

**Running Narratives: Injury, Identity, and Body Insecurity
on the Tufts Track and Field Team**

An Honors Thesis for the Center for Interdisciplinary Studies

Sarah Oliver

**Cathy Stanton, Department of Anthropology
Paul Leavis, Tufts University School of Medicine
Diane McKay, Friedman School of Nutrition Science and Policy**

Tufts University 2020

Abstract

This thesis explores the importance of sports injury narratives, defined as the practice of exploring, understanding and bringing into existence the injury experience through narration, which helps shape the lives and identity changes that occur for college athletes. Drawing on qualitative interviews conducted with Tufts Track and Field athletes, it argues that hyper-competitive and achievement-oriented values of the modern world have played out in the identity formation, injury experience, and body insecurities of Track and Field athletes. Chapter One discusses the development of identity in athletes and the relationship between identity and self-efficacy. Chapter Two identifies how sports injury narratives vary with event group and specialization. Chapter Three explores how and why athletes tended to minimize injury in their sports injury narratives. Chapter Four discusses the origins and effects of what is sometimes termed a “diet culture” mentality mostly on female athletes. Chapter Five connects the fear of weight gain to injury. A major goal of this thesis was to bring these issues of body insecurity to light, and to encourage change by contributing to an emerging conversation in the world of sport about how the quest for competitive excellence can damage athletes as well as building positive self-identity. I give recommendations for change in Appendix 2.

Key Words:

1. Sport
2. Injury
3. Body image
4. Illness narrative
5. College athletics

Table of Contents

Introduction pg. 1

Chapter 1: Exploring Questions of Identity and “Becoming Well-Rounded” pg. 18

Chapter 2: Sports Injury Narratives among Track and Field Athletes: Specialization, Subjectivity, and Isolation pg. 29

Chapter 3: Athleticism, Injury, and Maturation: Minimization in Sports Injury Narratives pg. 37

Chapter 4: Weighing Heavy: Questions of Discipline, Stigma and Body Image pg. 50

Chapter 5: A Case Study, How Diet Culture Impacts the Injury Experience of Female Athletes pg. 64

Epilogue pg. 79

References pg. 82

Appendix 1 Interview Guide pg. 88

Appendix 2 Addressing the Changing Athlete, My Recommendations for the Team pg. 89

Introduction

My Story

I came to high school unhappy, struggling with an eating disorder, and no longer passionate for the sport I had played since age six, soccer. My high school mentor was on the cross country team, so she encouraged me to come to a pre-season practice to see what it was like. She told me it was fun to be on the team, and the races were “only” three miles, which at the time seemed near impossible. I could not fathom running for three miles straight! I had never done that before, and at the time I hated running.

So of course I came to the practice, and was shocked to find how different it was from my years of soccer. The team was not as I was accustomed to, fraught with drama and competition; the cross country team was welcoming, light, and encouraging of all abilities, and I was completely enthralled with the older girls on the team. The running was less important, although I found it went by a lot faster by talking with my peers. This is how I began my running career.

From then on I came to see myself as a runner, and after a year or so I decided to do whatever it took to become the best I could be, and better than everyone else, too. And for a little while, I was. I was the fastest on the team. But by senior year, after four years of running year-round on an underweight and malnourished body, I developed two stress fractures, one right after the other.

I had already been accepted to Tufts and recruited for the Track and Field team, so not being able to run was devastating. Joining a team, knowing no one, unable to participate in the truly bonding act of mutual suffering known as training, was difficult in and of itself. But on top

of that, I was going through an identity crisis, as I could no longer call myself a runner, and therefore I had no way to define myself.

My genuine love for physical activity kept me active in other ways, including weight lifting, which eventually led me to become a thrower on the team. Although I have since returned to running, I have not been keen to take back the “runner” identity. I prefer “athlete,” as it allows me to cycle through different sports and exercises without attaching my identity to any one in particular. I came to define “athlete” as someone who was physically active either in sport or casual fitness, and could do any number of activities without needing a new identity for each one. I could be an athlete whether I ran, swam, or lifted, without limiting myself to being a “runner,” “swimmer,” or “lifter.”

What I have realized, in this evolution of identity, is that we, as humans, are not stagnant. Our identities change as what we do in our lives changes, and this is a normal, healthy process. In particular, people’s identities tend to change during the time they are in college, a process, that I refer to as “becoming well-rounded” and explore more in Chapter One. Our bodies also play a role in these changes. They may either force us to alter our actions or we alter our bodies to accommodate what we wish to do. Less frequently, our bodies and lives are in harmony.

