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# Just Tri: Examining the Transformative Experiences of Women Amputees who Participate in Paratriathlons

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JUST TRI: EXAMINING THE TRANSFORMATIVE EXPERIENCES OF WOMEN  
AMPUTEES WHO PARTICIPATE IN PARATRIATHLONS

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A Thesis  
Presented to  
the Graduate School of  
Clemson University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science  
Parks, Recreation, and Tourism Management

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by  
Amy Christine Baczurik  
August 2012

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Accepted by:  
Dr. Lynne Cory, Committee Chair  
Dr. Fran McGuire  
Dr. Betty Baldwin

## ABSTRACT

The United States has approximately 1.7 million people living with limb loss. The majority of studies focus on general disability related to limb loss rather than specifically focusing on women with amputations. Women amputees can experience difficulty in accepting the disability, which in turn may lead to decreases in life satisfaction. Often women amputees may experience varying levels of depression, negative perception of body image, as well as decreased self-confidence and decreased sense of self-efficacy. The researcher used a phenomenological lens to examine transformative experiences of women amputees who participate in paratriathlons, specifically focusing on participants lived experiences related to (a) athletic history prior to the amputation, (b) participation in a paratriathlon training camp, and (c) the generalization of lessons learned at the camp to other contexts of their lives. Results indicated participation in the paratriathlon training camp and the sprint triathlon increased self-efficacy, improved negative perception of body image, and increased self-confidence. Future research may include examining the lived experience of men with amputations to better understand similarities and/or differences between genders and effects of physical disability. Implications of this study on therapeutic recreation practice include incorporating paratriathlons as a potential facilitation technique, as well as a leisure education topic and ongoing activity for recreation participation.

## DEDICATION

For my family, who has always been my support system, taught me to always believe in myself and never give up on my dreams.

## ACKNOWLEDGMENTS

My thesis and graduate work is the result by a shared effort that was supported and facilitated by three main groups of people. First, I would like to give many thanks to the participants who shared their stories about their life and everything they have experienced prior to and after their amputation. I am so pleased to have met every woman involved and share a bond with each.

Second, I would like to give thanks to the faculty members involved in my experience with Clemson's PRTM department. My advisor, committee chair, and professor, Lynne Cory shared her valuable and clear insight and academic knowledge throughout this process. Her knowledge and expertise of therapeutic recreation has been very influential as I take off and begin my new adventure as being a practitioner in this field I love so dearly. Also, to my committee members, Fran McGuire and Betty Baldwin, who have challenged me to do my very best in my research.

Finally, I would like to thank my family for their unconditional love and support through this journey of graduate school and thesis work. My family has taught me how to stay strong through difficult times and always follow through with my dreams. They have always been the group I count on and tell me to keep going and push on through, especially with my love of sports. They have been my support system through thick and thin and I know I would not have made it through this process and so much more without their love and support.

## TABLE OF CONTENTS

	Page
TITLE PAGE .....	i
ABSTRACT .....	ii
DEDICATION .....	iii
ACKNOWLEDGMENTS .....	iv
LIST OF TABLES .....	vii
CHAPTER	
I. INTRODUCTION .....	1
Introduction.....	1
Description of the problem .....	2
Rationale .....	3
Purpose of Study .....	4
Research Questions .....	4
Definitions of Terms .....	4
Outline of Chapters .....	5
II. REVIEW OF THE LITERATURE .....	7
Introduction.....	7
Psychological Aspects .....	7
Body Image.....	9
Body Image due to Participation in Sport .....	11
Athletic Identity .....	13
Self-efficacy Theory.....	14
Adaptive Sports.....	15
Triathlons .....	17
Summary.....	18
III. METHOD .....	20
Introduction.....	20
Research Questions .....	20

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Participants .....	20
Setting .....	21
Data Collection .....	22
Data Analysis .....	23
Reliability and Validity .....	24
Summary .....	25
IV. RESULTS .....	26
Introduction .....	26
Description of Participants .....	27
Characteristics of Participants .....	27
Individual Participant Profiles .....	28
General Themes .....	41
Summary of Results .....	57
V. DISCUSSION .....	59
Transformative Experiences .....	59
Discussion .....	62
Implications for Therapeutic Recreation Practice .....	66
Role of Researcher .....	68
Study Limitations .....	68
Recommendations for Future Research .....	69
APPENDICES .....	71
A: Participant's Information Form .....	72
B: Interview Handout .....	74
C: Interview Guide .....	75
REFERENCES .....	77

## LIST OF TABLES

Table		Page
4.1	Characteristics of Participants .....	27
5.1	Characteristics of Study .....	59

## CHAPTER ONE

### INTRODUCTION

#### Introduction

According to the National Limb Loss Information Center (NLLIC), the United States currently has 1.7 million people living with an amputation with an estimated one out of every 200 people having limb loss. The most common cause for lower limb loss is dyvascular (having a defective blood supply), whereas trauma is the most common cause for upper limb loss (NLLIC, 2008). The Amputee Coalition of America (ACA) has found men experience amputation at a greater frequency than women (NLLIC, 2008) and therefore, existing research is more likely to focus on males rather than females. This can potentially cause difficulty in understanding the way women adjust to altered body image and psychological factors differently than men.

Hassouneh-Phillips and McNeff (2005) found many studies focus on people with physical disabilities in a general context, but very few studies focus specifically on women with physical disabilities, especially amputations. The study also found that women who have physical disabilities are more likely to experience body dissatisfaction due to society's high expectations of women. Robson (1988) found body dissatisfaction generally leads to depression and anxiety. In addition, poor psychological adjustment is a common factor for women suffering from physical disabilities (Gross, Ireys, Kinsman, 2000). Many rehabilitation techniques focus on increasing social, psychological, and physical functioning for those who have physical disabilities (Geertzen, Martina, & Reitman, 2001; Burger & Marincek, 1997). Nissen and Newman (1992) found recreation

and sport to be the most difficult aspect of a leisure lifestyle following a disability, but is the most influential. Feltz (1988) conducted a study on self-confidence and sport performance, which showed an increase in self-confidence for those who develop interest and participate in sports following the disability. Due to the increase in self-confidence, Bandura (1977) found people with physical disabilities learn how to execute behavior successfully to produce certain outcomes, which he defines as self-efficacy. A high degree of self-efficacy promotes opportunities for an individual to pursue greater challenges, increase motivation, and adjust better psychologically (Feltz, 1988).

#### Description of problem

Women who acquire or experience traumatic amputations can potentially lose confidence in themselves which may prevent achievement of their personal ambitions. This may cause a decrease in motivation and negatively affect perceptions of themselves. Researchers have found that women experience a strong connection between sports and body image, therefore participation in marathons, such as triathlons, can potentially improve body image, psychological well-being, and overall self-efficacy (Depcik & Williams, 2004; Imm & Pruitt, 1991; Leichty, Freeman, & Zabriske, 2006). There is very little research on women with disabilities participating in sporting events and marathons. This research is important because it can contribute knowledge to extend literature about the topic of women with disabilities and ways sports can affect overall positive self-perceptions of these individuals.

## Rationale

The purpose of this study is to examine the transformative experiences of women triathletes (ages 21-35) who have experienced traumatic or acquired amputations by focusing specifically on the participants' life experiences related to (a) the injury, (b) training for triathlons, (c) the specific effects of training for triathlons, and (d) the generalization of positive self-perception across life contexts.

Following a traumatic or acquired amputation, women may potentially fail to think positively about their self-perception. Mendelson, Mendelson, and White (2001) note, "body-esteem is the self-evaluation of one's body or appearance" (p. 90). Since body-esteem is considered the most important component of one's overall self-esteem (Levine & Smolak, 2002), it is assumed people who suffer traumatic injuries have low self-esteem. Individuals who are determined to participate in adaptive sports "gain feelings of accomplishment and functional efficiency which in turn fosters empowerment" (Groff, Lundberg, and Zabriske, 2009, p. 319). Individuals who participate in adaptive sports may potentially learn how to accept themselves for the way they are and in turn improve their self-esteem, confidence, self-efficacy, and self-concept. According to Groff, et al (2009) adaptive sports do have a major role in improving the lives of the individuals who sustain a traumatic injury. The authors identify seven improvements resulting from participation in adaptive sports. Individuals reported (a) being better adjusted and more satisfied with life, (b) having fewer days of pain, depression, anxiety, sleeplessness, and increased days with improved vitality, (c) having an increase in life expectancy, (d) being stronger and having more stamina, (e) having

improved cardiovascular health and fitness, (f) experiencing fewer and less severe secondary health conditions and (g) developing a positive athletic identity (p. 319).

The effects adaptive sports may have on women with disabilities may not be widely understood. This research can potentially build awareness about adaptive sports for women with physical disabilities.

### Purpose of Study

The purpose of this study is to examine the transformative experiences of women amputees who participate in paratriathlons. The study will focus on self-efficacy, specifically involving life experiences related to injury, training for triathlons, the specific effects of training for triathlons, and the generalization of self-efficacy and other self-perceptions across life contexts.

### Research Questions

1. Is self-identity affected through participation in paratriathlon training camps?
2. How are general self-perceptions affected by participating in paratriathlon training camps?
3. How is general self-efficacy affected by participating in a paratriathlon training camp?
4. Does a transformative experience occur at a training camp? If so, what are the factors that contribute to the transformative experience?

### Definitions of Terms

*Self-efficacy* – one's belief he or she has the ability to perform and complete a task (Bandura, 1977).

*Body image* - perceptions individuals have towards their bodies including affective, evaluative, cognitive, and behavioral components (Brown, Cash, & Milulka, 1990; Cash, Melnyk, & Hrabosky, 2004)

*Paratriathlon/Triathlon* – athletes with disabilities and able-bodied athletes compete together at elite, intermediate and beginner levels in swimming, biking, and running.

*Paratriathlon training camp* – a camp educating and training men and women of all ages with physical disabilities in areas of swimming, biking, and running on how to adapt to triathlons according to their disability.

*Participant* – a camper registered for the training camp with an amputation who agreed to participate in the current study.

#### Outline of Chapters

The remainder of this thesis is presented in four chapters. Chapter two presents a review of the literature pertaining to the current study, emphasizing psychological aspects, body image, body image due to participation in sport, self-efficacy theory, adaptive sports, and triathlons. Chapter three discusses the method used throughout the study. This includes a description of the participants, the setting of the training camp, interview questions and how data were collected and analyzed. Chapter four addresses the results of the study including individual participant profiles, themes, and descriptions

of emergent themes. Chapter five contains a discussion of the findings, implications, and limitations.

## CHAPTER TWO

### REVIEW OF THE LIETERATURE

#### Introduction

The study examined the transformative experiences of women amputees who participated in a paratriathlon training camp and sprint triathlon. Specifically, it examined life experiences related to injury, training for triathlons, the specific effects of training for triathlons, and the generalization of self-efficacy and other self-perceptions across life contexts. This chapter includes reviews of foundational literature pertaining to this study gathered from printed and electronic journal articles, textbooks, and web pages such as those of the National Limb Loss Information Center and the Amputee Coalition of America.

