

Southern Illinois University Carbondale

OpenSIUC

---

Research Papers

Graduate School

---

2023

## Understanding the Effects of Long-Term Injury on Student Athletes Body Image

Amber Ruiz-Bueno  
amber.ruiz-bueno@siu.edu

Follow this and additional works at: [https://opensiuc.lib.siu.edu/gs\\_rp](https://opensiuc.lib.siu.edu/gs_rp)

---

### Recommended Citation

Ruiz-Bueno, Amber. "Understanding the Effects of Long-Term Injury on Student Athletes Body Image." (Jan 2023).

This Article is brought to you for free and open access by the Graduate School at OpenSIUC. It has been accepted for inclusion in Research Papers by an authorized administrator of OpenSIUC. For more information, please contact [opensiuc@lib.siu.edu](mailto:opensiuc@lib.siu.edu).

UNDERSTANDING THE EFFECTS OF LONG-TERM INJURY ON STUDENT-ATHLETES'  
BODY IMAGE

by

Amber Ruiz-Bueno

B.S., Southern Illinois University, 2020

A Research Paper  
Submitted in Partial Fulfillment of the Requirements for the  
Master of Science in Education Degree

School of Human Sciences  
in the Graduate School  
Southern Illinois University Carbondale  
August 2022

RESEARCH PAPER APPROVAL

UNDERSTANDING THE EFFECTS OF LONG-TERM INJURY ON STUDENT-ATHLETES'  
BODY IMAGE

by

Amber Ruiz-Bueno

A Research Paper Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Master of Science in Education

in the field of Kinesiology

Approved by:

Dr. Julie A. Partridge, Chair

Graduate School  
Southern Illinois University Carbondale  
August 2022

## **AN ABSTRACT OF THE RESEARCH PAPER OF**

Amber Ruiz-Bueno, for the Master of Science in Education degree in Sport Studies, presented on August, 2022, at Southern Illinois University Carbondale.

**TITLE: UNDERSTANDING THE EFFECTS OF LONG-TERM INJURY ON STUDENT ATHLETE’S BODY IMAGE**

**MAJOR PROFESSOR: Dr. Julie A. Partridge**

The purpose of this study was to investigate how long-term injury can affect a collegiate student-athlete’s body image. One-time, semi-structured interviews were done with seven total participants aging from 20 to 28 years old. Participants included both current and former student athletes as well as both male and female participants. Inductive and deductive content analysis was then done, and two overarching themes emerged: perceptual body image and social support, each with multiple subsequent themes. From the results we can conclude that body image may be impacted by long term-injury in collegiate student athletes in various ways and that further research in this area is necessary.

## **ACKNOWLEDGMENTS**

I would like to thank Dr. Julie Partridge for providing assistance, guidance, expertise and criticism to me throughout the creation and process of this research project.

## **DEDICATION**

I would like to dedicate this work to all those who have struggled with body image issues as a result from an injury in sport. I hope you find some peace in feeling heard from this work and knowing that you are not alone in your struggle. With great dedication and effort, I hope to bring light to this issue, to bring clarity and extensive understanding on this topic to those who hold powerful positions in athletics and hope for a better future for athletes.

## TABLE OF CONTENTS

<u>CHAPTER</u>	<u>PAGE</u>
ABSTRACT .....	i
ACKNOWLEDGEMENTS .....	ii
DEDICATION .....	iii
CHAPTERS	
CHAPTER 1 – Introduction & Literature Review .....	1
CHAPTER 2 – Methodology .....	15
CHAPTER 3 – Results and Discussion .....	21
REFERENCES .....	50
APPENDICES	
APPENDIX A – IRB Approval .....	54
APPENDIX B – Social Media Post .....	56
APPENDIX C – Informed Consent .....	57
APPENDIX D – Interview Questions .....	60
VITA .....	62

## CHAPTER 1

### INTRODUCTION

Many times, athletes are told that experiencing pain is part of the game, but this normalization of pain comes at a cost. Athletes every year, across all sports fall victim to injuries of various types. They may or may not be prepared for these injuries by coaches, trainers and even family, telling them that they are likely to experience an injury of some type at any point in their athletic career. However, there are minimal resources and preparations set in place to help them deal with the psychological effects that occur during and after an injury, specifically for those who experience long term injuries. In professional athletes it has been found that injury and pain are normalized and even hidden for the sake of uninterrupted participation (Wainwright, Williams & Turner, 2005), suggesting that even at the highest levels, athletes may have difficulty coping with injuries.

Due to the normalization of pain athletes can have a hard time distinguishing their pain as something abnormal. Crocker (2019) examined the experiences of 20 college athletes through semi-structured interviews to find out how they viewed health, fitness, and body image. The data suggested that, “Participants...perceived themselves as healthy at times despite playing through a debilitating injury, which was interwoven with their identity as an athlete. For example, Theresa, a fifth-year soccer player with a history of injury, differentiated between an athlete’s ability to be healthy through pain, and that of a ‘normal person’” (Crocker, 2019, p. 52). This idea that injury is normal causes athletes to not see injury as a threat to their health or to view it as something that is expected as a part of being an athlete. Wainwright et al. (2005) studied injury and its effect on female dancers and found that injuries are accepted by dancers as part of the process. “Some dancers are just so used to working with their failing bodies that ‘keeping going’ becomes

its own reward. Paradoxically, dancers also sometimes felt in peak physical condition and to be dancing at their very best just before their bodies gave out under the stress . . .” (Wainwright et al., 2005, p. 53). Athletes are so consumed with participation that even when their physical body fails them, they are adamant about continuing on. Cragg (2011) writes, “A popularised opinion within sport is that pain is a negative and that an athlete suffering from pain is weak” (pg. 30). This gives a glimpse as to why athletes may play through pain aside from social pressures of coaches, teammates, family and other athletic support staff. Playing through pain can in some cases make relatively minor injuries worse resulting in a long-term injury an athlete may not be prepared to deal with. Other times injuries can occur suddenly and still require a long healing process.

Athletes can also have strong beliefs about their own body image, what an athlete should look like and how important it is for that to be sustained to be a successful athlete. De Bruin (2010) interviewed six former women athletes with eating disorders, and found that, “For most athletes, however, body evaluations and ideal were not only related to aesthetics and appearance, but also or particularly to performance” (p. 84). Cragg (2011) wrote about her own experiences as an athlete, “In sport the body can be seen as a mechanism that constantly needs to be maintained, enhanced and fixed in order for that person to be a successful athlete” (p. 11). A study from Krane, Waldron, Michalenok, and Stiles-ShIPLEY (2002) explored body image concerns in female athletes and exercisers and used 18 participants who were a mix of athletes and exercisers. The authors interviewed them using focus groups where they were asked various types of questions about eating habits, body image feelings associated with eating and exercises etc. The authors found, “The athletes we interviewed expressed pride and satisfaction with their bodies as athletes. They worked hard to develop as strong, powerful, and skilled athletes” (p. 39).

Similarly, “Often, having an ideal athletic body is perceived as an important element of athletic success; leanness and muscularity are associated with success, and excess fat is connected with poor performance” (Davis, 1990; Johns, 1996; Petrie, 1996 as cited in Krane et al., 2002).

Athletes have standards and ideals about what their body should look like relative to their sport to be considered elite or to be able to perform their sport well (Chaouch, 2013). Greenleaf (2002), while doing exploratory interviews with six former athletes about their athletic body image, feelings about their bodies in social settings and how they perceive their previous involvement in sports has affected how they view their body now one multi-sport athlete describes her body as more ideal for cycling than long distance running because her thighs and muscles were larger than what is ideal for running. She described the perfect running body as “. . . tall, long legs...very slender, usually no chest” (Greenleaf, 2002, p. 69). In the same study a former volleyball, beach volleyball and softball player described the ideal volleyball player as, “. . . having a flat chest and big, muscular thighs and butt “ (Greenleaf, 2002, p. 76), while a former cheerleader, multi-sport event and water polo player described the ideal cheer body as “having a medium build, long muscles, around 5’5” to 5’6”, weighing around 125 pounds, and being a little bit curvy” (Greenleaf, 2002, p. 77). Cragg (2011) also confirms this idea of idealized body types by saying from her own experiences, “Specific body types are suited to different sports in order for them to be successful” (p. 11).

When an athlete feels that his or her body does not live up to the standards they have set they may be at risk for eating disorders, body dysmorphia and overall negative feelings toward their body. Krane et al. (2001) held focus groups with 18 female athletes and exercisers and asked about body image, eating, and exercise feelings associated with eating and exercise. The authors found that many of the participants had subclinical disordered eating, including a track

athlete who restricted her eating depending on what she ate the day before and had thoughts of purging food, a gymnast who talked about obsessive dieting and a basketball player who admitted to intensifying their exercise when they ate something that wasn't good for them (Krane et al., 2001). We see this also in De Bruin (2010) where he looked at adolescent girls in elite and non-elite gymnastics and compared them to a control group of 85 schoolgirls who participated in non-aesthetic recreational sports to see if there were differences or similarities in dieting behavior. Results suggested that the elite gymnasts were more frequently dieting and using weight control techniques, such as self-induced vomiting, than the other groups even though they did not report more body dissatisfaction than those groups. "Most important, as the overall pattern of results was consistent, our findings seem to be in agreement with those of other studies showing that aesthetic athletes, especially at the elite level, are more at risk for disordered eating and pathogenic dieting behaviors" (De Bruin, 2010, p. 48).

Similarly, being an athlete alone may lead to higher distortions of body image (Chaouch, 2013). De Bruin (2010) found that those in aesthetic sports (e.g., sports that are judged on the visual components of the performance such as diving or gymnastics) felt insecure about their bodies in the sporting context yet secure or incomparable to others in the daily live context. A quote from one of the former athletes interviewed in that study said, "My weight determined my performance; that was the driving force" (De Bruin, 2010, p. 84). Another athlete from the same study said, "I always felt fatter than I really was. I was also extremely focused on that" (De Bruin, 2010, p. 84). These quotes provide support for how strongly athletes may feel about their body image in connection to their sport and how those feelings can cause an athlete to create unrealistic standards for their body.

