences between the two groups.

Limitations

There were several limitations in the study. First, the three samples gathered for the analyses were convenience samples. They were chosen because the race directors allowed the researcher access. Several race directors denied the researcher access. In addition, the samples came from two states only: Texas and Florida. Because of these factors, the results may not be representative of the larger sprint triathlete population.

In addition, the triathletes that chose to participate in the on-line survey may be different in a significant way from those who chose not to participate. A total of 799 triathletes had the opportunity to participate in the study. Only 165, or 20.7 %, chose to fully complete the online questionnaire. There may be an important difference between those who chose to participate and those that chose not to. This potential unknown difference could impact and/or limit the generalizability of the results.

Finally, analyses by factorial ANOVA tends to separate the independent variables into many smaller cells. These small numbers can impact the power of a study, or the ability of the study to detect a difference that is there. Thus, there may be differences in the groups that were not detected because there were too few participants in a given cell. For instance, data was collected on the ethnicity of participants. Though the sample was fairly reflective of national triathlon demographics, because the sample was small, there were not a sufficient number of non-white triathletes, and potentially meaningful differences could not be analyzed. A larger sample may discover important differences in triathlete motives based on race/ethnicity. The present study lacked the power to detect race/ethnicity differences.

Recommendations for Future Research

The results of this study provide evidence that there may be differences in sprint triathletes' motives based on important factors such as gender, age, level of activity, and level of experience. Since this was the first significant study to assess the motives of triathletes using a modified version of the MOMS, the study should be replicated with other sprint triathlete samples to confirm these findings. Additional studies could bolster and further clarify the results of this study, especially if larger samples were utilized. There were several instances where significance was not found at the $p<.05$ level, but where this significance level was approached. Replicating this study with larger samples may reveal additional motivational differences.

It may also be important to use the present instrument with triathletes who participate in longer triathlons. This study focused on sprint triathlon, the shortest of the triathlon events. Research should be conducted with triathletes who compete in Olympic distance, Half-Iron distance, and Iron distance triathlon. These studies could reveal similar differences in the motives of triathletes who choose to endure more grueling training regimens and longer events. It would also be useful to compare the motivational differences between groups; that is, compare the motivational factors of sprint and Olympic distance triathletes, Olympic and Iron distance triathletes, etc. It may be that triathlon distance is an important variable in triathlete participation motives.

As demonstrated by the present study, triathletes at present tend to be a homogenous group in term of race/ethnicity. However, trends could change and the sport may become more heterogeneous and reflective of the U.S. population, including higher participation rates by African Americans and Latinos. In addition, these underrepresented

groups constitute a potential growth opportunity for triathlon. Consequently, future studies that utilize race/ethnicity as an independent variable could be important to further the knowledge of triathlete motivation. The current study lacked a sufficient sample size and racial variability to attempt to examine any possible differences.

The MOMS was originally developed by Masters, Jolton, & Ogles (1993) to assess the motives of runners. Because runners and triathletes are both endurance athlete groups, it may be important to compare the motives of these different endurance athlete groups of using a standardized instrument. The MOMS has already served as the basis for several studies with other endurance athlete populations, including ultramarathoners and adventure marathoners (Doppelmayr & Molkenthin, 2004) and cyclists (LaChausse, 2006). Future studies that assess the motives of other groups, such as swimmers, adventure racers, and cross country skiers may be important. Research utilizing within-group and between-group designs with various endurance athletes could yield meaningful differences in motives based on sport.

Finally, the modified MOMS utilized in the present study measured triathlete motivation utilizing the previously mentioned nine subscales. One possible motive for participation not measured by the instrument was *fun* or *enjoyment*. This is a participation motive common in sport and exercise motivation literature, including some with endurance athletes (Brodkin & Weiss, 1990; Frederick & Ryan, 1993). The original MOMS and the modified version used in this study do not devote a construct to assessing *fun* or *enjoyment*. These could be significant motivational factors that influence people to begin or continue triathlon and should, therefore, be examined.

Conclusions

Though important research still remains before fully understanding what motivates triathletes, it is intended that the present study will add to the body of literature on sport motivation in general and triathletes specifically. The results may help comprehend more fully what motivates individuals to undergo the high costs—socially, physically, mentally, and financially—to take part in triathlons. It could also beneficial to the companies that operate within the triathlon industry. Hopefully, the study can contribute to an increase in overall participation in triathlon events—specifically sprint triathlons— via more specific and effective marketing efforts based on age, gender, competitiveness, and experience of triathletes.