#### Psychological Aspects

Disabilities can be congenital, acquired over time, or happen traumatically. The primary traumatic injury research focuses on amputations, acquired brain injuries, traumatic brain injuries, and spinal cord injuries (Hatcher, Whitaker, Karl, 2009; Howes, Benton, Edwards, 2005; Saradjian, Thompson, & Datta 2008). Disabilities can be categorized by types, such as intellectual and physical and can affect people in four important domains of life: occupational status, leisure pursuits, social contacts, and everyday life skills (Demet, Martinet, Francis, Paysant, Andre, 2003; Jones & Davidson, 1995; Whyte & Carroll, 2002). Disability can affect people in different ways and each person may adapt differently. Disability caused by traumatic injury can have major

psychological effects on individuals. It is important to achieve acceptance of and adjustment to the disability.

Psychological well-being is a subjective term that may have multiple meanings. Much research focuses on psychological well-being as an interpretation of self-esteem and self-efficacy (Bode, Heij, Taal, Laar, 2010; Borso, Gerdle, Peolsson, 2010). Self-esteem is an overall assessment of one's self that is closely related to the beliefs, moods, and behaviors in present and future situations (Swann, Chang-Schneider, & McClarty, 2007). According to Bandura (1997), self-efficacy is described as an individual's beliefs of the capabilities and competence levels to perform different tasks and activities that affect their everyday lives. These different performance levels can be included in cognitive, affective, life skills, decision-making and even motivation (Bandura, 2001).

Research on amputations and limb loss supports that the occurrence of losing a limb can strongly affect self-perception related to body image and self-esteem. This can lead to dissatisfaction with life of the individual having an amputation (Breakey, 1997). For women, positive body image is an important perception to regain after injuries.

Women can react to traumatic or acquired amputations differently than men. Howes, Edwards, and Benton (2005) stated, "one of the many adjustments individuals with injuries have to make is addressing the change in functioning and appearance of the body" (p. 403). For women, physical appearance is viewed as highly important (Jackson, Sullivan, and Rastker, 1988), because of this; it can affect the psychological well-being of women. Those who do not perceive themselves as having the "ideal body" (Salter, 1997) may not have the highest self-efficacy and sense of competence. Following amputations,

women can feel dissatisfied about themselves and according to Franzoi and Shields (1984) this can be related to physical appearance. Women who experience amputations have to process the change in their bodies across physical, social, and emotional domains (Unwin, Kacpersek, & Clarke, 2009).

### Body Image

According to existing research, body image is defined as perceptions individuals have towards their bodies including affective, evaluative, cognitive, and behavioral components (Brown, Cash, & Milulka, 1990; Cash, Melnyk, & Hrabosky, 2004). “Body image” is a subjective term that describes how a person believes his or her body looks (Breakey, 1997). Therefore, when a woman’s body does not meet a preconceived ideal mental image it can cause negative emotional, perceptual, psychological, and physiological reactions (Breakey, 1997; Cash, Jakatdar, & Williams, 2004; Svoboda, 1992). Abbott and Barber (2011) explained body image as a multi-dimensional construct where individuals place values on different features of their bodies, expressing behavioral-investment to maintain these features and, lastly, evaluating their satisfaction with their bodies. The study also focuses on how body image is not to be restricted to only physical attractiveness and looks, but more so on how the body functions, moves, and what it can do physically. Greenleaf, Boyer, and Petrie (2009) found that women who understand how their bodies move and function will experience an increase in physical competencies. This in turn can affect body image positively due to women better understanding their bodies’ functionality. This is in contrast to the sole reliance on the

perception of their bodies from an internal perspective (e.g., themselves) and from an external perspective (e.g., outside observers).

One way individuals are defined is by physical appearance. Physical appearance is viewed as highly important (Jackson, Sullivan, & Rastker, 1988) due to the social importance of the female body (Janelli, 1993). Salter (1997) noted the ideal body image represents, “youth, beauty, vigour, intactness and health” therefore, women who do not meet the ideal description can experience insecurity.

Moin, Duvdevany, and Mazor (2009) examined body image among women with and without disabilities. The study indicated that women with and without disabilities had similar concerns about body image; however women with disabilities had a higher score of body image dissatisfaction. Similarly, Watson’s (1999) findings supported those of Moin, et al. (2009) and also found that women with disabilities have additional concerns due to high levels of discrimination from outside viewers. Because of this high level of discrimination, research supports that contextual, social, physical, and emotional factors affect women more so than the disability itself (Barnwell & Kavanagh, 1997; Craig, Hancock, & Chang, 1994). Howes, Edwards, and Benton (2005) found acquired and traumatic disabilities cause a change in one’s physical functioning which may cause a dilemma associated with identity. Based on compilation of these findings, one supposition may be that women do not understand their roles in society because they have lost their sense of identity. This is in addition to receiving ongoing messages that they are ‘absent’ in the eyes of society.

According to Tatar (2010) a typically occurring body image would include having four healthy limbs. Women with acquired and traumatic amputations can experience internal conflicts in the emotional, psychological and physiological domains, but they also experience external conflict related to complex social function. This is in addition to simple daily living functions such as the way clothing fits (Tatar, 2010). Briggs (2006) found that once women begin using prosthetics they may have difficulty accepting the new anatomy of their bodies and can focus on the new prosthetic rather than the disability itself. This can cause insecurity in social receptiveness that may lead to increased anxiety. However, Saradjian et al. (2008) found that women who receive prosthetics, particularly upper limb prosthetics, have difficulty accepting and feeling comfortable with the prosthetic. Tatar (2010) also found that the misperceptions about one's changed physiology can affect one's ability to function and socialize adequately, and can cause a decrease in the perception of one's self-efficacy.

A woman's wellbeing is highly dependent on the way one perceives one's body image. Changes in body image are likely to change self-perceptions and security with one's self along with experiencing difficulty in a social atmosphere.

#### Body Image due to Participation in Sport

Participation in physical activity has been shown to enhance positive body image in women in multiple studies. Scott and Derry (2005) found that women who are open to participation in sports and recreation tend to achieve a greater ability to understand the way their body is able to function and in turn enhance their self-image. Women who participate in sports experience an increase in physical capabilities (Jaffe & Manzer,

1992; Jaffe & Ricker, 1993; Williams & Cash, 2001) that can lead to improvements in strength, agility, coordination, speed, endurance, and flexibility, all of which influence a women's physical competence.

Chrisler and Lamont (2002) studied feminist therapy and how it contributes to women's participation in exercise and sport. Feminist therapy is described as a psychotherapy brought by the feminist political theory. This therapy is thought of as feminist due to the underlying philosophical feminist models used throughout the practices (Brown, 1994). Feminine therapists take multiple principles into account: (a) the individual is political, (b) it's important to analyze the power and gender contributions in any social setting through raising consciousness, (c) the need to bring women's experiences and opinions to the surface of any situation, and (d) learning empowerment (Ballou & West, 2000; Brown, 1994; Worrel & Remer, 1992). Feminist therapy is not used for women to feel like they fit in but instead it is implemented to encourage women to stand out and feel confident in reaching their wants and needs in any type of setting (Ballou & West, 2000). Feminist therapists work with the most common issues and disorders of women including, depression, anxiety, eating disorders, body image disorders, and physical and sexual abuse. Therefore, therapists advocate participation in sport and exercise to help overcome these issues (Chrisler and Lamont, 2002).

Many women are sedentary due to beliefs that participating in sports and exercise is unfeminine (Pate, Pratt, Blair, Haskell, Macera, Bouchard, Buchner, Caspersen, Ettinger, Heath, King, Kriska, Leon, Marcus, Morris, Paffenbarger, Patrick, Pollock,

Rippe, Sallis, & Wilmore, 1995; Chrisler & Lamont, 2002). Many women who did not participate in sports at a young age have difficulty understanding benefits sports can provide for physical and psychological wellbeing (Chrisler & Lamont, 2002). Tatar (2010) found participation in physical activities contributes positively to psychological wellbeing and can help individuals feel confident in social situations. Based on these findings, women who may be reluctant to participate in sports do gain self-confidence, self-esteem (Chrisler & Lamont, 2002) even if they did not participate in sports and exercise at a young age.

Sports and exercise have been noted to help women in multiple areas, including social settings, improving body image, increasing self-esteem and self-efficacy (Chrisler & Lamont, 2000; Tatar, 2010). These studies demonstrate that through participation in sports, a cycle is established; that is, participation leads to positive social experiences, which influences positive body image, which eventually enhances women's confidence and self-efficacy, which finally leads to additional sport participation.

#### Athletic Identity

Martin (1999) found that people who were athletes before their injury may have a smoother transition into sports following their injury because of their previously held athletic identity. Athletic identity, as defined by Brewer, Van Raalte, & Linder (1993), is the degree to which an individual identifies with the role of an athlete. Individuals view athletic identity differently and the definitions can vary from being physically active in general, to participating in sport, or being a good competitor in sport (Anderson, 2004). Pica (2003) found individuals who participate in sport at a younger age had a higher

degree of athletic identity as an adult, as well as increased desire to be physically active as an adult. Individuals who have a high athletic identity will participate in sports and physical activities more so than individuals with a low level of athletic identity (Pica, 2003). Therefore, when an individual identifies with a certain sport or physical activity, determination to keep the existing, familiar identity can influence participation, which in turn can lead to an improvement in their self-esteem and self-efficacy.

### Self-efficacy Theory

Self-efficacy describes the confidence one has to execute behavior successfully to achieve a certain outcome. For example, a sports performance resulting in self-satisfaction could lead to feelings of self-efficacy. Self-efficacy is used to indicate the level of perceived competence and the strength of the individual's belief to perform and complete any task (Bandura, 1977). Bandura (1981) noted "self-efficacy is concerned with judgments about how well one can organize and execute courses of action required to deal with prospective situations containing many ambiguous, unpredictable, and often stressful elements" (p. 587). Bandura's (1977) research supports that one's self-perception of self-efficacy can affect a person's choice of activity, how much effort they put forth, and how long they will continue with challenges.

Self-efficacy theory was first studied to gain understanding about anxiety in clinical psychology but has expanded to a wide variety of areas such as motivation, achievement behavior, health behavior, and sport behavior (Feltz, 1988). Bandura bases self-efficacy theory on expectations and outcomes. Efficacy expectations are "the conviction that one can successfully execute the behavior required to produce the

outcomes” whereas outcome expectations are “a person’s estimate that a given behavior will lead to certain outcomes” (p. 193). A person’s efficacy expectations influence his or her behavior and the outcome expectations influence the actual outcome (Bandura, 1977). Therefore, efficacy expectations can determine the maximum effort a person puts forth as well as the duration of persistence in a challenging experience. Due to a person’s efficacy expectations, “the stronger the perceived self-efficacy, the more active a person’s efforts” will be (Bandura, 1977, p. 194). Perceived self-efficacy can also have a direct influence on an individual’s choice in activity participation.

Self-efficacy theory is derived from four sources of information, most importantly performance accomplishment. Performance accomplishment “is based on personal mastery experiences” (Bandura, 1977, p. 195). A personal mastery experience affects both the persistence and initiation of coping behavior. A person may avoid a threatening situation because they believe the situation will exceed their ability to cope with the situation (Bandura, 1977).

Bandura (1977) finds the theory of self-efficacy has been the most commonly used theory to understand self-confidence and competence in sport performance. Self-efficacy helps allow others to understand a person’s motivation and behavior towards sport as well as a person’s own judgment of their capabilities to perform a sport (Bandura, 1986).