Cragg (2011), in her personal description, claimed that during her time as an athlete, as

she progressed in her fitness level, she felt more confident wearing her leotard. She said that a slim upper torso and muscular legs are preferred for trampolining and since her body type was becoming more like that it gave her more confidence in her uniform. Cragg (2011) demonstrated the idea that positive body image and confidence is associated with having “the correct” body type for one’s sport. Cragg (2011) also admitted that after finding out about a torn ACL, “It was as if my leg wasn’t part of me anymore” (p. 25). This statement provides further evidence for the distorted view of one’s body in accordance to athletic function that may characterize this relationship.

Crocker (2019) interviewed 20 Canadian student athletes to investigate how they understand their health, fitness and body image, and how they create these ideas. Crocker (2019) found, “Body image was discussed in various ways, pertaining to both a ‘healthy’ body image, a ‘fit’ body image, and an ‘athletic’ body image specific to their sport.” (pp. 51-52), which suggests an athlete’s view of their own body can be influenced by many things, and that there are several contexts in which they assess their bodies. Having these different contexts in which one views their body can make it difficult for athletes to handle changes in their body that happen outside of their control. Many times, the complex connections between health, body image and functionality in an athlete can become damaging through various types of circumstances, with injury being one of those (Bridel , 2013 as cited in Crocker, 2019). Other studies have shown that varsity athletes connected their health to their body image and perceived athletic capacity and that this equating of health and athletic capacity may contribute to injury body dysmorphia and more (Bridel, 2013 as cited in Crocker, 2019).

Similar to this, De Bruin (2010) finds that athletes are vulnerable to believe they are not thin enough for their sport, yet believe they are thin enough for their daily lives. De Bruin also

states that thin athletes wanting to be thinner is extremely unhealthy. "... perhaps gymnasts realize they look good and thin enough in daily life, but believe they need a thinner body for their sport to enhance their physical ability" (De Bruin, 2010, p. 50). This shows that athletes are at risk for a distorted view of their body without injury, so when injury happens it can be more devastating than one might initially expect due to how much value athlete's place on the proper functioning of their body.

### Body Image and Compromised Health States

#### Cancer:

While there is limited research on how body image is affected by long term injury in athletes, there currently exists a more robust body of literature regarding body image and how it is affected in other populations with long term injuries or illnesses. For example, body image is affected in cancer patients because body image is a critical issue for cancer patients (Fingeret, Teo, & Epner, 2014). Studies show that up to 75% of patients with cancer above the neck have admitted concerns or embarrassment about changes that will occur following treatment and diagnosis, and including the number of breast cancer patients, findings indicate that these problems will continue in into long-term survivorship (Fingeret et al., 2014). Falk Dahl, Reinersen, Nesvold, Fossa and Dahl (2010) discovered, "Women who had undergone both MRM and manually defined radiotherapy were significantly more common in the poorer body image group" (p. 3552). In a study by Przewdziecki, Sherman, Baillie, Taylor, Foley and Stalgis (2013) wanted to determine the relationship between body image disturbance, self-compassion and psychological distress and whether body image struggles were associated with more distress in breast cancer survivors. They sent out a questionnaire to 279 women over the age of 18 in Australia who were previously diagnosed with breast cancer and have completed treatment. The

research found, “A considerable number of women reported experiencing body image disturbance related to their breast cancer diagnosis and treatment, consistent with other studies reporting sustained body image difficulties at 12 months post-diagnosis and beyond [52–54]” (Przezdziecki et al., 2013, p. 1876). The side effects related to breast cancer treatment such as hair loss, scarring, pain, weight gain and functional impairment may also impact one’s self perception and adjustment to life after cancer (Fingeret et al., 2014; Helms, O’Hea, & Corso, 2008).

Women who developed fibrosis during cancer treatment were more frequently found with a poorer level of body image as well which shows that when an injury gets worse than one might originally expect body image may be affected even more negatively (Falk Dahl et al., 2010). Breast cancer survivors also suggest that reconstructive surgery may not improve body image and that physical appearance alone is not the only factor affecting body image (Falk Dahl et al., 2010). This may be similar to the athlete’s view of body image being closely related to one’s health and functionality, rather than the more traditional understanding of body image, which may be focused more on solely what an individual looks like.

While these studies have been done in older populations with cancer, it is important to understand how younger populations with cancer react to the changes in their body due to illness because their age is more closely aligned with the population of interest for this study. Larouche and Chin-Peuckert (2006) researched adolescents with cancer to better understand how this population perceives their body image while undergoing treatment. They found, “The degree of perceived ugliness, however, differed among the adolescents and ranged from being less attractive to being totally ugly” (p. 204). The theme from these interviews was that these adolescents felt they did not look normal. These adolescents also said that they consider their

body image as not normal due to the side effects (Larouche & Chin-Peuckert, 2006). This can translate to situations in which an athlete may obtain an injury and upon further inspection by a doctor, be worse than they initially perceived. These injuries may require surgery, long term rehabilitation and/or wearing physical assists such as casts or braces. The extremely limited amount of research done on how these might affect an athlete's view of their body gives us only a glimpse of the reality of the issue.

The adolescents described themselves as looking sick, said that they would avoid social situations, noticed that people would be looking at them because they look sickly and that they avoided activities that would leave their bodies exposed (Larouche & Chin-Peuckert, 2006). "All 5 adolescents said that they would do as much as they could to minimize and even hide their physical changes. The physical changes that the adolescents wanted to hide were the most noticeable ones such as hair loss (i.e., wearing wig/hat) and the presence of the CVC (i.e., wearing a shirt covering the lower end of the neck)" (Larouche & Chin-Peuckert, 2006, p. 205). Similarly, De Bruin (2010) found that elite women athletes with known eating disorders also had issues with their physical appearance, particularly when having to wear clothing that was revealing because it would cause them to be more aware of their own bodies and leave them more exposed for other people to "judge". This supports what Pendley, Dahlquist and Dreyer (1997) found that even when adolescents do not appear more physically unattractive to others they are still found to rate themselves as more affected physically by cancer.

Collins, Liu, Schootman, Aft, Tan, Dean .... and Jeffe (2011) discovered through their work of assessing the effects of breast cancer surgery and side effects on body image, that younger age, high BMI and higher levels of depression and anxiety was related to having more issues with body image after surgery. This leads us to assume that younger athletes in these

categories who have also sustained an injury may be at a higher risk than athletes who do not fall in these categories during an injury period.

### Amputations

Another population that is affected by long-term injury or illness that can potentially affect one's overall body image are those who have had to undergo an amputation. Amputees have either had a long-term illness, such as diabetes, that lead to the necessity of an amputation or experienced an acute accident resulting in the need for an amputation. This is similar to the ways an athlete can experience long-term injury. Athletes may go through a period of dealing with pain or an injury but still be able to partially participate when something happens that causes the situation to worsen thus their ability to participate is fully diminished, or an unforeseen acute event happens that leads them to not being able to play for a long period of time. Since amputations are lifelong once performed, it may help us understand how athlete's view their body image over a period of extended injury. It may also give us insights at how an athlete might view themselves if forced to use crutches or other medical support devices during their injury by understanding the psychological process for individuals from injury to amputation to use of prosthetics in this population.

From research we know that body image is considered an important topic in terms of adjusting to limb loss and prosthesis acceptance (Kulkarni, Hande & Parab, 2014). The amputation creates significant changes in the individual's life and often times causes long term negative psychological effects (Kulkarni et al., 2014). Holzer, Sevelde, Fraberger, Bluder, Kicking, and Holzer (2014) found in a study of specifically lower-limb loss that lower leg amputations had a significant negative affect on participants body image and can significantly influence how they perceive their body and they noted, "The loss of a body part disturbs the

integrity of the body and affects the physical and psychological condition” (p. 6). This mimics what an athlete might feel when they are injured, and part of their body may not work as they need it too. It could be perceived as a loss especially for those with long-term injuries. Body image was also found to negatively affect those with diabetes related lower-leg amputations and be associated with various negative psychological outcomes (Coffey, Gallagher, Horgan, Desmond & MacLachlan, 2009).

From these specific populations we learn that the way one views their own body image plays an important role in their initial injury acceptance and diagnosis, recovery and long-term injury acceptance. These populations view their body as not normal, admit embarrassment from their physical appearance and have overall body image disturbance that can begin from time of diagnosis. Being able to mentally cope with such things can be inhibited by a negative outlook on one’s body image, where acceptance of their “new” body and a positive body image can have the reverse effect. For athlete’s certain injuries can leave them with permanent scarring, impairments and unnatural internal structures similar to what cancer and amputees face. However, there is not much research surrounding this area of concern and we know very little about how body image is affected in student athletes with long-term injury. We know that athletes can have strong opinions on how their body needs to look for their specific sport when they’re healthy and that this can put them at risk for things such as eating disorders and body dysmorphia. This leads us to wonder how an athlete might react when a long-term injury is involved.

While existing research suggests that athletes are at a higher risk for injury and higher levels of body image disturbance, currently we do not know much on how these considerations might interact. From the few studies that have hinted at this connection we can assume that long

term injury may have an effect on athlete's body image. Cragg (2011) writes about her own experience with injury and body image and states that "Being a female, I am very self-conscious of my body image in everyday life" (p. 27), and "Injury, in this case, had resulted in considerable weight gain, thus engendering aggressive feelings towards my body; consequently, affecting how both self and others viewed my appearance" (p. 27). Before her injury she loved the way her body looked and was confident in her leotard because of all the muscle definition it showed off. After injury she became obsessed with how her body looked and viewed it as something that needed to be fixed (Cragg, 2011). "The difficulties subsequently lay in the acceptance of the reconstructed body; I found it hard to accept my body as screws and bolts had been put in and a felt like a robot" (Cragg, 2011, p. 30). In a similar way, Curry (1993) writes about a wrestler who had a very serious cauliflower ear infection and later describes his own ear as ugly and an embarrassment. These examples give us some insight on the connection between body image and long-term injury yet many questions are still left unanswered and unexplored.

We know that athletes may be prone to underestimate or downplay the pain they feel when they acquire an injury which, when combined with strong feelings about their athletic body image, has the potential to cause not only physical harm but psychological distress to the athlete. We can assume this from looking at a few examples of athletes themselves, but more concretely from seeing how cancer survivors and amputees body image has been impacted by their diagnosis and treatment. It's been found in these populations that many times their body image is negatively affected not only by the initial diagnosis but over the course of their treatment and recovery. The result is a need for further knowledge in the area of how body image is affected by long term injury in athletes to ensure proper care for this population. This gap in knowledge may be putting injured athletes at more of a risk for body image disturbance.