APPENDIX A

Modified Motives of Marathoners Scale

1. Age:___ 18-24 ___ 25-29 ___ 30-34 ___ 35-39
___ 40-44 ___ 45-49 ___ 50-54 ___ 55-59 ___ 60+

2. Gender: ___ Female ___ Male

3. Do you consider yourself to be Hispanic/Latino? ___Yes ___No

4. In addition, select one or more of the following racial categories to describe yourself:
___American Indian or Alaska Native (Principal tribal group: _____)
___Asian
___Black or African American
___Native Hawaiian or Pacific Islander
___White

5. How many sprint triathlons have you participated in? _____

6. How competitive do you consider yourself (circle one)?

Not very competitive								Very competitive	
1	2	3	4	5	6	7	8	9	10

Please rate each of the following items according to the scale below in terms of how much it contributes to your participation in triathlon. A score of 1 would indicate that the item is "not a reason" for participating in triathlon; a score of 7 indicates that the item is a "very important reason" for participating in triathlon. A score in-between represents relative degrees of each reason. You will notice that many of the questions are very similar and seem redundant. This is by design and helps ensure a valid score.

Not a Reason						Very 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 run, bike, and swim speed.
6. _____ To earn the respect of people in general.
7. _____ To socialize with other triathletes.
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.
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, bike, and swim 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 traithletes.
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.
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 in races.
41. _____ To feel a sense of belonging in 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 compliments from others.
55. _____ To feel at peace with the world.
56. _____ To feel like a winner.

APPENDIX B

The four general categories and nine scales of the MOMS.

Physical Health Motives
General Health Orientation - to improve my health, to prolong my life, to become more physically fit
Weight Concern - to look leaner, to help control my weight, to reduce my weight
Social Motives
Affiliation - to socialize with other runners, to meet people, to visit with friends, to share a group identity with runners
Recognition - to earn respect of peers, people look up to me, brings me recognition, to make my family or friends proud of me
Achievement Motives
Competition - to compete with others, to see how high I can place, to get a faster time than my friends
Personal Goal Achievement - to improve my running speed, to compete with myself, to push myself, to beat a certain time, to try to run faster
Psychological Motives
Psychological Coping - to become less anxious, to distract myself from daily worries, to improve my mood, to concentrate on my thoughts,
Self-Esteem - to improve my self-esteem, to feel proud of myself, to feel a sense of achievement, to feel mentally in control of my body
Life Meaning - to make my life more purposeful, to make myself feel whole, to feel a sense of belonging with nature

APPENDIX C

Invitation to triathletes to participate in the study

Dear Triathlete,

You are invited to participate in a research study conducted by Matt Lovett, a PhD candidate in the Department of Health, Exercise, & Sport Science at the University of New Mexico. The results of the study will contribute to the formation of research regarding motivational factors of triathletes. You were identified as a possible participant because you will soon be a participant in a triathlon.

This purpose of this study is to gain information about what motivates individuals to train for and compete in triathlons. The study involves the completion of a survey. There are minimal risks involved in participating. The length of time required to complete the survey is approximately 10 minutes. Your participation in this study is completely voluntary. You may withdraw from the survey at any time without penalty. The results of this study will remain completely confidential.

You can choose whether to participate in this study or not. If you volunteer to participate, you may withdraw at any time without penalty by simply exiting the survey website. You may also refuse to answer any questions you do not want to answer and continue to answer the remainder of the survey.

If you have any questions or concerns about the research, please feel free to contact David Lovett by phone at (505) 410-1757 or via email at mlovett@umhb.edu. The address is Box 8030, University of Mary Hardin-Baylor, Belton, TX, 76514.

If you have any other concerns or complaints about your rights as a participant, contact the Institutional Review Board at the University of New Mexico, William L. Gannon, IRB Director and Chair, Research Ethics and Compliance Services MSC 05 3400, 1717 Roma, Second Floor, 1 University of New Mexico, Albuquerque, NM, 87131-0001. You can also reach the IRB toll-free at 1-866-844-9018.

Here is the link to the survey: http://www.surveymonkey.com/s/6DFRC7P

David Lovett

APPENDIX D

Informed Consent

Motives of Triathletes Scale

Section I:_ Purpose & Consent

You are invited to participate in a research study conducted by Matt Lovett, a PhD candidate in the Department of Health, Exercise, & Sport Science at the University of New Mexico. The results of the study will contribute to the formation of research regarding motivational factors of triathletes. You were identified as a possible participant because you will soon be a participant in a triathlon.

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Agreement to Participate

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in the study.

I AGREE

I DISAGREE

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