### Adaptive Sports

Adaptive sports can be a leisure activity, rehabilitation technique, and can even take on a competitive nature for those who have disabilities. Adaptive sports can help

individuals improve their physical, psychological, emotional, and social components in their lives (Geertzen, Martina, & Rietman, 2001). Different types of adaptive sports include outdoor recreation, such as adaptive skiing, sailing, cycling, and white-water rafting. Adaptive sports also include team and individual sports, such as wheelchair basketball, wheelchair rugby, wheelchair tennis, sit volleyball, triathlons, bowling, golf, and even aquatics.

People with disabilities may not be fully aware of the capabilities they have as well as they lack information about adaptive sports. Blinde and McClung (1997) researched disability sport and how it can affect men and women with disabilities. Blinde and McClung's study found that participating in individual sports could potentially affect an individual with disabilities in four different areas including (a) experiencing their body in new ways, (b) improvement in self-perceptions, (c) participation in adaptive sports redefined what they are able to do physically, and (d) sports increased their self-confidence in new, challenging activities.

Adaptive sports can help individuals with disabilities in a variety of ways. DePauw and Gavron (1995) found individuals with disabilities are one of the last groups of people to have access to sports. Due to this finding, studies have shown that people with disabilities are less likely to participate in physical activities and sport (Brown & Gordon, 1987; Schmidt-Gotz, Doll-Tepper, & Leinhart, 1994; Williams, 1994). Rollins and Nichols (1994) conducted a study examining constraints on individuals with disabilities and the role of constraints in sports and physical activity participation. Constraints identified included (a) people with physical disabilities were not aware of the

benefits of participation, (b) people were not interested in being physically active in sports, and (c) people's disabilities were restricting their participation. Martin (1999) suggested that participation in sport could be a way to promote healthier lifestyles and increase physical activity.

Many people who have amputations, spinal cord injuries, traumatic brain injuries, and acquired brain injuries experience self-consciousness about their disability and may refrain from participation in recreational activities (Sjodahl, Gard, & Jarnlo, 2004). Before individuals participate in adaptive sports it is helpful for them to possess a sense of determination to fulfill their basic needs so they may improve their psychological well-being through adaptive sport. Rehabilitation techniques, such as the involvement in adaptive sports, aim to improve a person's physical, psychological, and social functioning (Geertzen, Martina, & Rietman, 2001; Burger & Marineck, 1997). Therefore, specific to this study, adaptive sports may be able to provide women with the opportunity to gain the confidence they need for self-acceptance. They may become more sociable, which can add to the acceptance of a disability, as well as contribute to the improvement of their psychological well-being. Improved psychological well-being can potentially allow women to perceive themselves the same way they did prior to their amputation. This may promote strong determination to accomplish increased skills and improve their physicality and mentality.

### Triathlons

Triathlons are multi-sport marathons consisting of three sports, swimming, biking, and running. Triathletes, individuals who participate in the sport, compete in large

groups to achieve overall time. Shaw (1994) and Wearing (1998) found that sport and leisure activities contribute to the development of confidence in women that serves to promote resistance to societal pressures related to the ideal of femininity. Sport and leisure is also a means for women to become more aware of their bodies as well as to gain the potential to increase their competence by more frequent participation in sports (Shaw, 1994; Wearing, 1998).

Furst, Ferr, and Megginson (1993) conducted a study about athletes with amputations and spinal cord injuries and their participation in triathlons and found that triathlons are becoming more common and are providing competitive opportunities for these athletes. Earlier research indicated that the primary motivators for individuals who have amputations and other disabilities to participate in triathlons were self-motivation, the participation of peers with disabilities, as well as encouragement from friends, family, and physicians (Sherrill, 1986; Hopper, 1986). Cronan and Scott (2008) focused on the experiences of women who participated in triathlon training sessions. Findings indicated that important components of the experiences were the relationships between the participants as well as the social support through the sessions. Additional findings indicated that women learned about their athletic needs and capacities and developed a positive perception about their own bodies.

### Summary

This chapter detailed a review of the literature as it relates to the current study. The first section discussed the meaning of psychological aspects and explored areas that are affected after an acquired or traumatic amputation. The second section discussed

body image and how important body image is in the eyes of an individual and to society. The third section addressed how participation in sport can help women understand their body and how it will function. This section also expressed how sports and exercise are beneficial in multiple areas, such as social settings, improving body image, increasing self-esteem and self-efficacy among other self-perceptions. The fourth section includes a brief description of athletic identity and the benefits of identifying as an athlete at an early age in life. The fifth section addresses Bandura's theory of self-efficacy and why it is an important factor in sport performance. The sixth section details adaptive sports and the various areas in life that may be benefitted from participating in the adaptive sports. The last section focuses on the advantages from participating in triathlons. In spite of research addressing women and disabilities, the literature has yet to address life prior to an amputation, the hardships women experience shortly after an amputation, and the transformation experienced once involved in a paratriathlon.

## CHAPTER THREE

### METHOD

#### Introduction

Using qualitative methods, this study examined the transformative experiences of women, ages 21-35, who have acquired or experienced traumatic amputations that participate in paratriathlons. Semi-structured interviews were conducted to examine self-efficacy, specifically involving life experience related to injury, training for triathlons, the specific effects of training for triathlons, and generalization of various self-perceptions across life contexts. This section discusses the methods used in this study.

#### Research Questions

1. Is self-identity affected through participation in paratriathlon training camps?
2. How are general self-perceptions affected by participating in paratriathlon training camps?
3. How is general self-efficacy affected by participating in a paratriathlon training camp?
4. Does a transformative experience occur at a training camp? If so, what are the factors that contribute to the transformative experience?

#### Participants

Participants for this study were chosen through an adaptive triathlon club and were identified through the club staff of a weekend camp sponsored by the club. The first day of the camp participants introduced themselves. I, as the researcher, described

the study and asked for all willing participants who fit within the criteria, to participate in the study. Overall, there were a total of five women between the ages of 21 through 35, who fit within the inclusion criteria and provided verbal consent. In addition, the women (a) were currently not pregnant; (b) did not have congenital amputations; (c) had an acquired or experienced a traumatic lower extremity amputation. Four of the five participants used prosthetic legs for the running and biking portion of the marathon whereas one participant used a hand-cycle and racer for the running and biking sections. Each participant was given a copy of the recruitment letter to further inform them about the study. Participants had an in-person meeting with the researcher and were presented with the informed consent document. Qualitative interviews were conducted through the weekend training camp based upon interviewees' availability.

### Setting

The paratriathlon club is a nonprofit organization serving youths, adults, and wounded service members who have physical disabilities such as amputation, spina bifida, spinal cord injuries, stroke, cerebral palsy, and visual impairments who are training to compete in triathlons. The camp is based in the Midwest U.S and the camp used in this study lasted for 3 full days. During the camp, participants trained in swimming, running, and biking with the help of club staff, certified triathlon coaches, and volunteers. Training sessions occurred inside and outdoors at a recreational facility.

*Swimming.* Initial instructional swimming sessions were provided in the facility's Olympic-sized pool for an hour and a half. The following day, swimming occurred in the lake external to the recreational facility.

*Biking.* Participants were given group lessons using stationary bikes, and topics included how to ride bikes correctly specific to their disability. The same day, participants were able to ride bikes around the lake and facility, which was approximately 2.5 miles each lap.

*Running.* Participants were trained in proper running techniques inside the facility on basketball courts and later ran the path around the lake, which was approximately 2.3 miles. The third and final day of the training camp, staff arranged for a sprint triathlon for all camp participants to compete in. Distances were as follows, 300-yard swim, 10-mile bike, and 2.3 mile run.

#### Data Collection

Following the university's Institutional Review Board approval data collection for this study involved participant interviews. Data collection procedures focused on each woman's athletic history prior to the amputation, specific effects of training for a triathlon, and a generalization of self-efficacy and other self-perceptions across all life contexts.

The research procedures are comprised of two main parts: the participation in the paratriathlon training camp and interviews. The interviews included a semi-structured questionnaire that was chosen based on the purpose statement and research questions. Interviews were conducted during the camp. All participants' interviews were audio recorded upon verbal consent. Interviews were semi-structured with 15 questions (see Appendix C), that focused on self-efficacy and other self-perceptions in four specific areas: (a) involving life experience related to injury, (b) training for triathlons, (c) the

specific effects of training for triathlons, and (d) generalization of self-efficacy across life contexts. Interviews last approximately 30-45 minutes each.

The process each participant followed was (a) participant was identified by club staff president and recruited by the researcher, (b) upon verbal consent to participate, participant and researcher met at an agreed upon location at the training camp, (c) Researcher obtained informed consent, (d) Participant was interviewed and interview was audio taped, (e) the researcher thanked the participant and participant was free to go. Data collection was guided by inductive reasoning by utilizing general theories of self-efficacy and self-perception.

#### Data Analysis

Analysis was performed after the completion of all interviews. Analysis included transcription of all five interviews by the researcher. Following the transcription of each interview, the researcher read each interview. Before the researcher continued analysis, general themes were identified based on the arrangement of the interviews. Each interview followed the format of athletic history prior to the amputation, the impact of the amputation on life satisfaction, and lastly, finding out if participation in the paratriathlon training camp and sprint triathlon led each participant back to their previously held identity, and if so, how did their participation accomplish this. Once general themes were identified, each transcribed interview was read again to identify keywords and key phrases. Key words and phrases were then written in outline form following the three general themes. Interviews were read once again to identify any missed key words and

phrases. After all key words and phrases were identified, inter-rater reliability was then employed.

For inter-rater reliability, four unbiased graduate student readers were gathered to complete the exact process of the researcher. Before readers read transcriptions, the researcher discussed the general themes that were formed from the interview questions. Readers then read the transcriptions and found all key words and phrases that were recurring throughout interviews. After an initial reading, readers were then asked to re-read transcriptions to ensure all key words or phrases that were recurring or vital to the research were found. After final readings, the researcher and readers discussed findings from the transcriptions to ensure no differences were found between the researcher's and the reader's findings. If different findings did occur, the researcher and reader would discuss where the finding occurred, why the finding was important, and what theme would include the finding.

Following determination of inter-rater reliability, the researcher created coding categories to group the findings that fit in appropriate relationships for each general theme. Each general theme was then categorized into three separate subthemes, totaling nine subthemes for the study as a whole. Each subtheme was created due to the findings in each individual interview.

### Reliability and Validity

Reliability and validity was addressed through inter-rater reliability and support from methods and the literature. Inter-rater reliability was employed after the researcher transcribed all interviews, general themes were formed based from the arrangement of the

interview, and transcriptions were read over for common key words and key phrases and placed in outline form. Four graduate students in the Parks and Recreation field read through transcriptions and found keywords and phrases in the transcriptions, using the identical process as the researcher. After reading through final transcriptions, each reader grouped findings in outline form according to the three general themes of the study. Meetings between the researcher and readers were then employed to discuss all findings, whether similar or different. After all meetings and discussions were complete, an above 80% inter-rater reliability was reported. Along with inter-rater reliability, support from methods and existing research was taken into account while grouping findings for the current research.

### Summary

This chapter described the methods and procedures used during this study. Five participants from the paratriathlon training camp were included in this study. Participants completed semi-structured interviews with the researcher during the camp. The researcher also engaged as a camp participant throughout the three day training camp. Qualitative data was analyzed as a complete body of data to develop common themes within the participants and data.