## **Purpose Statement and Significance**

From lack of research in this area, studies done on how pain normalization can lead to many negative psychological effects in athletes and the results from studies done on non-athletes who have experienced significant compromised medical diagnoses (e.g., cancer survivors and amputees) it becomes clear that there is a lack of existing systematic research on how long-term injury, which many athletes experience, may affect the body image perceptions of student athletes. The purpose of this study is to investigate the sport injury experience with respect to body image. The research question for the current study is what is the impact of long-term injury on a student-athlete's body image?

The significance of this study is that it will help build the body of knowledge and literature around the topic of body image and long-term injury in athletes since very little known about how these elements can interact. The importance of this topic is to discover how athletes body image is affected by long term injury and to build useful information for coaches, athletic trainers, doctors, sport psychologists and other support staff in athletic facilities about these psychological affects injured athletes may go through and use it to be able to provide proper help and support for them.

## **Defining Terms**

For the purposes of this study, I will define the common terms used:

*Body image* is described as the way in which one perceives their own body including functionality, health and physical appearance.

*Long-term injury* will be defined as an injury lasting four weeks or longer resulting in missed participation in one's sport, including games and practices. The few studies available give very broad and open definitions for long-term injury. This definition will provide us with a better

understating of the actual effects of long-term injury as this should mean athlete are missing enough practice and game time to see or feel some type of change in their body.

### **Assumptions**

I assume that everyone will respond truthfully and honestly during the interviews and that participants will understand the questions I ask. I also assume that all participants meet the requirements set up to partake in this study.

### **Delimitations**

I will delimit my study to only current and former student athletes at the collegiate level, to those older than 18, and to only those with a long-term injury as defined by this study. I also delimit my study to those who are able to see my social media posts directly and those who will be able to see it through snowball sampling.

### **Limitations**

The application of the study will then be limited in who the results apply to according to the demographics of the actual respondents. A major limitation will be the age group of the participants. Since we are only looking at those who participated in collegiate athletics, we will not be able to apply or compare the results across the many levels or ages of athletes, particularly those younger than 18. It is also limited by the strict definition of long-term injury. Those who experienced injury for less than four weeks are not included as well as those who experienced long-term injury but were not forced to completely eliminate participation in their sport are also excluded. Further studies should consider how body image is affected by long-term injury in populations of different ages and exercise or experience backgrounds, and those who may have suffered from injury but were still able to practice and compete in their sport.

This study is also limited on the athlete population available to me. I was only able to

obtain athletes who have similar social media platforms as I do, know me or know someone who was willing and able to share my post(s). There is potential for more respondents if this was shared on a more national or global platform. Results could vary depending on region of participation. I am also limited by types of sports that respond, injury type, sex or age. There is also the potential for type of sport to be limited or skewed towards runners since that is the population with whom I am most in contact.

This study does not specify, categorize or define seriousness of potential injuries. The type of injury, severity, visibility and placement of injury may all have various effects on body image and my results may be limited in the fact that this was not addressed when searching for participants.

A possible limitation to this study is the concern level of my participants. My results may become skewed in either direction due to the possibility of participants who are very upset about their previous injury situation and events surrounding it that may or may not be directly related to this study. For example, those who are unhappy with how an injury was handled by medical staff, those who felt mistreated by teammates and coaches, those who are disgruntled about medical bill payments etc. may want to be participants strictly to discuss these situations rather than focusing on the research questions presented. This could influence my results.

## CHAPTER 2

### METHODOLOGY

#### **Participants**

I received approval from The Institutional Review Board at Southern Illinois University Carbondale before conducting any research involving human participants (see Appendix A). The qualifications to be a participant in this research were that they must be a current or former collegiate student athlete, have had or currently have a long-term injury as described in this study during their time as a college athlete and they must be at least 18 years of age. Thus, the participants were all current or former student-athletes who have or had an injury that lasted at least 4 weeks resulting in missed participation in their sport and all are above the age of 19.

Participants were found using social media post made on platforms Facebook, Instagram, Snapchat and LinkedIn an example of the post is provided in the Appendix B. From there I utilized snowball sampling to find more participants who meet the qualifications to take part in this research. This means other users who saw my post were able to share my original post to their platforms to reach a broader amount of potential participants.

My personal email was attached to each post as a means for participants to contact me. Once I received an email each participant was sent an informed consent form (see Appendix C) which they had to sign and send back to me. When I received the signed consent form an interview date was set up at the participant's convenience and the interviews were all conducted and recorded via Zoom.

A total of seven participants made up the study ranging in ages from 20 to 28, with one male and six females. Eight total participants were interviewed but during the interview process it was discovered that one participant did not meet the qualifications set forth by this study (i.e.,

their injuries never required them to stop participation), therefore their information was not included in the results. Two participants are current student athletes while the rest are all former student athletes. Participants were from a variety of sports including cross country, track and field, volleyball, golf, basketball and soccer. Injury of each participant was very unique with no two injuries being the same. Using students from across divisions, sport, year in sport and sex allowed me to get the most accurate picture of how long-term injury affects student athletes. Current location, specific university location and specific division of sport was not obtained.

### **Instruments and Procedures**

For this research I used semi-structured interviews to obtain information from my participants. Using this type of interview technique allowed me to have the freedom to ask questions and build off certain ideas or topics that many have come up while still keeping the interview focused. I conducted one-time semi-structured interviews with the participants over Zoom which were recorded and then transcribed verbatim afterwards. These interviews were conducted by me alone. The decision to do interviews via Zoom was made to ensure that physical environment/proximity was not a limitation for potential participants, and to make it as convenient as possible for those interested to participate in the interviews from a location and setting they are comfortable with.

These interviews ranged in time from approximately 15 minutes to 50 minutes. Each participant was asked approximately 29 questions (see Appendix D) all in the same order. The questions began with basic demographic style information such as age, sport participated in, major etc. This was intentional to help ease participants into the interview and to help get them comfortable with talking. The questions then progressed towards information about their injury and injury history, body image and how they perceived body image may have been affected by

the injury. This information was the base of the research and most important in helping us understand how long-term injury may affect student athletes body image. The last set of questions addressed teammate and coach perceptions and how that may have influenced the athlete's body image as well as mental and physical support during the injury process. This was to see if body image was potential influenced by other factors related to but not directly the injury itself.

### **Researcher Influence**

My experiences being an injured collegiate athlete sparked my interest and desire to create and conduct this study. Growing up I was very active and participated in city league soccer from about age 8. When I reached 7<sup>th</sup> grade, I was able to start running track and from then I played soccer in the fall and ran track in the spring all throughout middle school and high school. In my early playing days, I only sustained very minor injuries. I got kicked in the ankle during a middle school soccer game on two different occasions which lead to spraining the same ankle twice. In high school, I strained both my quad muscles during a soccer game which took less than two weeks to heal. When it came to track, my freshman year of high school I would get my ankles taped before practices because they were weak but eventually, they got strong enough for that not to be necessary.

After high school I was recruited to run track for a local community college where I began running cross country for the first time in my life. It was a rough transition because I was a sprinter at the time, but my coach let me take it slow and injury was never something that occurred. During that track season I ran every event from the 55m dash to 1500 still without acquiring even one minor injury. I finally found my niche event was the 800. I had major time improvement from my first year to my second year but still never experienced any injuries. My

coach highlighted rest days for us and made sure we ran primarily on soft surfaces.

From there I was recruited to run on a mid-major Division I cross country and track and field team. It wasn't long after training began that I started to experience injuries for the first time in my life, all of which were overuse injuries. From chronically tight calves, Achilles tendonitis, plantar fasciitis, sciatica, compartment syndrome to finally my career ending mystery foot pain. Early in my career I easily received the care I needed but as time went on and new injuries kept arising it was harder and harder to get the support and proper medical attention that I needed. I was forced to run on injuries that caused me immense pain until my mother sent the school an email requesting, I see a doctor. Once that doctor visit happened, I never ran for the team again because my injuries had gone ignored for so long that they developed into permanent injuries. After seeing the school doctor, two different specialists, getting a nerve study, x-rays, MRI's, years of physical therapy and treatment and approximately one and a half years off running I am now able to run again however in a very limited capacity.

Much like the responses from the participants of this study, these injuries caused me to think about my body in many new and negative ways. I was not and am still not able to exercise in the ways I want to and at the height of my final injury caused me steady weight gain. This weight gain catapulted me into a slew of unhealthy eating patterns and negative thoughts and feelings towards my body. I began strictly limiting my food intake because without regular exercise and running I didn't know what else to do. I just wanted to get back to the body I was used to having. To this day I struggle with keeping a healthy eating pattern and taking in enough calories for fear of weight gain. If I splurge on food one day, I skimp on meals the next.

When it came to how I felt about my body, I did not recognize the person in the mirror. The girl who always used to be so fit and healthy now looked plump and unathletic. My tone and

muscle definition were gone and replaced with rounded features and cellulite. I hated looking at myself. I had to finally face the facts and start buying a size up in clothes because none of my jeans would fit and all my shirts were too tight. I felt ugly and was very unaccepting of my new body.

During this time, I still had to attend every practice but rather than joining the team in warmups and workouts I had to go to the student recreation center and bike by myself or with someone else who was injured. Being out of practices for so long with an undiagnosed injury was emotionally as much as physically painful. I had to watch teammates bond, have fun, reach their goals and succeed without me. My body used to be capable of so much and now it was useless and broken. I began to doubt my own abilities and previous success. Some days my foot hurt so bad I would fall getting out of bed and I couldn't stand for very long without something giving me pain. Getting around was such a chore and it made me even more disgusted with my body. I would've given anything to get back to my normal life, but I was trapped inside a body that was failing me and with coaches and athletic training staff that really didn't care. I lost all confidence in the functionality of my body and trust with those who were supposed to take care of me.

Therefore, my personal experiences, thoughts and emotions guided the creation of this study, interview questions and analysis of the data. They color the way I view the responses of my participants because I understand them and have experienced them on a very deep level. This research is meaningful to me and personally relevant.