## CHAPTER FOUR

### RESULTS

#### Introduction

The purpose of this study was to understand whether or not participation in triathlons increase a women's self-efficacy, specifically involving life experience related to injury, training for triathlons, the specific effects of training for triathlons, and generalization of self-efficacy and other self-perceptions across life contexts. This study was designed to answer the following research questions:

1. Is self-identity affected through participation in paratriathlon training camps?
2. How are general self-perceptions affected by participating in paratriathlon training camps?
3. How is general self-efficacy affected by participating in a paratriathlon training camp?
4. Does a transformative experience occur at a training camp? If so, what are the factors that contribute to the transformative experience?

To fully understand the content participants experienced, a full life analysis was necessary spanning before the amputation, after the amputation, and through the involvement in the training camp. First, participants will be described with a detailed participant profile. Next, the role of the researcher will be defined, and lastly, the main themes from the qualitative data will be explored.

### Description of Participants

Ten campers registered for the paratriathlon training camp. Of that number, five women fit the inclusion criteria for this study and all five women agreed to participate. The researcher was able to interview the women either the second day of camp or the last day depending on participant availability. Table 1 describes participant demographics and each participant was given a pseudonym for the study.

### Characteristics of Participants

Table 1. Characteristics of Participants (n=5)

Calla	Late twenties African American Chicago, Illinois resident Student at University of Northpark Married 1 <sup>st</sup> time participant of training camp/triathlon Enjoys running Left below the knee (BK) amputee Cause – pleomorphic leiomyosarcoma
Audrey	30 Years Old White Married Has one child Stay-at-home mom Resides in Grand Rapids, Michigan Has competed in training camps/triathlons Enjoys all three sports, especially swimming Right above the knee (AK) amputee Cause – connective tissue disorder
Miranda	31 Years Old White Chicago, Illinois resident Iraqi War Veteran Certified Prosthetist Paralympian Motivational Speaker Certified Triathlon Coach

	Member for the Wounded Warrior Project Left above the knee (AK) amputee Cause – Improvised Explosive Device
Joy	33 Years Old White Resides in Crowley, Texas Married Has children 1 <sup>st</sup> time participant of training camp/triathlon Left above the knee (AK) amputee Cause – tumor on backside of knee
Hope	21 Years Old White Resides in Evanston, Illinois Student at Northwestern University 1 <sup>st</sup> time participant of training camp Left above the knee (AK) amputee Cause – bone cancer

### Individual Participant Profiles

To better understand the effects of the paratriathlon training camp, an examination of participants’ athletic history, cause of amputation, impact of the amputation, and the turning point in their lives is necessary. This section will discuss the experiences of the five participants who were involved with the weekend long paratriathlon training camp. These participants include: Calla, Audrey, Miranda, Joy, and Hope. With each participant, the researcher will explore the athletic history, the cause of amputation, the emotional progression after the amputation, and the moment that led each to participate in the paratriathlon training camp. These individual participant profiles consist of data from interviews and observation. Throughout the profiles, repeating patterns will be discussed.

## Calla

Calla began participating in sports at the age of six or seven years old and identified herself as an athlete. She started in the sport of gymnastics and later participated in track and field and cross-country throughout middle and high school. After her sophomore year in high school, Calla decided to quit the sports she was currently involved with due to disagreements with coaches. She did not return to training or participating in sports until the year 2007. After taking a break between high school and college, Calla began running again. She began to feel pain in her left tarsal (big toe) but thought it was a stress fracture and ignored the pain. In fall of 2009, Calla's pain began to increase and she decided to see a doctor for the continual discomfort. As Calla went on to describe the pain and discomfort, she explained:

“The fall came...I was involved in school, real excited, the pain started to get worse...I decided to go to the doctor, um, they couldn't figure anything out. I went through bone scans, an MRI, and finally a CT scan and that's when they found a mass, they didn't know exactly what it was, but it was a mass on my toe. I went to a special orthopedic surgeon...the day before my birthday, it was November 23<sup>rd</sup>, I was diagnosed with, uh, cancer...pleomorphic leiomyosarcoma.”

Calla's diagnosis was a 3 out of 3 and growing rapidly. The cancer began to break through her bone, which ultimately left her with two decisions, she explains what she was told by her doctor:

“...we basically have two options for you, you can either get your foot amputated or...you can do the whole reconstructive surgery...take my whole bone out of my toe...take a piece of my tibia and, uh, try to reconstruct my bone with metal. I thought, of course I want to keep my foot...there’s going to be a problem...9 out of 10 times we’re going to miss the cancer if it comes back...I just decided to do the amputation December 30<sup>th</sup> of 2009...more or less a month away from when I was diagnosed...we did the amputation and I was fine, like I was fine. I was ok, I wasn’t happy or sad I was just OK.”

Calla expressed very little emotion for a significant amount of time after being discharged from the hospital. She continued to mention how she was okay with no emotions about the amputation at first, until she recalled when it finally became a reality to her:

“...I was fitted for my first prosthesis, I was devastated...I took off the leg and didn’t want to wear it...I just started crying...I didn’t know what was going on. I have to put this leg on to go to the bathroom at two o’clock in the morning...seeing people take off both their shoes makes me upset because I couldn’t do it. I couldn’t do it. It really upset me.”

Throughout the hardships, Calla decided it was in her best interest to see a therapist, someone she could confide in who was not affected by her injury. She quotes, “...I just didn’t know what to do with myself. I didn’t know where my life was going to take me...”

Despite the doubts and tribulations Calla encountered throughout her initial year with an amputation, she recalled:

“I am honestly a true believer in everything happens for a reason...God has a plan for us...this happened for a reason...I’m just excited about life. It’s made me appreciate life ten times more...the cancer could have killed me...I definitely thank God every single day that I still have my life and still cancer free, and you know, I’m living my life to the fullest and nothing is stopping me at all...at all.

Along with the positive attitude she wanted to find that athletic identity she classified as all her life. Her prosthetist became informed about the paratriathlon training camp and mentioned it to her. Calla agreed to participate by saying, “this was the first time doing anything, you know, running, whatever with, uh, after my amputation, so like really getting involved. So of course, I was like yea, I definitely want to do it.”

#### Audrey

Audrey identified herself as being an athlete. She began swimming at an early age and continued her involvement in sports with basketball, volleyball, and softball through high school. During her freshmen year, she tore her ACL (anterior crucial ligament) in her left knee and the following year she tore her right ACL. As Audrey continued to discuss her injuries throughout her high school career, she explains, “I continually had problems and then I found out I had a connective tissue disorder...I was kinda depressed too so I mean, just, because you’re used to playing sports, you know? And then you lose that and you lose a lot of your friends and everything at a crazy age too.” In college, her desire was to play softball but due to the connective tissue disorder

and pain in her joints she was unable to play. As she continued through college, the discomfort progressed. When asked about the actions the doctors decided on, she replied:

“...I tore my ACL and PCL in my right leg and I tore my ACL and LCL in my left leg...we weren't thinking the connective tissue disorder was the cause because it wasn't affecting the joints...they, um, broke my leg and realigned it, called a high tibial osteotomy...they had, like, a big external fixator with, like, pins that go through it and I got an infection through the pins so I had compartment syndrome...your muscles and everything in your leg swells and it compresses arteries, nerves. So they slit, they open up from, like, the knee to the ankle, called a fasciotomy, and that, like, gives your leg room...had to do that three times...I didn't have any sensation in my foot. I had drop foot, um, they put a line in my chest for IV antibiotics because of the infection...um, because the pins went through my bone, um, then I had MRSA so that caused resistance in my anterior tibialis so they had to take that out.”

Audrey continued to have problems from the surgery and acquired foot drop. Doctors persisted to try more procedures, which only caused more pain and problems. When asked what happened next, she replied:

“They tried braces and stuff but it didn't work. ...They actually lost blood flow in my leg, um, and found out later...I had a popliteal artery, it was being compressed by my PCL reconstruction...my leg was using collateral flow and then they cut off the circulation to my foot. I had, like, no circulation going down to my leg and so

I started to get gangrene and it, um, I was getting really sick and so I was ready to go septic with, you know, where the infection goes into your bloodstream and so in order to save your leg we need to amputate it. ...they quickly amputated through the knee, so they did that and that was it...I lost my leg September of 2004...it was, it was traumatic in the fact...it wasn't in the plan for me.”

As Audrey reflected on her experiences on learning how to cope with her disability, she recalled the difficulties she encountered on a daily basis. She lost the identity she knew for most of her life, as an athlete. She did not have acquaintances or friends who knew what it was like to go through an amputation so she recalls being somewhat ignorant within the disability and disabled community and felt unmotivated because she did not know anyone who came out of an experience like hers and had great accomplishments. When asked about her initial thoughts after her leg was amputated, she responded:

“I came out of it like, what the heck am I going to do with my life...it was a day decision...do it now or you can die...after the surgery, like, I swore I didn't do it, I mean it hurt but the reality was seeing, it was a shocker, like, the flat bed sheet, you know”

Audrey maintained a “depressed” state of mind as well as feelings of denial. She was fitted for a prosthetic and realized this was now her life to live. All the prosthetics she tried did not fit right due to the level of the amputation and connective tissue disorder together. Audrey and her prosthetist tried multiple ways to adapt her prosthesis, to fit comfortably but nothing would work. Now she was not only depressed, but also

frustrated with her situation. When asked to reflect back on her thoughts after trying the prosthetic, she responded:

“It was super painful. I have a lot of volume fluctuations...it was hard to fit...they wrapped muscle and skin to try to pad it on the bottom, but, um, with my connective tissue disorder it didn't hold. Every time it would fall apart...I was discouraged...I wanted to do what everybody else was doing...I had to go around in a chair and no leg...I remember I told my husband...because of the depression, I was suicidal...I told him, I can take some kind of concoction of pills and end it right here because I don't know what my purpose is...go throw away all the pills in the house...I was a failure because of my weakness.”

Along with these emotions of weakness, failure, and depression, Audrey also had an issue with her body image, quoting, “I didn't think people stared at me because of the wheelchair, they stared at me because of the leg...people would point at me and it made me sick to my stomach.”

Despite all the hardships Audrey has been through she chose to see a therapist, someone who was not affected by her injury. It was hard for her to move on with her injury due to the fact she only communicated with her family. She recalled, “they're [family] still going through it too cause they're like grieving for you too...I needed to find a positive outlet so that's where I kinda got the feelings out...it was somebody neutral and keeping all things safe and secret.” During her sessions with the therapist, she learned her first mistake during recovery, “trying to figure out the purpose of life.” She began to understand that she needed to learn to love herself and accept herself

instead of trying to understand the purpose of her life now that she had three limbs instead of four. When asked about her road to recovery, she responded:

“I started training for sports again, I went back to nursing school...it’s a stressful job [nursing] and if I need to get out to relieve my stress some way and in a healthy avenue...I can go take a swim, get it out, take it out on the water, take it out on however hard I want to train and let it go, and go on with life. I feel like it’s taken a long time, like, I feel like I haven’t bounced back as fast as some people but I have to look at everyone’s circumstances...I don’t want to compare things...but we all of a sudden, shock, out of nowhere...you know how it is to have two arms or legs that function and then all of a sudden it is taken from you...but it’s OK...you get through it...get out there and do something you love or focus on your career...if that’s a health outlet for you I think that’s fine, you know...that’s probably what brought on the triathlon.”

Miranda

Miranda has participated in athletics throughout her life. When asked about her history with sports, she replied:

“I kinda always considered myself as an athlete. I grew up on the sport of gymnastics, did it every day of the week or six days a week...in high school I went to high school gymnastics. I did gymnastics, diving, and track through high school...I joined the ROTC military program in college...I went on to the crew team and diving team [in college].”

When asked about how she became involved in sports as a child and an adolescent, she explained, "...they [parents] kind of got me into the sport of gymnastics when I was five or six but I swam briefly...but looking back, I think it was myself...but yea I loved it. I wanted to go to the Olympics..." Once Miranda graduated college, she enlisted in the United States Army. As her duties in the Army, she was commissioned as 2<sup>nd</sup> Lieutenant to the Transportation Core. When asked to describe her time in the Army, she replied:

Umm, I was one of the first passengers to do transfers to Iraq in 2004. April 2004, I was in a routine conveyer suit to Baghdad and our Humvee was struck by a roadside bomb, which uh, make a long story really, really, short, resulted in the loss of my left leg above the knee. Then I went back to Walter Reed and had quite a few infections and it got shorter kind of progressively.

She completed the daily mission multiple times and recalls, "this is just another day and I have done this route multiple times." Although, the day of the explosion was very different from the other days she performed this exact route. As she spent her time in recovery she went through multiple surgeries and rehabilitation. She was medically retired from the Army with a Purple Heart and bronze star.

The day Miranda lost her leg, she recalled:

"I didn't know until my first surgery in central Baghdad and when I woke up my husband at the time, um, he was the one that told me I lost my leg and, uh, when I found out, I mean, I wasn't like my life is over, I mean, I knew I had the support to get through it. I-I-I guess, I mean not to say I don't have bad moments or bad

days, I think I knew pretty early on I would just accept it and get through it...I've always been a pretty positive person.”

Although Miranda had a positive outlook on life, when asked about how she felt wearing a prosthetic, she responded:

“Walter Reed...was about how cool you looked...the real world, yes it's different. Leaving Walter Reed and going back to my hometown and being the only amputee it's a bit strange but I'm used to it now. I'm used to bunches of people looking. It's just something you get used to.”

The positive attitude and strong mentality she had throughout her first year led her to try new activities and sports as an amputee. She explains:

After I lost my leg...I went skiing. I lost my leg in April 2004 and then later that year, November or December 2004, I went to Colorado, to Breckenridge and um, I didn't think I could ski with one leg and I kinda thought there is no way I'll be able to do it but a week later it was like the most incredible week of my life. Skiing down from the top of the mountain, you know, as fast as I could really showed me that I could do anything...that was what changed my perspective...”

After the ski trip, Miranda had confidence in her abilities and put the confidence towards all activities she want to do. The reassurance led her to believing in the never ending possibilities and she soon after became interested in the challenging and competitive sport of triathlon.

## Joy

Joy participated in outdoor activities as well as basketball as a child. She identified herself as a “runner” who liked the outdoors. As a child, she motivated herself to play sports and stay active. When asked about the cause of her amputation, she replied:

“I had a benign tumor behind my knee so it was not cancerous but then I got pregnant. So the pregnancy I had in 2008, the tumor, uh, was apparently estrogen driven...the tumor grew so big and then after the pregnancy, things didn’t change, it stayed that way and I couldn’t bend my knee...it affected my everyday life so much that it was just a quality of life decision for me.”

Joy was unlike the other participants, in that she was excited after her amputation. She was no longer held back from achieving daily activities because of the tumor on the posterior of her knee. She explains, “I was more excited cause I knew there was a light at the end of the tunnel.” Although she experienced excitement she still mentions “bad days” when challenges arise.

Joy’s acquired amputation allowed her to have time to thoroughly think through the decision unlike previous participants. When asked how she became interested in participating in sports as an amputee, she explains:

“I didn’t have an A-ha moment. I mean even before my amputation I had been Google-ing athletes with prosthetic legs and they were my inspiration and I guess that was my motivation.”

The athlete Joy researched guided her to believe and understand people with amputations can continue participation in sports they have a passion for or try new and different sports. The knowledge she gained helped guide her to test her strength and potential by participating in triathlons.

### Hope

Hope identified as an athlete early on in life. When asked about her athletic history, she explained:

“I always loved sports as a kid...did all the team sports you can imagine; basketball, volleyball, soccer, softball...middle school is when I started to get serious about finding what was right for me...volleyball and basketball were always a big priority for me. I really liked the team sport mentality...I was also very aggressive.

The start of her athletic career was led by her parents, quoting, “I think they encouraged me to start off but I ended up loving it so I kept going...I was the most athletic and so that was kind of my position in the family.”

Sports have always defined Hope’s life and as she started middle school, she developed bone cancer in her left leg. Hope remembers the day she was informed about her probable future with sports, explaining:

“...[sports] such a big part of my life...I remember the day that I found out that I probably wouldn’t be able to play sports again after my surgery, um, I had bone cancer in my leg and I, um, like had another surgery to try and save the leg...it was very intense...I had a knee replacement and donor bone put in and my doctor

told me, like, afterwards you are really are not going to be able to play sports again...I remember that day, I think I was much more emotional than the day I was actually diagnosed.

Hope's surgeries did not end with the knee replacement and donor bone, when asked about the cause of amputation, she recalls:

"I had that surgery...my leg never healed from it and I couldn't do anything and it just got to the point where I was like, I'm really, I'm not even living my life right now...I tried and thought it'd be much easier, you know, with a prosthetic...at 14, I had an amputation.

After the amputation, Hope still was not able to participate in sports and she no longer knew her identity due to this fact. When asked about her affect after the amputation, she explains:

"I think part of the reason why I did have the amputation...I was so into sports before this...I really couldn't do sports and I kinda felt, like, I lost a part of myself...the fact that I wasn't healing from it and the fact that it wasn't getting better, like, I almost thought there was something wrong with me and, like, my ability, you know...at first...being diagnosed I was very much, like, alright well whatever, like, let's do what we gotta do...I was open to anything, I'll do whatever...after a couple years on my leg, when it wasn't working so well, it just got really frustrating...I was just frustrated and I was just so ready to get on with the rest of my life...I was in middle school and, which is, like, a horrible time no matter what. I mean it's even worse when you have cancer...saw my friends on

the sports teams I used to play...I just remember feeling so jealous and like, uh, why can't I be doing that."

After experiencing the frustration, Hope participated in an organization in Park City, Utah. When asked about her experience in Utah, she explains:

"I went skiing for the first time in my life...this organization that takes childhood cancer survivors, um, out to Utah and teaches them how to ski...it was like four months after my amputation and I think that was really, like, the first, like, physical thing I had done in a really long time...I had never skied before in my life and by the end of the week I was, you know, turning it up and that was probably what started things for me.

After Hope went skiing, her attitude and affect changed immensely. She began believing in her abilities again and her passion to become the athlete she once identified with.

Throughout her high school years and beginning of college, Hope became interested in adaptive sport organizations. She received an internship with an organization based out of Chicago, Illinois. Along with the internship, one requirement is competing in a triathlon, which she says, "I always thought it'd be a cool thing to do...I added it on my bucket list but it was one of those things that I never thought I really would do...it ended up working out really well."

### General Themes

To better understand the participant's camp experience and the factors that could influence a participant's self-efficacy and as referred to the first research question (Is self-identity affected by participation in paratriathlon training camps?), all of the

interviews were analyzed as a collective body of data. This section discusses three themes that emerged from the data. These themes include athletic history as a basis of self-identity, impact of the amputation, and getting back to themselves.

#### Athletic history as a basis of self-identity

One theme that emerged across the participants was the existence of athleticism serving as a basis to self-identity. All participants were asked about the athletic history throughout childhood and adolescence and throughout the interviews all participants referred back to being an athlete and being involved in athletics. Each participant mentioned the loss of the identity they once knew and the journey to reaching this identity once again. Three main subthemes contributed to this idea of athleticism as the basis of self-identity: childhood athletic history, the struggle to regain identity, and finally regaining identity. Each of these factors will be discussed below.

#### *Childhood/Adolescence Athletic Identity*

First, participants identified as athletes in their families at a young age. Each participant took part in team and/or individual sports starting from five or six years old all the way through high school or college. When asked to describe their athletic history, participants offered these comments:

“I’ve always been into sports” (Calla).

“I started swimming, like, at three months old” (Audrey).

“I always considered myself an athlete. I wanted to go to the Olympics”

(Miranda).

“I was the most athletic and so that was kind of my position in the family”  
(Hope).

“I was an active child. I played basketball” (Joy).

A majority of the participants acknowledged their parents influenced their involvement in sports during their childhood. Throughout their adolescence, each participant acknowledged they enjoyed the sports and ultimately continued their involvement on their own and not because their parents pushed them. Hope exemplified how she transformed her parents’ decision for her to participate in sports into her own decision. She said:

“My parents weren’t super, like, you know a lot of parents these days are pushing their kids into sports, like, my parents encouraged us to do it but they weren’t, like, super pushy about it...they encouraged me to start off but I ended up loving it so I kept going” (Hope).

Hope confirms self-motivation is a vital component in each individual’s athletic identity. The ability to recognize each participants’ history concerning athletics, improves the understanding of the difficulties through the journey of each participant regaining their identity.

#### *The struggle to regain identity*

A second factor contributing to the athleticism as a basis for self-identity involves the struggle to regain a previously known identity. As discussed in the individual participant profiles, each woman explained their stories on how they became an amputee, from cancer to disorders to trauma. A recurrent theme noted throughout the interviews

was that following the amputations, a majority of the participants could not identify as athletes as they once did. When asked to express their feelings about their abilities, Hope and Audrey responded:

“I remember the day I found out that I probably wouldn’t be able to play sports again...I remember that day, I think I was much more emotional than the day I was actually diagnosed...I couldn’t do sports and I kinda felt like I lost a part of myself” (Hope).

“I, like, tried getting back into basketball because basketball was my thing before cause we didn’t have adaptive softball here, um, so I started with that and you get going and you get discouraged...everything is different...I felt like a failure”

(Audrey).

Each woman explained her frustration with the current status of not being able to identify as an athlete as they did once before the amputation. Although the women struggled to identify as athletes, they tried to participate in sports or recreational activities to attempt to and find their niche and allow themselves to understand their full athletic potential. The participants felt they needed a positive outlet to overcome the obstacles and each participant was led to the sport of triathlon.

#### *Regaining athletic identity*

The final factor contributing to athleticism as a basis for personal identity included the notion of the participants reaching their former athletic identity. As mentioned during the participants’ struggle to regain their athletic identities, each participant was invited to participate in a paratriathlon training camp. When asked why

the women decided to participate in a paratriathlon training camp, these comments were offered:

“I’m a little bit ADD (*laughs*)...I get sick of one thing...I like to train for multiple things...my husband and I can train together...I have a friend, she’s part of the Challenged Athletes Foundation where she does triathlons, um, she’s paraplegic and, I don’t know, just watching what she’s done and where it has taken her and the fun she’s had...made me want to get in this type of competition. I’m competitive...the cool thing about triathlons, is that you’re in the same venue as able-bodied people...I don’t feel isolated” (Audrey).

“I always kinda thought it’d be a cool thing to do...no one really ever pushed me to do it...I got an internship with GLASA...one of the coaches was like this is great but you’re also going to run a triathlon” (Hope).