### **Data Analysis**

Once an interview date was scheduled and before any data was transcribed each participant was given a pseudonym. Interview recordings were transcribed verbatim into separate

Microsoft Word documents for each participant. I was responsible for all the transcribing. Any specific names, places and other identifiable information mentioned by participants during the interviews were also replaced with pseudonyms in order to preserve anonymity. Once all of the transcriptions were completed, both inductive (i.e., derived from the data) and deductive (i.e., derived from the conceptual framework of the study) qualitative data analysis methods were used. Common themes in the participants' responses throughout the interviews were identified and confirmed with my research advisor. Each transcription was color coded highlighted for information on a separate Word document. Following first-level theme development, additional grouping of themes on a more conceptual level was completed.

## CHAPTER 3

### RESULTS AND DISCUSSION

The purpose of this study is to investigate the possible impact of long-term injury on student-athlete's body image. Two main themes were found (a) Body Image and (b) Social Support, with subsequent themes in each.

#### **Body Image**

All participants reported body image disturbance during their injury period however, the way in which it was experienced varied and was not always constant among participants. To further and more thoroughly investigate and understand how body image was affected I have created multiple body image categories: (a) How Athletes Understand Body Image, (b) Function, (c) Aesthetic and (d) Behavioral.

#### **How Athletes Understand Body Image**

Participants were asked early in the interview to describe what they thought body image was. Given that body image is defined as our internal representation of our outer self, it was surprising that all but one participant used comparison to others in some form in their definition of body image. Suki described body image as, "How you think of your body or how you think others see your body I guess it's a better way to say it" and Zoe said, "... how you view yourself or how you think that other people view you or view you in your body". Ava had a particularly interesting view on body image saying that it is, "Just how you view your body in like relation to like both yourself and everyone around you. So, I feel like a lot of body image is like comparison between you and like another person or just you and like your former body images". When we view an accurate definition for body image, "Body image is the part of the self-concept that involves attitudes and experiences pertaining to the body, including notions about masculinity

and femininity, physical prowess, endurance, and capabilities” (Drench, 1994, p.31). we see that each one of these assumptions about what body image is skewed. Only Mike solely talked about body image in a way similar to the definition. He described it as “I was just kind of think it’s more like the physique and appearance and kind of how you feel about that” or “... how comfortable and confident you are in kind of in your your own skin”. It is noteworthy that Mike is the only male in this study. This may suggest that gender can influence one’s understanding of their body image.

This misunderstanding of body image from the majority of participants suggests a lack of self-involvement and control over one’s body image. As if the way one appreciates their body is not solely reliant on the individual but needs input from others to create a full and “accurate” body image. This understanding of body image is more attuned to definitions of self-presentational, described by Driediger, McKay, Hall and Echlin (2019) as a person’s attempt to present themselves in a desirable manner most often by highlighting positive characteristics and de-emphasizing undesirable characteristics, and social comparison, known as an individual’s process of assessing their abilities against others in order to evaluate, improve or enhance oneself stated (Horton, Dionigi, Gard, Baker, Weir, and Deneau, 2019). Consistent with previous research (Krane et al., 2001; Reel et al., 2007) these are commonalities among female athletes and exercisers.

### ***Frequency of body image related thoughts***

The frequency of body image-related thoughts was also found to be very similar among most participants. Four participants described that they thought about body image daily or constantly, while a few mentioned or implied that they wished this was not the case. Suki said, “I mean, I hate to say it but [I think about my body image] constantly”. Sarah and Val used a

similar phrase of “a little bit more” or “a lot more” when describing how often they thought about their body because they both admitted that there was an increase in how much they thought about their body due to being injured. Similar to them, Ava says that when she was injured, she thought about the functionality aspect of her body image a lot because she was unable to live her normal life. She also describes her struggle with how she used to look before the injury versus now.

### ***Function***

Many participants reported strong feelings about loss of bodily function during and even post injury, different ways they injury inhibited their daily lives and pain that has continued on post injury, and how the injury may have impacted their status/function on their team.

#### ***Loss of Function: During Injury***

Body image is often seen as a purely aesthetic construct centered around the conceptualization of what our body looks like. However, body image can also include beliefs about what our body is capable of performing. Six out of seven reported feeling that loss of bodily function from injury negatively affected their body image. Zoe described this as, “It’s disappointing when your body functions one way for your entire life and then all of a sudden, it’s just like not so, so, yeah”. Mike said, “...I felt like I was pretty effective for the most part and then when you realize that your body’s not gonna hold up forever. It definitely kind of shapes and changes a little bit of how you kind of feel on that...”. Zoe says, “It just prevented me from. I don’t know, just going from somebody who’s like very functional, like able to do everything all the time. And now like having constant, is not constant, but pretty constant hip pain. It’s sad. It sucks.” Val describes the losing of the functionality of her leg from an ACL injury as causing a shift in her identity which she talks about in an interesting way,

That's just kind of how you tie your identity into it. And so, upon not being able to move my leg I lost a lot of that, and I really had to like, redefine, like what my success is and the direction of my life.

Sarah noted that her loss of function caused her to stop trusting her body and that she still struggles with it today. "I'd say it did affect me a lot when I was injured with the functionality aspect of it and the aspect of having that control and trusting my body to get me through stuff". She further stated that "... I didn't have confidence in the fact that my body was able to be perfect and never be injured. . .". She also said, "So then it made me stressed out about the way that my body was functioning and moving and being able to do stuff" when she saw that a fellow injured teammate lost their scholarship due in part to their injured status. She described her body as "...it wasn't truly like working the way it's supposed to" and that made her think about her body more. This leads us to believe that comparisons of one's new, limited abilities to what they were once capable of were beginning to happen.

Body image concerns related to body functionality/performance were also noted in comparison from healthy to injured experiences. Ava describes her loss of function by comparing her preinjury capabilities to her post injury capabilities:

And like I'd be comparing myself from like I used to be able to run like 10-14 miles like for just like one run, and then I couldn't even like, they were trying to get me back into running and I couldn't even run 10 minutes without like crying. And then yeah. So, it was just like really weird going from like one extreme to the other and just having to deal with that. And just like that's my new normal at the moment.

Ava described having to give up sport to focus on getting her body healthy and back to being able to complete day to day functions. "... I was just doing whatever I could just to get back to

functioning. . .”. She admits to staying on the team for a fifth year to get her surgery paid for, “So, I did a fifth year to get my surgery paid for, but I wasn’t going to do the sport my fifth year because I was too injured to do my sport”. She also says,

I felt like really in my body was useless in what I wanted it to do. Like I couldn't do anything that I liked, love doing or even like doing, like or even be a functioning human being. Like I couldn't stand without like being in an extreme pain.

### ***Loss of Function: Post Injury***

Data from this study suggests that sport injury can impact perceptions of body functionality not only during the immediate injury process, but also after leaving sport. Some participants noted that post injury, they have been unable to work out in the ways they want to or they now have to change their approach to exercise. Suki said, “Just makes it really hard to run and go as long as I want to or as fast as I want to”. Zoe said, “So when, I, so, I’m not as active as when I was playing or like actively in my sport because if I am at that level of activity, now I’m in a lot of pain...So I just have to limit my activity, for sure”. Suki noted something similar, “I think it [the injury] does play a role, considering the fact that I can’t do as much as I want to which helps you be in shape, stay in shape”. Ava mentioned that her physical therapist is only now, after years post injury, is slowly beginning to transition her back into running. “And now I can do my basic tasks, but it’s harder for me to do what I, like it’s harder for me to actually run...”. She also said, “Yeah, functionally I’m not who I am normally and we’re working with the body we got now”. These experiences suggest that sport injuries can affect perceptions of the body’s functionality, not only during the immediate injury process, but that these ramifications may last well beyond the time when an individual has been released back to participation, or even after retirement from sport altogether.

These findings regarding the impact of injury on body image and perceptions of functionality are consistent with existing research. Alleva, Martijn, Van Breukelen, Jansen, and Karos (2015) found that a training program designed to help women focus on the functionality of their bodies helped to improve overall body image. Participants in the current study, whose functionality had been impaired by injury, reported indicators of body image disturbance. Focus on functionality has been identified as a means to decrease levels of self-objectification (i.e., evaluating and valuing oneself primarily on physical appearance) which has been found to be more common in women than men (Haslam, Loughnan & Holland, 2013). While it is encouraging that functionality can lead to improved body image, the findings of this study suggest that this relationship may also be negatively impacted by factors that decrease perceptions of functionality (i.e., a significant injury).

Some participants specifically expressed that they are still experiencing and living with pain from their collegiate sport injury. Zoe admits that just taking her dog for a walk can be a painful experience and describes her pain as pretty constant. Ava describes her pain during the height of her injury as excruciating or an eight on a scale of one to ten. Now she says working with her physical therapist has brought that pain down to a constant two rather than a six or seven, and when she has a busy day or is exercising it only goes up to about a three or four rather than an eight. However, she does not express being pain free at any point. Sukie says that pain from her injuries come back whenever she starts to pick up running again.

Coping with pain resulting from an injury remains an important and difficult topic for athletes. Findings from this study are consistent with previous findings that coping with pain is a factor that impacts body functionality (Lotze & Moseley, 2007). Pain has been found to distort body image in a variety of populations, while even having the ability to impact neural

representations of our bodies, although much of this research has been conducted with amputees (Pezzin, Dillingham, & MacKenzie, 2000). Further exploration of the pain/body image connection in an athlete sample is necessary to fully understand these relationships.

### *Loss of Position on a Team*

The last lower order theme identified under functionality related to how injuries impacted perceptions of status or performance on an athlete's team. Suki and Ava both discuss how injury caused them to lose high scoring positions on their team. Ava, "I went from being like in the top five on the team to practically being the coach of the team". Suki says:

Going into each season I was number two, number three on the team and as the season went on I got injured. I actually had mono freshman year of college during indoor season. I didn't know it. So, like I was running slower you know, not as good on the team as I was in the beginning. That definitely affects you.

She also later noted that she was moved into the last scoring position; an issue that caused her a negative emotional reaction.

Sarah also talked about how in high school she was a starting player but upon being injured her freshman year of college she did not take up that usual role on the team. She says this role change was difficult for her at first.

Concerns over loss of playing time/status due to an injury have consistently been found in athlete samples (Tracey, 2003; Wiese-Bjornstal et al., 1998). Despite many people in sport believing that there is an "unwritten rule" that an athlete cannot or should not lose their status on a team once their injury has been rehabilitated, this remains a significant concern for many athletes, including many respondents in this study. Losing a position on a team can cause unnecessary stress to an athlete and can result in body image distortion.