“...basically running, it’s just, you know, it’s just one of those things, you know, you kinda get bored with especially as an amputee, so it’s more of a, more of a rounder approach” (Joy).

“It started out as proving to myself and others that I could still do anything I wanted without a leg...I lost my leg, I didn’t want to be held back by anything. Just proving to myself that I could still do it...I love the competitive part, the challenge...a lot of self-worth feeling that I can still do it” (Miranda).

“My prosthetist made me! (*laughs*) I’ve never done anything remotely close to this so why not go the extra step” (Calla).

Along with the participation in the training camp, each woman transformed the unknown identity into a term used daily prior to the amputation, an athlete. Although each woman struggled individually, each determined a moment in their life where they wanted to identify as an athlete again. The paratriathlon training camp was the initial means to accomplishing this goal. As each woman participated in the training camp, they were reminded of the impact the amputation had on them from day one to competing on the final day of the paratriathlon training camp.

#### *Summary of athleticism as a basis for self-identity*

For the participants, three factors contributed to the regaining of their athletic identity. First, the participants all categorized themselves as athletes at an early age, prior to the amputation. Second, because of the devastating experience of amputation, each participant lost their athletic identity. And third, the ability to participate in a competitive paratriathlon camp and competition provided the opportunity for the participants to regain their athletic identity.

#### *Impact of the amputation on self-perception*

The second theme that emerged from the participants' interviews was the impact of the amputation on self-perception, which is related to the second research question (How are general self-perceptions affected by participating in paratriathlon training camps?). All participants were asked to characterize their emotional state after the amputation in addition to anything they struggled with throughout months afterwards. Throughout this theme, body image, depression and confidence were recurrent through all the interviews. Each participant struggled with their physical appearance and self-

image shortly after their amputation along with a majority who experienced depression. In addition to body image and depression a decrease in confidence was also discussed. Each of these subthemes will be discussed below.

### *Body Image*

The majority of the participants recalled struggling with the acceptance of their new physiology after their amputation, some more than others. Some participants also expressed a state of denial that the amputation did not actually occur. Audrey and Calla explain how they did not believe their leg had been amputated. They said:

“...after the surgery I swore they didn’t do it, I mean it hurt but like I could, you know you could still see your foot and everything like it wasn’t horrible, I don’t know. And so, I guess the reality was seeing it was a shocker, like the flat bed sheet, you know (Audrey).

“I got home, I was fine...after I was fitted for my first prosthetic I was devastated” (Calla).

Once the women knew the amputation was a part of their reality, each participant explained their own experience with the difficulty of accepting their self-image. When asked to explain their perceptions of their body image, the participants offered these comments:

“...I felt awkward...I never really have gone out with shorts on...I was kind of afraid of the stares...the crazy thing is, is that I have a cosmetic leg that resembles my other leg” (Calla)

“...going back to my hometown and being the only amputee it’s a bit strange, but I’m used to it now. I’m used to bunches of people looking. It’s just something that you get used to (Miranda).

“I had to go around in a chair without the leg on...people stared at me, not because of the wheelchair but because of the leg...people would point, like, at me and stuff and it just made me sick to my stomach...I didn’t leave the house because so many people were staring (Audrey).

“...I was in middle school, it was a horrible time no matter what” (Hope).

Each woman experienced difficulties with accepting their altered physiology because the physiology was not something they were used to in prior years. The excerpts above expressed how the women were used to being viewed as ‘normal’ woman in society. As their body changed the image they saw, along with outside observers, changed their idea of what ‘normal’ body-image should appear to be in today’s society. Because of the body image issues, more problems surfaced for some of the participants, including the development of depressive symptoms which also led to a decrease in self-confidence.

### *Depression*

Three participants experienced some level of depression. Each of the three women expressed their experience of depression and what they believed caused the depression. The actual amputation was not the only factor that caused the depression but other external factors that were going on during this transition period of their lives.

When asked to characterize their emotional state shortly after the amputation, three women offered these comments:

“I definitely went through some depression. I lost my mom within six months of the amputation. I was anxious to get a prosthetic and get my leg but then I had to wait...it seemed like forever...because of the depression, I was suicidal...I didn’t know my purpose...I felt like a failure” (Audrey).

“...I just cried, like, I didn’t know what was going on...I have to put this leg [prosthetic] on just to go to the bathroom...it made me upset because I couldn’t do it. I couldn’t do it...I had to see a therapist because I just didn’t know what to do with myself. I didn’t know where my life was going to take me” (Calla).

“...my leg never healed from it [reconstructive surgery] and I couldn’t do anything...it got to the point where I wasn’t even living my life...I thought there was something wrong with me and my ability” (Hope).

Although some participants had a difficulty immediately accepting the amputation, other participants did accept their amputation shortly after the initial surgery. When asked how they felt shortly after the amputation, these comments were expressed:

“...the military hospital helped the transition...I’ve always been a pretty positive person...I wasn’t like my life is over...I knew pretty early on I would just accept it and get through it” (Miranda).

“I felt great...I was more excited because I knew there was finally a light at the end of the tunnel” (Joy)

Even though some participants experienced depression whereas others did not, all the participants did mention that not every day is a great day and to take one day at a time. The participants struggled with internal issues as well as external factors. These internal factors have impacted the daily lives of the women, which led to a decrease in level of self-confidence.

### *Confidence*

Following each participant's amputation, confidence became an issue. Prior to the amputation, all the participants recall having confidence because of their participation in athletics. After the amputation, they no longer felt they had the ability to participate in sports because they had one less leg and believed it was no longer a possibility. When asked if any of the participants tried to get into different sports, Audrey explained her experience with sports after her amputation. She said:

“I tried getting back into basketball because basketball was my thing before...you get discouraged that you're at a lower level...this isn't how basketball is supposed to be played...I tried to find things that really helped me but at one point I-I felt like a failure” (Audrey).

Although Audrey found a wheelchair basketball program, she did not experience an activity that helped her believe she could do anything she put her mind too. Unlike Audrey, Hope and Miranda had the chance to join two different organizations that taught them how to ski on one leg. When asked about the experience of one-legged skiing, they responded:

“I didn’t think I could ski on one leg and I thought there is no way I’ll be able to do it but a week later it was like the most incredible week of my life. Skiing down the top of the mountain, you know, as fast as I could really showed me that I could do anything...it changed my perspective” (Miranda).

“I had never skied before in my life...I went skiing with this organization that takes childhood cancer survivors...by the end of the week, I was turning things up...that was what started things for me again...it was my ‘aha’ moment” (Hope).

After the skiing experience, they began to understand that participating in athletics was a possibility. They began trying new activities, such as running and swimming, which brought forth a new sense of confidence.

Although each woman struggled differently post-amputation, time allowed for each woman to grow and accept what has happened. Each struggle the women went through led them to the different places in their lives. For some of the participants, they accepted their amputation earlier than others and reentered the world of sports on their own. For others, the people they met encouraged them to participate in sports once again, where all the participants would join together and learn the power of participation in sports, specifically the paratriathlon.

#### *Summary of impact of the amputation on self-perception*

For the participants, the amputations had a major effect on each individual life, which related to the third research question (How are general self-perception affected by participating in paratriathlon training camps?). Through the participation in the paratriathlon training camp, the women began to perceive themselves differently. Their

confidence increased because they saw what they could do as long as they believed in themselves. The continued support each participant had encouraged them to continue to believe even when they felt like they could not go any further. As their confidence increased, the depression decreased. Once the depressive symptoms were set aside each woman began to perceive herself as she did prior to the amputation. The ability to participate in a competitive paratriathlon provided the opportunity for participants to learn about themselves, feel more confident in themselves, and experience a change in the way they perceive themselves, all for the better.

#### Getting Back to Self

The third theme to emerge throughout the interviews was the idea of getting back to one's self, which is related to the third and fourth research questions (How is general self-efficacy affected by participating in a paratriathlon training camp and does a transformative experience occur at a training camp? If so, what are the factors that contribute to the transformative experience?). This theme emerged from the participation through the paratriathlon training camp and the competition in the sprint triathlon. Throughout this theme, all the women participating felt they found the person they knew themselves to be prior to the amputation. The women demonstrated a competitive attitude, increased motivation, improved confidence and a stronger mentality, as well as excitement, increase in self-efficacy, improved perception of self and were all around more positive. Excerpts from each will be expressed below.

*Excited to regain competitive nature*

First, participants continuously spoke about the excitement they felt due to the chance to participate in sports once again, specifically the challenge and competitive nature of all three sports involved with the triathlon. When Calla was asked to express her feelings towards her participation in her first triathlon, two years after her amputation, she responded:

“...it’s a challenge and I like the challenge...it feels good, it feels like a huge accomplishment...I feel great about it. It’s exciting!”

Calla has been inactive in athletics since her amputation. She mentioned she did not have the knowledge about the sport or about the different resources that she learned from the camp. Now that she has the resources to find different organizations, she states, “I’m pretty excited...it’s a lot of hard work but it’s good to get involved with things like this.”

Along with Calla, two other participants expressed their excitement to find their competitive spirit through the involvement in triathlons. When asked how they felt about their involvement in their first triathlon, these comments were expressed:

“I love the competitive part of putting all three together, the challenge of it...I guess a lot of the self-worth feeling that I can still do it...I’ve learned through this, you can do anything...where there’s a will there’s a way and I learned that through the athletics” (Miranda).

“...I’m competitive in nature...the cool thing about triathlons is that you’re in the same venue as able-bodied people, you’re in a different category, but in the same

venue...I still get to go on that race course with able-bodied people and it's not like I feel isolated and they're usually pretty supportive" (Audrey).

As the participants became more knowledgeable about the sport of triathlon, their excitement increased due to the understanding that they could still participate in athletics in addition to, the ability to compete with able-bodied athletes.

#### *Motivation from social support*

Throughout the camp, the participants regained their love for competition, which aided in feeling more motivated to compete and continue participating in triathlons. When the participants were asked how the triathlon training camp and triathlon has affected their motivation, the women responded:

"...if I was alone I would've stopped...meeting the other amputees and, you know, they don't quit, why should I? I feel like I'm not alone, you know, like before I felt alone...I don't have a friend that is an amputee...but I'm meeting new friends here that have helped push me and you have to tell yourself to keep going...I feel great that I've actually pushed myself too" (Calla).

"...seeing other athletes with prosthetic legs, they were my inspiration...they motivated me" (Joy).

"I never really had anyone push me to do it...someone has finally motivated me to do it and stick with it" (Hope).

"I have really good support...I put myself in circles that do the same things and are motivated...through triathlons, the satisfaction of achieving my goals or

crossing that finish line and getting that great time, that keeps me going”

(Miranda).

“...the fact that I’m not the only one because when you go home you’re by yourself, you’re not surrounded by other amputees...we all struggle and go at our own pace but we get through it...just that feeling of accomplishing it...”

(Audrey).

From the quotes provided, motivation was not only influenced from the competitive nature but also from the social support they received throughout the camp and from friends and family.

*Sense of accomplishment increases confidence and mentality*

As participants progressed through the paratriathlon training camp and competed in the sprint triathlon the final day of camp, all the information they learned about triathlons and themselves showed in their final performance. Women exuded improvements in their confidence, mentality, competence, and self-efficacy. On the final day of camp after the sprint triathlon, the participants were asked to explain how they felt from the participation in the paratriathlon training camp and sprint triathlon. These comments were offered:

“When I first started I was like there’s no way I can do this. I’m not meant to do this...and now, I definitely know that I can. I’m more motivated now” (Joy).