### *Inhibiting Factors*

All participants experienced altered lifestyle conditions while injured and some still experience those limitations today. Most participants experienced inhibiting factors that affected their day to day living and simple daily tasks. These conditions included walking and getting around, running, bending over, stretching, standing, sitting, using their hands, eating, and showering. Val describes her injury as affecting everything she does, “it’s just any physical movement” and having to do things slower and more carefully. Sarah describes one of her injuries as affecting her social life.

And then with my back it didn't inhibit or like stop me from doing anything other than probably going out. I didn't like going out as much because if you were to run or jump around you were going to get injured more. So, I was, I kind of became a hermit and stayed in and tried to make sure I was getting healthy.

Sarah also described her hardships from having surgery on her right labrum, “When I showered and like washing my hair was super hard. Like I barely could shave my armpits like it was it was horrible” and “I do, literally I hold my phone with my right hand like I do everything with my right hand”. Similarly, Ava said, “I couldn’t really do anything.”

Three participants specifically expressed trouble sleeping due to pain from their injury. Leah describes it,

Well, it was really hard to sleep. I used to never have problems sleeping and I think that’s where my insomnia started. Was that the whole thing was, yeah. I never had a problem sleeping and then I would start off because the pain obviously. So, that was hard. Trouble with sleeping can affect many areas of life for athletes such as lengthened healing times, trouble focusing and strain on personal relations and mood.

### *Aesthetic*

Many participants reported changes in the way their body looks and in almost all circumstance it was seen as negative change. Many participants noticed a change preinjury to post injury and a heightened awareness of their body in certain circumstances.

#### *Pre vs. Post Injury*

Pre-injury most participants described their body as toned, healthy, fit, lean or in shape. Suki, “. . . when I was in college, I was in shape I was fit”, Zoe, “But I grew up very, very like lean and fit”, Leah, “But I’d say before like right before I was like in the best shape that I could have been in going into freshman year and like I was probably at my leanest”, Val, “So, before my injury, I would definitely say like I was like healthy. I was like very toned athletically”. However, participants reported a shift in responses when asked about their post injury body image. Val says, “I’ve lost a lot of like that tone and muscle so that’s kind of frustrating”, and Zoe, “So I would, I would consider myself right now is like unfit or like not in shape”. Leah, Suki and Ava all described gaining weight post injury and post college and that this negatively affected their body image. Ava described her experience about how her body looks post injury as,

So, like it's not like I looked down on my body then but it's definitely worse now. Like I look back on my pictures and I'm like I really took advantage of it. And like I feel like like going back and looking at it. I feel bad about myself now just because like I might be at a healthier weight for me but like in my mind, I'm like I used to look like this. Like this is what my body is supposed to look like and it's really weird. And I like seeing myself and like the same clothes I was wearing back then, and I like feel gross like and I just have like I just have to deal with it because they're the clothes I have. But I'm like this

just doesn't in my brain like it just doesn't look right. And I remember after seeing after having like one of my surgeries I looked at my body and I was like I don't even recognize myself.

Ava also said that she knows her body doesn't look the same and,

Like I don't but it's just weird seeing my new body and adjusting to it. Because...and like I guess on the outside like a lot of other people have seen my body changes I just necessarily like I just wonder what they think because some of them know what I've gone through. Some of them don't. But it's more like not necessarily that I think they think I look like fat or whatever because like I know I'm not fat. Like like mentally I know I'm not fat. I just been like not used to being as heavy as I am now and it's weird to think about it.

### ***Heightened Body Awareness***

Participants Zoe and Val talk about being more aware of their body or thinking about their perceptual body image more at times when their body is more exposed. Val says “. . . I think about it a lot more like particularly like in the mornings when you're getting dressed.” Zoe says,

. . . definitely wearing a bikini has changed preinjury to post injury. I definitely like before I would just throw in a bikini and I'm like, eh, like hello, I'm at the beach. We're gonna hang out and eat marshmallows and chocolate and hang out. And now I'm like, oh my god, well do I look too bloated today? Like should I wear something different? Should I just like wear a dress all day? Like, you know? What, what should I do here? You know, looking at more what the right thing is to not cause myself anxiety about the way that I look.

This suggests that long-term injury may affect one's social physique anxiety which is defined as "Social anxiety resulting from concerns about physical evaluation..." (Driediger, McKay, Hall, & Echlin, 2019, p.371), potentially increasing it or creating it.

### ***Behavioral***

Participants noted that injury also impact behavioral aspects of their body image. Lower order themes included: (a) Altered Eating Habits, (b) Fear of Re-Injury, (c) Altered Exercise Environments and (d) Acceptance and Understanding of Injury.

#### ***Altered Eating Habits***

Certain participants admitted to altering their eating habits according to their injury status. Zoe, a former cross country and track and field athlete, discusses her changed eating pattern,

I mean, I definitely pay more attention to my food and my food intake or what I'm eating day to day. Whereas before, I just kind of ate at random and didn't gain any weight and now I feel like even a cheeseburger. I'm gonna gain like 20 pounds. So, I guess I've just kind of become more strict about that and more strict about my food intake but other than that, I don't think so.

When she was asked if she attributes this to no longer being an athlete or to her injury, she said both because "... if I'm at that level of activity now, I'm in pain a lot."

Sarah, a current basketball athlete, talked about her changed eating behavior as a way to justify the difference in calories burned or used pre vs. post injury.

...when you're an athlete and you're practicing, you're hungry more and when you're not practicing, you're, you're, you don't waste as much energy you don't get as many calories burned. So, you don't eat as big, like I eat huge meals like even today. And I

kind of went to a smaller meal because I didn't have the diet or like the want for as big of a meal because I wasn't burning as many calories as I was.

Val, a current soccer player, talked about her experience in a similar way.

And then just like after surgery, I'm a lot harder on my body just like before, when you're an athlete, you just burn calories, like it's nothing and so I'm just a lot more cognizant of like foods that I eat, and I think if I eat something bad there's a little bit more of like a guilt trip there than before.

One participant, Ava, a former cross country and track and field runner reported not being able to cook for herself because of the pain from her injury.

. . . it inhibited me so much that I really stopped cooking for myself because I can't, I wouldn't be able to stand there in front of the stove for that long to cook for myself. So, I would just make like basic meals or like, like a lot of my meals were like veggie burgers for a while because I could just stick it on the oven like take it out and like, so I inhibited like cooking for a while.

This gives an alternative view on a unique way injury may alter an athlete's normal eating behaviors. Much of the existing literature on body image and eating behaviors has focused primarily on body image disturbance having the potential to impact food choices, caloric intake overall, or even disordered eating habits (Furnham, Badmin, & Sneade, 2002; Peat, Peyerl, & Muehlenkamp, 2008). This study also found that there may be unique factors associated with injury-impacted body image that relates to the pain associated with performing tasks of daily living such as standing, reaching, and lifting that are required to prepare meals. Further exploration of this topic seems warranted in future studies. However from the responses from our participants we can see that altered eating may be an effect from body image disturbance.

### *Fear of Re-Injury*

Fear of reinjury can be connected to a change in body image in multiple ways including functionality and aesthetics and was discussed by a few participants in this study. For Mike and Ava, it changes the way they participate in sport after college. Mike said:

...it's usually kind of top of mind as well because I'm like I don't really feel like getting hurt today. So no, I'm not gonna go play basketball. I'm not gonna like go 100% in this pickup game. Like I'll stand outside and shoot and like if you want to be mad at me you can.

He also said:

To this day, I still get kind of nervous to like just go play a pick-up basketball game or something because even since just the ankle injuries I've like severely like I've had high ankle sprain and stuff to where it didn't break but like I was limping for a few weeks or or whatever. So, I'm always kind of cognizant of that and kind of see that as, again, something that kind of makes me nervous and that I'm not super confident in.

Later in the interview he also said he avoids getting in crowds during intermural football games as an effort of protection for himself. Fear of reinjury has made him less confident in his body's ability to perform and years after injury still causes him to alter positions that he is willing to play in during intermural or pickup games.

Ava gives us a very straight forward view of fear of reinjury. She says "... like it's harder for me to actually run and also want to because like the fear of it happening again. So, like I really want to run but I'm also very timid and like staring".

Sarah talked about fear of re-injury in multiple ways. First in the sense of how these injuries will affect her later in life. She also talked about doubts regarding whether or not she

should continue sports participation because of her numerous past injuries. “So, like, that kind of stuff kind of affected me and made me think about hey, maybe this isn’t the right thing to do. Maybe you shouldn’t be playing basketball because it’s gonna affect your body and that could affect it in the long run”. She also talked about self-surveillance over her body, using phrases like “pay close attention to” and “I have to kind of watch myself” now that she has had multiple injuries. She says:

And if I'm hurting like I have to stop so that's something that I constantly think about and I'm like I'm thinking about like a lot of the times right now because of my hammy and I think about it because of my shoulder and my if my back starts flaring up again. I don't want to deal with that again.

These findings are consistent with research on fear of reinjury in athletes. Hsu, Meierbachtol, George, and Chmielewski (2017) found that “Athletes with high fear of reinjury may reduce exposure to physical activities in which they can potentially reinjure themselves, which leads to an athlete’s perception of low function” (p. 164). The current research shows loss of function for a period of time created in some athletes a fear of being injured again and thus altering their sport participation patterns by ceasing participation, changing desired participation and even questioning and self-monitoring. All consistent with perceiving their body as low functioning which overall affected their body image.

### ***Altered Exercise Environment***

A couple of participants expressed having to change their approach to exercise, specifically the environment and surfaces which they exercise on. Suki and Mike talk about this change in their exercise habits due to their injury. Suki says post injury she is only able to run on soft surfaces such as gravel. Mike says something similar, that due to his injury he now is very

aware of where he exercises particularly for running or jogging because he needs to be on a predictable surface as to not hurt himself again. He claims that this is the main way that his injury has affected his body image. This too shows an altered pattern of exercise due to injury which can affect body image.