“My self-efficacy has improved...I wasn’t that confident coming into it...I came to camp insecure at where I was at...I learned I can do anything I put my mind too” (Hope).

“I’ve learned there’s no barriers that someone can do...I’ve become more self-confident...I believe in myself” (Miranda)

“...I will hit trials and tribulations and obstacles, I can definitely overcome it, definitely, there’s nothing stopping me” (Calla).

“It empowers you...if you put your mind to it you can do anything” (Audrey).

The women learned that nothing is impossible and Miranda says it best, “...as long as you want to do something, there’s no reason why someone can’t do something.”

After participation in the camp and triathlon, the participants represent a different mentality, which are expressed in their quotes:

“I’m not going to say I’m disabled, I’m just going to try harder...this has empowered me, it makes me feel better...I feel I can adapt and adjust to this then everything else is going to be simple” (Calla).

“I know I can do this now” (Joy).

“I think going through this and other things I’ve gone through, like yea, I can do anything...I can do anything” (Hope).

“...there’s definitely been ups and downs with, you know, succeeding and not doing well but then turning that around...it gives me the motivation to try harder and succeed the next time...it’s not about at the end of the day the gold medal, that’s not what it’s all about. It’s about growing in yourself, in your motivation, in your values and learning about yourself through the journey to get to that point” (Miranda).

“...you can accomplish things that you don’t think you can...you can take that into your everyday life...take those little bumps in the road, persevere and get through it” (Audrey).

#### *Summary of getting back to self*

Throughout the third theme, getting back to self, the fourth research question is answered (Does a transformative experience occur at a paratriathlon training camp? If so, what are the factors that contribute to the transformative experience?). Throughout the camp, participants experienced a transformation from the first day to the final day. Each participant arrived at camp with (a) little to no confidence about the sport of triathlon, (b) limited confidence in their ability to perform in a paratriathlon, (c) insecurity about their self-image, and (d) minimal knowledge about others who had similar experience. As the camp progressed a transformation across participants was noticed by the researcher as reported through the interviews. Participants became more comfortable with the sport of triathlon, they became more confident in their abilities and they gained a support system external to their families that empowered them to achieve the goals they set for themselves.

#### Summary of Results

The purpose of this study was to examine the transformative experiences of women amputees who participate in paratriathlons. The results suggest the participation in the paratriathlon training camp and paratriathlon was instrumental in shaping a transformational experience for all the women involved in the study. The content from the interviews revealed that self-identity, general self-perceptions, and self-efficacy were

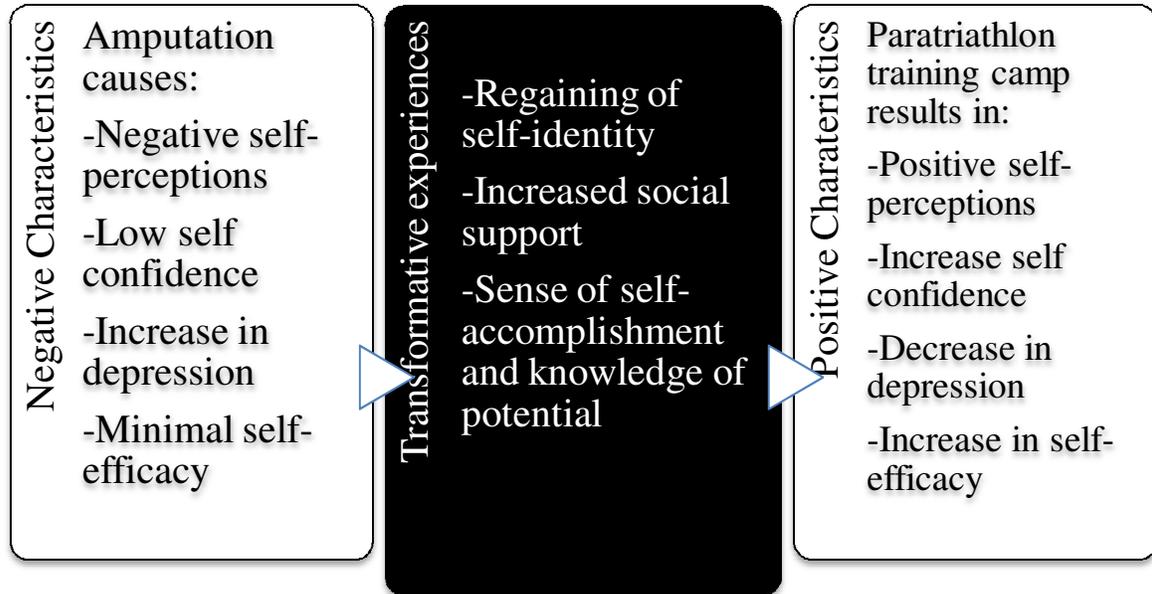
affected positively, which led to a transformative experience for each woman involved in the study.

## CHAPTER FIVE

### DISCUSSION

#### Transformative Experiences

Table 5.1 Characteristics of Study



The image above depicts how participants struggled with negative characteristics shortly after their amputation, including (a) negative self-perceptions, (b) low self confidence, (c) an increase in depressive symptoms, and (d) minimal self-efficacy. After participation in the paratriathlon training camp, participants were able to focus on positives aspects rather than the negative characteristics. Through participation in the paratriathlon training camp, participants experienced (a) positive self-perceptions, (b) increased feelings of confidence, (c) decreased feelings of depression, and (d) a higher sense of self-efficacy. The current study focused on examining how participation in a paratriathlon training camp potentially influenced a transformation in perceptions of

oneself and beliefs in one's abilities. Positive characteristics were developed through the transformative experiences including the (a) regained self-identity, (b) increased social support, and (c) the sense of self-accomplishment and knowledge of potential.

*Regaining former athletic identity*

Participants identified as athletes from childhood. Each woman actively participated in individual and/or team sports from childhood through college. The athletic identity they held at an early age gave them confidence and a positive outlook on life. This identity gave them belief that they could do anything they put their mind to and promoted their living of a healthy lifestyle. After each woman experienced a leg amputation, the identity they had chosen for themselves was taken away. They no longer believed in themselves or their capabilities. They lacked confidence to play sports and were not living a healthy lifestyle. Feelings of depression developed and sports were no longer a daily activity. Instead, daily activities consisted of therapy, dealing with feelings of grief, and attempting to reconcile ongoing confusion about their lives. Through the participation in the paratriathlon training camp, each woman began to identify as an athlete again. As hours of training progressed, self-perceptions, confidence, and self-efficacy increased, and feelings of depression decreased. A competitive mentality became noticeable. The opportunity for the women to see that sports could currently be and in the future be a part of their lives facilitated them feeling better about themselves. They perceived that their disability was not going to hold them back from being the person they knew themselves to be for most of their lives.

### *Social Support*

Social support is a vital factor for a healthy lifestyle and psychological well-being. Prior to the camp, several participants mentioned that external support groups were more beneficial than support provided by family members. Due to this, some of the participants went to therapy as they needed a neutral person to listen to their daily struggles. Along with this, some of these external support groups suggested trying the paratriathlon training camp. As the training camp progressed, participants mentioned their immediate bond between the other campers. Every woman had an immediate bond with the other because of the shared experience of living with one leg. Although each individual's story was different, each woman identified with the others because of the amputation and the struggles they had dealt with prior to the camp. Interestingly, each woman mentioned how they felt alone until the training camp because friends with amputations were not part of everyday life. They felt they could not talk with their family because of the loss they experienced. As the women learned about each other and observed that they all were pushing to their potential, it helped each woman understand their strength and potential. It again allowed for the women to believe in themselves, to be open about their disability and not shy away from their amputation. Social support helped each woman understand that they are not alone, and in the end, this encouraged them to achieve something they did not think was possible with one leg.

### *Sense of accomplishment and knowledge of potential*

A sense of accomplishment allowed each woman to understand her potential as well as understand that she can do anything if she believes in herself. Throughout the

interviews, many of the woman said the paratriathlon training camp was their first major athletic event since having an amputation. As the amputations caused a drastic change in the women's lives, the thought of accomplishing goals in sports was limited until they participated in the paratriathlon training camp and competed in the sprint triathlon. As they completed the training camp and sprint triathlon, each woman perceived increased self-efficacy, due to the understanding that they could perform and accomplish whatever task they desired. Along with increased perceptions of self-efficacy, general self-perceptions became more positive, confidence increased, and feelings of depression decreased. Once the women believed in what they could do, specifically sport-related tasks, and that they could still participate in sports and cross the finish line, many negative perceptions changed for the better. As confidence increased, feelings of depression decreased, especially since many of the women mentioned they now had a positive outlook rather than experiencing recurrent thoughts of sadness, grief, and confusion which circulated in their mind. As aspects of these three perceptions (confidence, depression, and self-efficacy) changed, general self-perceptions also changed. Participation in the paratriathlon training camp and sprint triathlon helped each woman see herself from a different perspective. The women perceived themselves in a positive light rather than focusing on their insecurities and differences. This shift in perspective helped them feel more comfortable in their changed bodies.

### Discussion

The results for this study illustrate how the participants who went through the training camp and participated in the paratriathlon, regained the lost sense of self in

addition to overcoming the struggles with general self-perceptions and self-efficacy, all related to their amputation. Thus, the participants minimized negative thoughts and regained positive thoughts and self-perceptions that they had prior to the amputation, as well as gained new ideals and self-perceptions. The results of this study indicate that the paratriathlon training camp and competitive sprint triathlon provided participants with an opportunity to experience an internal and external transformation of themselves.

Throughout the paratriathlon training camp, most of the women arrived nervous and self-conscious due to their insecurity with their injury. As the weekend progressed, participants opened up with one another and discussed stories and experiences about themselves and they learned about the other participants, which allowed them to feel more comfortable due to the immediate bond over injury and experiences. Participants learned to not feel ridiculed by any missteps throughout the weekend; rather they felt support by encouragement from coaches, staff, volunteers, and other participants. Based on the growth through participation, each woman did experience an internal and external transformation. Participants recalled feeling better about themselves in multiple areas, which included their self-perceptions, confidence, emotional state, and self-efficacy. One participant became confident enough through her participation to wear shorts while wearing her prosthetic. She no longer felt the burden of her disability and the insecurity with her prosthetic. Another participant mentioned she did not believe in her abilities to complete the paratriathlon and struggled to run a mile with her running leg. By the end of the competitive sprint paratriathlon, she held her head high and finished the race strong, running the entire 2.3 miles. One participant expressed her frustrations she

encountered on a daily basis due to living her life in a wheelchair. By the end of the training camp, she had the confidence and believed in herself to try a running leg and ran for the first time in multiple years. These few examples of participants express small, yet significant transformations of internal thoughts that changed multiple factors that were affected by the amputation.

The domains of women's lives have been found to be affected by traumatic or acquired amputations, including, physical, emotional, and social domains (Unwin, Kacperek, Clarke, 2009), which were found in the current study. These findings highlight the ongoing struggles with physical activity because each participant did not believe she could be actively involved in athletics. In addition, results indicated that there were ongoing emotional difficulties, which included difficulty in perceiving one self, confidence issues, feelings of depression, and limited self-efficacy. Lastly, the results indicated that social receptiveness can be difficult, not only from outside observers but from the participant, herself, and how social receptiveness is significant to recovery.

The first theme, athletic history as a basis for self-identity, described how participants identified as athletes most of their lives and after amputation, they lost the identity they knew. Participants' experienced lower self-esteem, that caused the women to have diminished perceptions about themselves and their abilities. Swann, Chang-Schneider, & McClarty (2007) discussed self-esteem as an overall assessment of one's beliefs in present and future situations. The findings showed that women did, in fact, express a decrease in self-esteem because they no longer believed they were able to

participate in athletics. All the women participated in sports prior to their amputation but due to their injury, lost their athletic identity. As the women were introduced to the sport of triathlon, they became the person they knew before the amputation, the athlete. They regained their identity they felt they lost and by regaining that identity, became knowledgeable about the possibilities participating in sport can produce.

The second theme, impact of the amputation on self-perceptions, indicated how participants sought to portray a “normal” image however they no longer had the confidence to portray this image. In addition, they struggled with general self-perceptions. Negative general self-perceptions caused problems for the participants’ active lives. Due to the negative self-perceptions, participants did not feel comfortable with their self-image, which contributed to issues with confidence and caused feelings of depression. Abbott and Barber’s (2011) study found body image was not restricted solely to physical attractiveness but more importantly, the way the body functions, moves, and what it is able to do physically. Participants of the current study expressed their issues and concerns with self-image, explaining that not only were the stares from outside observers difficult to handle, but also the inability to participate in cherished activities were difficult, all due to the fact of negative self-perceptions.

The last theme, getting back to self, illustrated participation in the paratriathlon training camp and sprint triathlon improved self-efficacy, increased confidence and perception of self, caused a stronger mentality, and overall, allowed each woman to experience a transformation. Tatar (2010) found participation in physical activities contributed positively to psychological well-being and helped individuals feel confident

in social situations. As results showed, participants felt better about themselves in an overall perspective related to participation in the camp, along with a regained athletic identity; one that they knew before they experienced a life-changing disability.

As results of this study demonstrate, the paratriathlon training camp and competition in the sprint triathlon provided participants with an interpersonal as well as an intrapersonal experience that was highly meaningful to each individual. The camp enabled them to participate in a group setting with others that had similar goals, develop relationships, and, overall, empower and improve general self-perceptions and self-efficacy. All participants of the current study transferred lessons and skills gained from the weekend-long camp to post-camp motivation and have actively continued participating in triathlons and marathons. As a result, this study demonstrates that further research into the transformative experiences resulting from participation in sport for women with amputations is justified as a part of the larger adaptive recreation and disabilities field.

#### Implications for Therapeutic Recreation Practice

Since this study was limited to participants with acquired or traumatic amputation, the implications for practice gained from this study will be limited to that population. However these findings may potentially be applied to adjustment and acceptance life-changing events and disabilities in similar situations.

The results for this study have important implications for therapeutic recreation, especially for clients who have experienced an amputation. The results indicate how therapeutic recreation, specifically adaptive recreation, is beneficial and can help people

with amputations learn to live a leisure lifestyle. The study's results reinforce the impact of community-based rehabilitation in the form of a training clinic. It illustrates how successful rehabilitation can be when individuals accept their disability and engage in the process of adapting to the multiple changes a disability brings to their lives (Saradjian, Thompson, Datta, 2008). One of the models used in therapeutic recreation practice is the Leisure Ability Model that focuses on functional intervention, leisure education, and recreation participation. This model is used to demonstrate how participants in therapeutic recreation learn to live a leisure lifestyle by becoming more independent through the three stages of functional intervention, leisure education, and recreation participation. Participation in the paratriathlon training camp educated participants on leisure activities, specifically swimming, biking, and running. Participants arrived to the training camp eager to learn about the proper ways to become involved in each activity they learned throughout the three-day training camp. They initially lacked knowledge and were more dependent on the coaches' knowledge of the three sports. As the training camp progressed, each participant became more and more independent from the coaches and their guides. As they became more knowledgeable about their capabilities and what worked for them, they were able to apply the knowledge it to other sports. In addition to applying the learned knowledge to sports, the participants are able to transfer and apply their knowledge to everyday activities. As participation in the paratriathlon training camp progressed, three important factors to a woman's daily life were influenced. These include social receptiveness, self-perception, and confidence. As social receptiveness increased, this aided in adjustment and acceptance of the amputation. Participants

learned much of this by meeting new people within the camp and exchanging personal stories, which helped them feel more comfortable and more open to others. As social receptiveness increased, it also helped women's self-perceptions increase, because they felt accepted by others. Once participants felt accepted by others, emotional well-being increased because they no longer felt like an outsider due to their disability. Therefore, social receptiveness can improve self-perceptions, which can lead to improved emotional stature; which, in turn, can promote personal growth in three major domains of a women's life, including the physical, emotional, and social domains.

#### Role of the Researcher

The fact that the researcher in the current study did relate to the participants because she has an amputation, may have had an impact on the findings. Participants were able to relate to the researcher and fully expressed their experience with an amputation without feeling uncomfortable. For this study, the researcher believed it helped in receiving in-depth, honest interviews rather than interviews that did not reach the depth and breadth of the women's experiences. It is important to point out that the findings in this study may not be generalizable to other populations due to the fact that all participants were (a) athletes prior to the amputation, (b) experienced a traumatic or acquired an amputation, and (c) were motivated to participate in a paratriathlon training camp and sprint triathlon prior to this study.

#### Study Limitations

The current study carried some limitations. First, the size of the population study was relatively small and only focused on women. While statistics note 1.7 million

people in the United States have amputation (NLLIC, 2008), this small sample size focused on five women with lower extremity amputations due to trauma or acquired through disease. Further, statistics showed that men experienced amputations at a higher frequency than women. This study focused on how women perceived their life after amputation rather than exploring the differences between how men and women perceive their lives after an amputation. Secondly, the sample population involved participants who each had a background in athletics. Results could have potentially differed if participants had no prior interest in athletics and were participating in sports for the first time after an amputation. Thirdly, the study was only able to capture the participants' experiences from one weekend. The time period was limited to the extent to which the researcher could have observed the potential for transformation of attitudes and behaviors to occur in their lives following the paratriathlon training camp. Finally, the researcher's similar experience of disability to that of the participants may have created bias. Although, the bias could also act as an advantage as it allowed participants to relate to the researcher, in addition to allowing the researcher to become a participant rather than an observer. The researcher's similar experience enabled access to the complete paratriathlon training camp experience.

#### Recommendations for Future Research

Future research regarding athletics' role in transforming the lives of people with disabilities could extend and expand upon the findings of the current study. First, studies could look at larger sample sizes and instead of focusing only on women, the sample population could include both men and women. Another study that could extend from

the current study could include different disabilities. Rather than examining amputations specifically, future studies could focus on other disabilities, for example paralysis, spina bifida, visual impairments, and others. Future studies could also focus on examining motivation for participation in athletics following a life-changing disability. Lastly, the current study is centered on a paratriathlon training camp. Future research can include various athletic events or different therapeutic recreation facilitation techniques in general.

## APPENDICES

## Appendix A

### Participant's Information Form

#### **Information about Being in a Research Study Clemson University**

##### **Effects of Physical Activity on Self-Efficacy for Women who have Amputations**

##### **Description of the Study and Your Part in It**

Dr. Lynne Cory (Principal Investigator, PI) and Amy Baczurik (Co-Investigator, Co-I) are inviting you to take part in a research study. Dr. Lynne Cory is an assistant professor at Clemson University. Amy Baczurik is a graduate student at Clemson University, conducting the study with the help of Dr. Lynne Cory. The purpose of this research is to understand the effects of physical activity on self-efficacy of women who have amputations.

Your part in the study will be to allow Amy to conduct an interview focusing on the effects of participation in physical activity on self-efficacy of women who have amputations. As the participant, you will answer questions from an adapted self-efficacy scale.

It will take you approximately 30 to 45 minutes to participate in the interview. We expect the participation of approximately 10 women who are between the ages of 21-35, have amputations, due to trauma and are not currently pregnant. Only one interview will be conducted for each participant involved in the study.

##### **Risks and Discomforts**

There are no anticipated risks or discomforts other than the potential negative emotional response to describing traumatic cause of amputation or other traumatic experiences.

##### **Possible Benefits**

One possible benefit to humankind from your participation in this research is that we may learn more about the effects of physical activity on women who have amputations.

##### **Protection of Privacy and Confidentiality**

We will do everything we can to protect your privacy and confidentiality. We will not tell anybody outside of the research team that you were in this study or what information we collected about you in particular. All information will be safely secured in the office of the Principal Investigator.

### **Choosing to be in the Study**

You do not have to be in this study. You may choose not to take part and you may choose to stop taking part at any time. You will not be punished in any way if you decide not to be in the study or to stop taking part in the study.

### **Contact Information**

If you have any questions or concerns about this study or if any problems arise, please contact Dr. Lynne Cory at Clemson University at [cory2@clemson.edu](mailto:cory2@clemson.edu) or 864-656-2198. If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-6460 or [irb@clemson.edu](mailto:irb@clemson.edu). If you are outside of the Upstate South Carolina area, please use the ORC's toll-free number, 866-297-3071.

A copy of this form will be given to you.

## Appendix B

### Interview Handout

#### **Purpose of Study**

The purpose of this study is to examine self-efficacy of women triathletes, ages 21-35 who have experienced traumatic amputations. The study will focus on self-efficacy specifically involving life experiences related to injury, training for triathlons, the specific effects of training for triathlons, and generalization of self-efficacy across life contexts.

#### **Definitions**

*Self-efficacy* – your belief you have the ability to perform and complete a task

*Competence* – your knowledge of a certain activity/task

## Appendix C

### Interview Guide

1. Tell me about your history as an athlete and your involvement in sports.
  - a. What was your childhood like? Did it involve sports? Did you get involved because you wanted to or did you get involved because family wanted you?
2. Have you ever participated or competed in a triathlon? What are you looking to get out of competing in such an intense marathon? How does it make you feel to complete a triathlon?
3. If you did participate prior to injury: did this motivate you to continue your participation in sport? Why? If you did NOT: why did you decide to get involved now, especially a triathlon? Did you have an AH'HA moment that led you to trying something new?
4. Can you tell me about your history with your injury?
5. How would you characterize your emotional stages after your injury? Did you feel sorry for yourself, mad at yourself, did think that you are done for and you weren't going to be able to do anything you used to? OR were you the same person? You accepted it and went on with your life?
6. How did you learn about the camp? Is this your first time with the camp?
7. Have you struggled at some of the tasks at camp?
  - a. Yes, how did it make you feel? Did you quit? Did you keep going to prove to yourself you can accomplish whatever you put your mind too?
8. What have you learned from participating in camp?
9. How do you think you've grown from this weekend?
10. Your opinion, what do you think of the statement, "You are the only obstacle that will determine if you can or cannot accomplish something?"

11. Was there anything you accomplished at camp that you didn't think you'd be able to do before?
12. How would you characterize your transition through sport?
13. How has the participation changed your adjustment to situations (physical, emotional, etc.)? Do you think you can handle situations better? Do you have more competence in your abilities?
14. Tell me how you take what you have learned from camp and apply these lessons to other aspects of your life? Different sports? Everyday activities?
15. Lastly, reflect on the definition of self-efficacy, what do you think of it? Do you think about more often now than you have?

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