### *Acceptance and Understanding of Injury*

A few participants mentioned acceptance of injury and even how they have changed in a positive way because of their injury. Mike indicated that knowing his injury was only temporary aided him in managing his emotions such as sadness with the fact that he was injured. Val also noted, “And so I have to remind myself to like not be so hard on myself and like understand that it’s like a rest period. I’m not really supposed to be moving my body or pushing its limits. It’s just like a healing time” when asked if her body image was affected by her injury. This suggests that accepting where she is at helps her manage her level of body image disturbance. Sarah said, “...I had to take a couple steps back and look at myself and realize it’s, it’s all a process and there’s a reason this is happening” and “So, I feel like having the injuries made me become easier and better person at the end of the day”. In a similar way, Val said her injury has helped her grow as well, “I think it sets me up for a lot more success and it’s just like, it was a very hard lesson to learn and a very hard thing to deal with”. This leads us to wonder if acceptance of injury can aid in reducing body image disturbance.

### **Social Support**

The second main theme that emerged from the data is social support. Specifically, various types of social support emerged as important influences on body image. Groups of people showed either to be supporting the athlete positively or negatively. Those groups consisted of coaches, athletic trainers, teammates, family and friends.

## **Coach**

The impact of coach support (or lack thereof) was mentioned numerous times throughout the interviews as coaches play an important role in the life of an athlete. They are in charge of what the athlete does day to day in practice, what games/events they partake in, positions they play, starting or playing status and more. The influence that coaches have over the injury process, including how that injury may impact perceptions of the athlete's own body.

### **Positives**

Results from this study suggest that coaches can play a positive role in supporting some athletes. Leah and Suki both mention that their coaches did check in with them on how they were doing mentally during her injury. Mike says that his coach being new allowed him to focus on helping the coach adapt to the new team environment. He said the coach leaning on him in this way had a positive affect and allowed him to, "...I was able to kind of keep myself busy while also feeling like I was loved and appreciated by those around me still...". This does not necessarily show direct positive coach support that was explicitly stated regarding the injury, but that by being able to keep his mind off the injury while still being an active and useful member of the team allowed him to cope better with not being able to golf. Sarah says that her coach Rod was a great source of support for the team, "...if I needed to tell him something if I need to cry in front of him, he would be there for us or me, anybody on the team. So that helped" while also saying that she thinks her new coach staff will provide similar support even though she has not experienced this directly yet. Val said that her coach reached out to her to see how she was feeling during the injury process. It is of further interest to ask how often coaches check in with their athletes and in what ways or the nature of the concern. Some coaches may solely be interested in how fast an athlete is healing and not necessarily the how they are mentally.

## Negatives

For some the athletes the coach played a more negative role when it came to support following an injury, which had the potential to impact body image. Sarah stated that she does not see coaches reaching out to athletes regarding mental health very often (including when athletes had experienced an injury). Zoe and Ava claimed that none of their athletic staff asked how they were doing mentally during her injury process. However, Zoe specified this did not affect the way she saw her body, where Ava says it did have an effect. Ava talks about her coach putting pressure on her to get back to running even though she expressed being in pain and not feeling comfortable doing that.

They were just like I was told like they saw me running one day and they were like if you want you could like run like...I don't remember what it was, like conference if you're still feeling good. I'm like, it's going to tear apart my body and like I can barely run 10 minutes right now. It might look good, but I don't feel good. It wasn't even about me anymore. It was about the sport.

She further described her coach's lack of support in this way,

So, like I feel like he cared for me for like a certain extent, but I feel like it was more about me returning. Like at first it was definitely about me that about more of me returning to the sport than me like actually succeeding mentally and physically. And then when I showed him the X rays for like my back and I'm like it's like, honestly, this is just gonna keep getting worse like he knew realistically I was gonna ever really come back to the sport, so I was just doing whatever I could just to get back to functioning. So, he was cool about that. But also, then continue to say that you look really good, and you should

run in our conference meet, so it really like I never really knew where I stood. Until I was fully done.

Her coach did not provide support for her to get healthy but rather added stress to her healing process by pressuring her to speed recovery to resume training and participation. Later she reveals,

So, I feel like I was just push too much and took it because it's a team sport and we didn't have enough people and they're like 'Ava will do it'. And so, they literally pushed me to my breaking point. And now I can't...Now I see myself completely differently because of it.

Sarah had a similar experience with her coach pushing her too hard while she was injured.

And my coach at the time was kind of one of those coaches that pushed you a little bit more than you should be if you were injured. So I was in a sling, riding the bike in the middle of practice and every practice. And jarring of the shoulder actually, like hurt it more when I was doing the bike and stuff and like if I even tried to express that they kind of thought that I was lying to get out of doing some sort of workout. So that was really hard for me in that sense. Getting back because I was hurting it daily by jarring it.

Sarah had the same experience with her coach when she sustained a different injury the next year.

So then with your back it's really hard to do any kind of workouts because all you do is you just jar the back. So, my coach wasn't really a fan of that, and she always tried to have me do something. Which I truly believe set me back a little bit because if I wasn't

doing certain things that she was having us do, I felt like I could have been a little bit healthier, and my back would have been less agitated.

Sarah also talks about negative relations with her coach due to her injuries.

So, she saw me as someone that was gonna come in and contribute. And when I got here and I was injured, I kind of got pushed to the side in her mind. And it was like you're not going to help me win money, you're not going to help me win games, so therefore it's not a big deal to me anymore. Like you're not super important. She was never like super-duper engaged with me. So, I think having that was hard with my coach. . .

Similar to Sarah, Val also mentioned that she feels being injured changes how a coach sees their athlete, "To a degree like it's always gonna be in the back of the head, back of their heads that you got injured. So, I think it would impact your coach's perspective of you. . .". This has the potential to cause unnecessary stress or pressure on an athlete to try and prove themselves to the coach as well as to try and regain their skills faster than their body is able to. Leah describes it as ". . . my performance for a while felt like it went down a lot because I hadn't been able to do much in a while. So, it was like having to get that skill back made me feel so conscious in that sense. . .". She said this did not affect how she saw her body, but the implication from her response that how she saw the way her body functions were affected in some way. Later she talks about her coaches in this way,

And then for my coaches I think they saw me differently after because it was like I was trying to fight to get a position and I had just come off and injury. So, it was like well, let's see, like if she can get her skills back quickly enough to do that. It took me a lot longer than I wanted to, but I eventually did to get to start so it worked out.

Sarah mentioned a situation where her coach decided to take away a teammates scholarship due to being injured for three years. This caused her body image disturbance as she did not want the same thing to happen to her. It caused her to worry and stress because she did not want the same thing to happen to her. She said,

So, I was worried and I kind of stressed myself out I think a little bit more because I realized that, and I noticed that, and I thought that that could happen to me. So, it kind of made me have a little bit harder body image mind for myself because I'm I had a feeling that maybe this could happen or maybe she could take my scholarship because I'm injured. So, then it made me stressed out about the way that my body was functioning and moving and being able to do stuff. But I think that was the only thing that truly made me think about my body a lot more because it wasn't truly like working the way it's supposed to.

Leah describes her support from her coach as “not so much”, “a little bit” and “not a ton”. All of these phrases imply that her coaches were not a solid source of support for her during this time. We learn from these testimonies that negative coach input, engagement with athletes and decisions can show a lack of support from coach to injured athlete and can greatly affect an athlete’s body image.

### **Medical Staff**

Athletic trainers are those who are directly in charge of an athlete’s health in cases of injury. They provide preventive support, rehabilitation techniques and provide treatment for the athlete. This is the first level of help an athlete seeks when they are injured and who will refer them to a doctor if they deem it necessary. Beyond athletic trainers there are numerous other

medical staff members that work with athletes who experience long-term injuries such as medical doctors, physical therapists and specialists.

### **Positives**

Mike specifically remembers the attentive care and extensive knowledge the doctor he saw during his injury was able to provide him. He this gave him support and confidence. “And the doctor that I had was also kind of a golf advocate, so I was able to kind of talk to him about stuff like that he was he was very reassuring to have...” and “...he kind of gave me confidence”. Sarah talked about how she perceives her new athletic trainer for the year as being someone genuine and caring towards the athletes, however she has not had direct experience with her yet. Val briefly mentioned that her trainer reached out to ask how she was feeling.

### **Negatives**

Trainers were perceived to be giving improper or inattentive care during the injury process from multiple participants. Leah stated that she did not receive any support from her athletic training staff, however, a trainer from another sport did check in on her she says. Suki says,

For the most part the trainer was a nice dude, you know, but I didn't feel he did what I needed to be done for my injuries. He was just like go do some stem or go put some heat on it. He didn't really pay attention to like me as an individual and needs.

Ava on multiple occasions discussed how her trainer had let her down. She said, “And once they left and we got a new one like I was going to my appointments by myself I was doing pretty much everything by myself. So, I felt like I guess an outcast even though I was still there”. This is a powerful statement showing extremely negative social support from an athletic trainer.

Athletic trainers are supposed to provide support and take care of their athletes. This is not what we see from Ava. She also says,

But as like time moved on, I feel like when like that trainer did leave and then I got a new trainer and like I feel like everybody as just wanting me, not really caring about my injury just wanting for me to come back. . .

She continues on to say “So, I feel like it wasn’t even about me at that point and caring about my health”. Later she describes her relationship with her athletic trainer “Well, one of them only knew me injured so I feel like he was just annoyed with me because I couldn’t do anything. And then I stopped going to the training room because he did nothing for me”. Lack of support from her trainer caused her to cease care with him.

Sarah talks about how she does not think trainers ask about athletes’ mental health unless they are very obviously and visibly in need, even then she says that they will not directly ask about it but rather dance around the topic.

Val discusses her injury and how she had to wait days for proper medical care.

. . .I had to wait a few days after my injury, and I had to wait for like a university physician to be there. And so like, I broke my bones and tore my ligaments like it hurt and so it was just kind of frustrating to like, not get like that immediate care and so like not really know what’s up.

She also talks about the billing process and how she is getting billed for medical expenses rather than the university who is supposed to pay, and the university is not taking the matter very urgently. Another interesting experience comes from Ava who said she had to compete at a regional event injured along with other injured teammates without an athletic trainer present. “I told one of my teammates, I couldn’t picture myself finishing the race because I was in so much

pain, but then had to run the race without an athletic trainer there”. She continues on to talk about her experience in this way,

Like why? Like I shouldn't have ever like been put in the positions I was to get that injured. I feel like so has the same thing happened with my foot like when I started like this trend over again, like when I had tendinitis that kept coming back and forth it was just because they kept running me. Like if I was out that whole time would this have ever happened?

She states that this overuse and being pushed to her breaking point has caused her to see her body differently than before injury.

### **Teammates**

Teammates are those who are the participants peers in athletics. Teammates does not necessarily imply a friendship but that overlap has the potential to exist.

### **Positives**

Zoe states “I mean, I had really good friends on the team and they you know, whether they know it or not helped me through a lot of things in my life and dealing with the injury. . .” Many participants mentioned being a source of support for uninjured teammates however only Zoe mentions teammates being a source of support for her during her injury. The positive mention of friends is used and may also provide some overlap for teammates who the participants consider friends, however that distinction was not made but may be considered to exist to some extent.

### **Negatives**

More times than not, teammates seemed to have a negative effect on support and injured athletes body image. Injury negatively affected team role and teammate relations and thus a gap

in support from teammates. This can create a lack of social support from those seemingly closest to you with experience and knowledge of the situation you may be going through. Zoe describes that she believed her teammates saw her differently once she was injured, “But like some of them I think just saw me as like, useless or somebody who just kind of like comes and hangs out at practice” and “I think a couple of the girls on the team saw me as like, oh she’s not serious. She doesn’t care or, you know, she’s never gonna be anything so like, why she here”.

Leah’s response when asked about social support was “. . . definitely not from teammates. . .”. She describes their relationship as

. . . I didn’t feel connected with the team in the beginning socially by feel like being injured just like completely took me out of it. Like I wasn’t really, I mean, like I said, we weren’t really close or anything, so I wasn’t really checked in on or anything. She said this relationship or lack thereof affected how she saw her performance which may indirectly connect to body image. She also talked about a misunderstanding with a teammate who thought she was rock climbing while being injured and not practicing. This was not the case and caused negative team relations there afterward. Leah’s response to her coach suggesting she approach the teammate to explain to her the reality of the situation was “. . . why do I have to explain myself to them and they don’t even know what like, they don’t ask me how I am normally”. Again, she brings up the idea of a lack of care from her teammates. This response suggests a lack of support from teammates checking in or caring about how someone who is injured is doing. This is a surprising finding considering that it is assumed that teammates usually have a strong bond with one another.

Suki describes an experience where teammates were unhappy with her inability to step up during a race.

I know they wanted me to step up in a way that I couldn't. And I hated myself for it and I'm sure they, you know, didn't like me for it. I remember my teammate had her wisdom teeth taken out and so I moved into the last scoring position which sadly I move down to. And I don't think I stepped up in a way that I could, you know, if I wasn't injured.

When asked if this affected the way she saw her body she responded, "Like I wouldn't feel as strong mentally and physically".

Then we have Ava who says that having a new team role as more of an encouraging assistant coach rather than teammate caused her to see her body differently. She says she could no longer do what she saw everyone else doing and that,

So, I felt like I was just laying around a lot of the time. And I feel like everybody thought I was being lazy, but I wasn't like I just couldn't do anything so. Definitely I'm glad to be out of that season of my life, but I miss running.

Mike, Leah, Val and Sarah all discuss missing out on bonding with teammates as a result of injury. Saying that playing and practicing with teammates is how you get to know them best and is how you find and create good friends on a team. Injury changed the way in which they created or had friends on the team. This can create a lack of teammate support and the altered team role seemed to have a negative effect on body image by highlighting to certain athletes the loss of functionality of their body and the desire to return to sport but the reality that their body may not be able to.

### **Friends and Family**

The final category for social support. This discusses how those closest to the participants aided or negatively impacted them during their injury process.

### **Positives**

Family and friends played a mostly positive role when it came to support for the participants. Two participants specifically citing that their dads played an central role in asking about their mental health during injury. Important to note Sarah makes the comment,

. . . I was kind of taken aback by the comment. Honestly, because I was like, did he just ask me that? Like I was like, but like because it's not something most people like, just ask. It's always there's always like a sign or something I feel like when you ask them somebody that.

She goes on to say that “So, I'd say that my family is my biggest support, my biggest like anything. I need anything I could possibly looking for I would find in my family”. She along with Zoe and Ava specifically mention friends being a source of great support. Ava says, “So I felt like besides for the most part besides a couple of my friends I was really going though it on my own”. This shows how crucial social support can be during the injury process.

Mike talks about how his girlfriend and family support was always readily available due to their close proximity and they helped him through his injury period.

### **Negatives**

While almost all participants had positive social support from friends and family one participant, Leah, discussed how her family was the main source that fueled her realization for her weight gain during her injury and source of social physique anxiety. She said,

And I didn't really notice it. It was more my family that pointed it out like they would show me pictures of how I looked before and then where I was then and I was, ugh, I didn't realize. Because I was like eating the same but not training as hard so.

She also said that she thinks about her body image daily,

Whenever like I eat something or have to like talk to my family, like on FaceTime or something where they can see me and I'm like, oh my gosh, like is my face big? Are they going to make some like make a comment about it?

She says that her weight gain is the sole reason for body image disturbance, yet we can see that family is a huge factor in her realization of weight gain and anxieties about weight gain.

### **Lack of Knowledge of Psychological Effects of Injury**

When participants were asked about knowledge of possible psychological effects a long-term injury could cause no participants were able to recall any knowledge of this topic at the time of injury. A few participants said they knew that it could play an effect but were not fully aware of it until after their injury. Mike says he had a little knowledge of the psychological aspects of sports but not in relation to injury. This shows a lack of professional social support for athletes. Whether or not they have a sport psychologist available to them, therapist or counselor but lack of knowledge of these affects suggest that these options may not be something an athlete will seek if they are not previously aware of the need for one.

Two participants however did admit to seeking professional help during their injury, one from a therapist and one from a sport psychologist. Sarah describes why she sought out help:

I actually, so , with my injures, it kind of took a lot of a big toll on me and I decided that I wanted to talk to somebody and get a therapist actually to kind of help me through it because I had, I was so stuck in on the concept of that I was injured and that it was a life altering injury and I was never going to play it again...

She later reiterates, "...it was really hard for me to get though all of that" when talking about her injuries. Both participants expressed that seeing a professional was helpful during their injury process.

## **Summary, Limitations and Future Direction**

Every year athletes across all divisions, types of sport, gender and ages fall victim to injuries of all kinds. Sometimes these injuries are a simple fix, and they are back to play while others may take weeks, months or even years to heal. It is well known that unexpected injuries can cause adverse psychological affects in athletes, but it is much less known how these may affect a student athlete's body image. By focusing on long-term injury in collegiate student athletes this research has begun to shed light on the answer to that question. Information from seven participants, both former and current student athletes whose injury has caused them to miss participation in their sport for at least four weeks and are of at least 18 years old, was gathered through one-time semi-structured interviews.

During the analysis of these interviews two overarching themes were found, body image and social support, each with multiple subtopics. The results show a dynamic and seemingly complicated relationship between long-term injury and body image. From the results it is clear that long-term injury may have an effect on student athletes body image, however, because this area of research is so underexplored further research is necessary.

Some limitations from my research include age, as I have limited my research to only those 18 years of age or older, I excluded those who and as athletics develop and become more and more competitive at early stages it is important to understand how younger athletes may be affected. My study was also limited by favoring female responses. There was only one male respondent therefore it becomes important to understand more fully how current and former male athletes are affected by long-term injury. The sample size of this study was relatively small therefore a larger sample size may be necessary to capture a more accurate view of the issue. The variety in type of sport research was not very expansive and excludes many culturally popular

and even unpopular sports. This will be interesting to investigate as we already know certain athletes such as those in aesthetic sports are more prone to body image related issue than those in nonaesthetic.

From these limitations we can see the many areas open to future research. Most notably is the definition for long-term injury. By stating that sort participation must have been ceased for a minimum of four weeks I excluded a population of athletes who continue to participate in their sport even though they are injured or in pain. This came to my attention when interviewing Lily whose data was excluded from the study due to not meeting the requirements of this study. From her interview I learned that she too experienced many of the things the participants of my study experienced. Further research should consider this population as well as the other listed in my limitation. It is also of interest to consider type and size of university where athletes come from. In this research this type of data was not collected however it may be important to understand how different sporting divisions such as the NCAA, NAIA and NJCAA athletes are affected as some athletes may be more at risk than others. Further different types of injuries may be of interest. This study did not define injury in any way other than long-term therefore severity of injuries varied greatly between participants. Creating a system to categorize injuries so the results could be compared on how they affect body image is of future concern. Perhaps even comparing those with visible vs. invisible injuries, injuries with a set amount of healing time vs. those that do not or placement of injuries.

## REFERENCES

- Abbott, B. D., & Barber, B. L. (2010). Embodied image: Gender differences in functional and aesthetic body image among Australian adolescents. *Body Image, 7*, 22-31. Doi: 10.1016/j.bodyim.2009.10.004
- Chaouch, E. (2013). Longitudinal analysis of perceived body image, sport commitment, burnout, and athletic injury.
- Coffey, L., Gallagher, P., Horgan, O., Desmond, D., & MacLachlan, M. (2009). Psychosocial adjustment to diabetes-related lower limb amputation. *Diabetic Medicine, 26*(10), 1063-1067.
- Collins, K. K., Liu, Y., Schootman, M., Aft, R., Yan, Y., Dean, G., ... & Jeffe, D. B. (2011). Effects of breast cancer surgery and surgical side effects on body image over time. *Breast cancer research and treatment, 126*(1), 167-176.
- Cragg, A. M. (2011). A Narrative on How a Long Term Knee Injury has Changed the Athletes Perceptions of their Body Image and Self?.
- Crocker, B. (2019). *A Qualitative Exploration of Collegiate Student-Athletes' Constructions of Health, Fitness, and Body Image*. McGill University (Canada).
- Curry, T. J. (1993). A little pain never hurt anyone: Athletic career socialization and the normalization of sports injury. *Symbolic interaction, 16*(3), 273-290.
- de Bruin, A. P. (2010). Thin is going to win? Disordered eating in sport. *International Journal of Eating Disorders, 35*, 597-600.
- Drench, M. E. (1994). Changes in body image secondary to disease and injury. *Rehabilitation Nursing, 19*(1), 31-36.

- Driediger, M. V., McKay, C. D., Hall, C. R., & Echlin, P. S. (2016). A qualitative examination of women's self-presentation and social physique anxiety during injury rehabilitation. *Physiotherapy, 102*(4), 371-376.
- Falk Dahl, C. A., Reinertsen, K. V., Nesvold, I. L., Fosså, S. D., & Dahl, A. A. (2010). A study of body image in long-term breast cancer survivors. *Cancer, 116*(15), 3549-3557.
- Fingeret, M. C., Teo, I., & Epner, D. E. (2014). Managing body image difficulties of adult cancer patients: lessons from available research. *Cancer, 120*(5), 633-641.
- Furnham, A., Badmin, N., & Sneade, I. (2002). Body image dissatisfaction: Gender differences in eating attitudes, self-esteem, and reasons for exercise. *The Journal of Psychology, 6*, 581-596. doi: 10.1080/00223980209604820
- Haslam, N., Loughnan, S., & Holland, E. (2013). The psychology of humanness. In S.J. Gervais (Ed.), *Objectification and (de)humanization* (pp. 25-51). New York, NY: Springer.
- Helms, R. L., O'Hea, E. L., & Corso, M. (2008). Body image issues in women with breast cancer. *Psychology, Health and medicine, 13*(3), 313-325.
- Holzer, L. A., Sevelde, F., Fraberger, G., Bluder, O., Kicking, W., & Holzer, G. (2014). Body image and self-esteem in lower-limb amputees. *PloS one, 9*(3), e92943.
- Horton, S., Dionigi, R. A., Gard, M., Baker, J., Weir, P., & Deneau, J. (2019). "You can sit in the middle or be one of the outliers": Older male athletes and the complexities of social comparison. *Frontiers in Psychology, 10*, 2617.
- Hsu, C. J., Meierbachtol, A., George, S. Z., & Chmielewski, T. L. (2017). Fear of reinjury in athletes: implications for rehabilitation. *Sports health, 9*(2), 162-167.

- Kulkarni, T., Hande, D., & Parab, K. U. (2014). Body image and quality of life among individuals with lower limb amputation. *Indian Journal of Basic and Applied Medical Research*, 3(3), 63-66.
- Larouche, S. S., & Chin-Peuckert, L. (2006). Changes in body image experienced by adolescents with cancer. *Journal of Pediatric Oncology Nursing*, 23(4), 200-209.
- Lotze, M., & Moseley, G. L. (2007). Role of distorted body image in pain. *Current Rheumatology Reports*, 9, 488-496.
- Peat, C. M., Peyerl, N. L., & Muehlenkamp, J. J. (2008). Body image and eating disorders in older adults: A review. *The Journal of General Psychology*, 4, 343-358.
- Pendley, J. S., Dahlquist, L. M., & Dreyer, Z. (1997). Body image and psychosocial adjustment in adolescent cancer survivors. *Journal of Pediatric Psychology*, 22(1), 29-43.
- Pezzin, L. E., Dillingham, T. R., MacKenzie, E. J. (2000). Rehabilitation and the long-term outcomes of persons with trauma-related amputations. *Archives of Physical and Medical Rehabilitation*, 81, 292-300.
- Przedziecki, A., Sherman, K. A., Baillie, A., Taylor, A., Foley, E., & Stalgis, B. K. (2013). My changed body: breast cancer, body image, distress and self-compassion. *Psycho-Oncology*, 22(8), 1872–1879. <https://doi-org.proxy.lib.siu.edu/10.1002/pon.3230>
- Tracey, J. (2003). The emotional response to the injury and rehabilitation process. *Journal of Applied Sport Psychology*, 15, 279-293. doi: 10.1080/714044197
- Von Rosen, P., Kottorp, A., Fridén, C., Frohm, A., & Heijne, A. (2018). Young, talented and injured: Injury perceptions, experiences and consequences in adolescent elite athletes. *European journal of sport science*, 18(5), 731-740.

Wainwright, S. P., Williams, C., & Turner, B. S. (2005). Fractured identities: injury and the balletic body. *Health*, 9(1), 49-66.

Wiese-Bjornstal, D. M., Smith, A. M., Shaffer, S. M., & Morrey, M. A. (1998). An integrated model of response to sport injury: Psychological and sociological dynamics. *Journal of applied sport psychology*, 10(1), 46-69.

## **APPENDICES**

**APPENDIX A**  
**IRB APPROVAL**

To: Amber Ruiz-Bueno

From: M. Daniel Becque  
Chair, Institutional Review Board

Date: May 20, 2022

Title: Understanding the Effects of Long-Term Injury on Student Athlete's Body Image

Protocol Number: 22093

The above referenced study has been reviewed and approved by the SIUC Institutional Review Board under an expedited category.

This approval by Southern Illinois University IRB on **May 20, 2022**, is considered active. The following IRB policies apply to protocols approved in expedited categories:

- Changes or modifications to the protocol, regardless of how minor, must be submitted for IRB review and approval prior to implementation, except to eliminate immediate hazard to subjects.
- Promptly report adverse events, off- protocol activities, or other noncompliance to the IRB within 5 business days. Contact the IRB for further guidance.
- The IRB will request an annual update each year the project remains active. Update forms must be received by the due date provided to maintain active status.
- The Principal Investigator is responsible for reporting study closure to the IRB in a timely manner. Please contact the IRB for a study closeout form when research activities are complete. A study is considered complete when you are no longer enrolling new participants, collecting or analyzing data.
- As always, you are responsible for compliance with Southern Illinois University Carbondale policies and procedures. If you have any questions or require further information, please contact the Institutional Review Board Office via email [siuhsc@siu.edu](mailto:siuhsc@siu.edu) or via phone at 618-453-4530.

Best wishes for a successful study.

This institution has an Assurance on file with the USDHHS Office of Human Research Protection. The Assurance number is 00005334.

MDB:sk

Cc: Julie Partridge

**APPENDIX B****SOCIAL MEDIA POST**

“Hello, my name is Amber Ruiz-Bueno, I am a masters student at SIUC and I am working with my advisor Dr. Julie Partridge. We are interested in understanding more about how long-term injury affects student athlete’s body image and are recruiting participants for our research. The research will consist of a one-time interview approximately 30 minutes long via Zoom. If you have been or currently are a collegiate athlete (any division), are of at least 18 years old (19 if from Nebraska), and have experienced an injury lasting longer than 4 weeks which prohibited you from participation in your sport and are interested in being a part of this research please contact me at [amber.ruiz-bueno@siu.edu](mailto:amber.ruiz-bueno@siu.edu). Thank you.”

**APPENDIX C**  
**INFORMED CONSENT**

**Informed Consent Agreement**

**My name is Amber Ruiz-Bueno. I am a student in The School of Human Sciences at Southern Illinois University-Carbondale, and I am asking you to participate in my research study. Please read this consent agreement carefully before you decide to agree to participate in the study.**

**Purpose of the research study:** The purpose of the study is to examine the affects long-term injury may have on student athlete's body image. The results may be published or presented after the study is complete.

**What you will do in the study:** In this study, I will be conducting interviews with student athletes who have a long-term injury as described by an injury lasting 4-weeks or longer resulting in missed participation in sport. **In order to be sure that all answers to the questions in the interview are accurately understood, the interviews will be audio-taped over Zoom recording therefore video will also be captured. The recordings and transcriptions will be erased after 3 years.** These interviews will be scheduled at a time that will not interfere with any other time commitments.

**Time required:** The study will require about 30-45 minutes of your time.

**Risks:** We will be asking some questions about some sensitive topics such as injuries and body image, we believe these are minimal risks and the potential benefits to our knowledge about these issues outweigh these risks.

**Benefits:** The study may help us to better understand collegiate student athletes' experience with a long-term injury as it pertains to body image.

**Confidentiality:** Participants will be assigned a pseudonym to identify their data and all data will be stored on a password protected laptop. Following the experiment, the data will be destroyed. Your real name will not be used in any report.

**Voluntary participation:** Your participation in the study is completely voluntary. You must be of at least 18 years of age to participate, if you are from Nebraska you must be at least 19 years of age.

**Right to withdraw from study:** You have the right to withdraw from the study any time with no penalty.

**How to withdraw from the study:** If you want to withdraw from the study, you can let me know at the contact information below, or let the researcher know. There is no penalty for withdrawing.

**Payment:** You will receive no payment for participating in the study.

**If you have questions about the study, please contact me:**

Amber Ruiz-Bueno

School of Human Sciences, SIUC

(440) 532-2382

amber.ruiz-bueno@siu.edu

Julie Partridge

School of Human Sciences, SIUC

(618) 453-3119

jpartrid@siu.edu

**Agreement:**

I agree to participate in the research study described above.

I consent to participate and have my responses quoted directly using pseudonym.

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**You will receive a copy of this form for your records.**

This project has been reviewed and approved by the SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the Committee Chairperson, Office of Research Compliance, SIUC, Carbondale, IL 62901. Phone (618) 453-4533. E-mail: [siuhsc@siu.edu](mailto:siuhsc@siu.edu)

**APPENDIX D**  
**INTERVIEW QUESTIONS**

What was/is your major?

What year in school are you? OR How long have you been graduated?

How old are you?

What sport(s) did you/do you participate in?

How old were you when you began playing sport/

Have you played sport your whole life?

How much eligibility do you have left?

Has your injury caused you to take a 5th year?

What is your injury history like? Have you had other injuries in the past?

Tell me about your current injury (how did it happen, how was it diagnosed).

How long have been dealing with your current injury?

What kind of things does it inhibit you from doing? From daily tasks to participating in your sport.

How would you define body image?

What does it mean to you?

How would you describe your body image?

How would you describe being successful in your sport?

How often do you think about your body? In terms of functionality, beauty, how others see you.

Do you think your injury has affected the way you see your body? In terms of functionality, beauty, how others see you, health.

Has your role on the team changed since your injury?

Does that affect the way you see yourself?

How familiar are you with the potential psychological effects associated with acquiring a serious or long-term injury?

Does anyone/has anyone asked how you are doing mentally during this injury process?

Do you feel that you have a good support system during your injury? Through friends, family, athletic training staff, teammates, coaches.

Do they support you mentally and physically?

Do you think your teammates see you differently since your injury? Coaches, athletic training staff, friends or family?

Anything else you think would be good for me to know?

**VITA**

Graduate School  
Southern Illinois University

Amber Ruiz-Bueno

Ruizbueno1@gmail.com

Southern Illinois University Carbondale  
Bachelor of Science, Sport Administration, May 2020

Special Honors and Awards:

Sport Administration Student of the Year 2019  
Graduate Student Achievement Award 2021

Research Paper Title:

Understanding the Effects of Long-Term Injury on Student Athlete's Body Image

Major Professor: Julie Partridge