But athletes are in pursuit of a contradictory set of goals: we strive for improved performance as the utmost goal, and yet we also wish nothing else would change. Once a runner, many of us hope to always be one, only getting faster, never injured. But as one particularly beat-up athlete I spoke with said, injury is the nature of sport, and it is something we will deal with for the rest of our lives. Sports are based on strengthening the body in order to improve performance. The way the body becomes stronger is through years of tiny stressors, muscle tears, heart beats and repetitions. It is only logical that some of these stressors can become too much, and injury

occurs. We may choose to ignore the injury and carry on with our usual activities of daily life, or the injury may become so painful or limiting that we are forced to recognize the injury and work within its limits. Some athletes, though I have found it to be rare, are able to recognize the early stages of injury and scale back in time to prevent future pain and limitation. But most continue to listen instead to external and internalized pressures that encourage them to *do more* in order to *be* anything at all.

In this thesis I explore the tension between maintaining one's athletic identity and negotiating the inevitable changes and challenges that come with both injury and normal life-course changes as a college athlete. I ask how these experiences intersect with gendered identities and with idealized bodies within what some have termed "diet culture." I do this by interpreting athletes' own narratives about their injuries as reflected in the interviews I conducted with members of the Tufts Track and Field team in the fall of 2019.

This thesis has evolved every step of the way, from the first inspiration to the final publication. It began with my own experience as an athlete, and how my identity has shifted from high school sports to college graduation. Injury played a role in this shift, but over the course of writing a complete draft of this thesis I realized there were larger issues at play: patriarchy and gendered experiences, capitalist values and hyper-competitiveness, and even college sport and the overall college experience itself. As a result, this thesis deepens as it goes along, from sports injuries and identities to "diet culture" and capitalist values, resulting in a more holistic picture of how both sport and injury affect a sense of identity for college athletes.

My Research Process

Throughout this thesis project I have been negotiating another tension: between clinical research intended to improve diagnoses, treatment, and performance, and qualitative social science research that aims to explore the more social and emotional aspects of experience. When I began, I was more focused on the clinical side of my questions. My own belief is that injury during sport doesn't necessarily need to be inevitable. Most often athletes are injured from adding too much volume too quickly, muscular weakness, or functional imbalances. All of these things are preventable or treatable, and addressing them can in turn prevent injury. Originally, I proposed to focus my thesis on clinical interventions, as I am a certified personal trainer through the American Council of Exercise and a student of Sustainable Nutrition and Kinesiology. The summer before my senior year I interned at the Micheli Center for Sports Injury Prevention in Waltham, Massachusetts, where I learned how to conduct biomechanical screens to identify muscular imbalances, range of motion deficiencies, and weaknesses. After identifying the problem areas, we could prescribe corrective exercises to address some of the causes of injury, rather than treat the symptoms, as is common in sports athletic training settings.

My initial plan for my thesis research was to conduct biomechanical screens with members of the Tufts Track and Field team, measuring weaknesses and imbalances that place an athlete at risk of injury, and to develop individualized protocols to correct the injury risk factors for those who chose to participate. I would then compare the control group to the intervention group to determine if the protocols were effective in preventing injury. I also planned to include some interviewing of student athletes to better understand how they themselves were experiencing their current or past injuries. But in preparing my application for the Institutional Review Board, I realized that there were some barriers to the project as I originally conceived it.

Some of these barriers were procedural. Varsity athletes are generally fully healthy by traditional clinical markers, but they do experience musculoskeletal injuries. Even though my project would have been conducted under the direction of staff in the Tufts Sports Medicine department, the IRB reviewers expressed a great deal of caution surrounding the exercise-based intervention component of research.

Additionally, the interdisciplinary nature of my study created a challenge. In clinical research, injuries are understood through risk factors, pain levels, diagnostic tests and treatment methods on the one hand, and sports psychology interventions on the other. I wanted not only to evaluate athletes physically, but to listen to their narratives about injury. Initially I was unsure about which IRB application to even use. Should I use the Health Sciences application, since exercise is considered a clinical concern? Or should I use the Social, Behavioral and Educational Research application, which covers the kind of qualitative research I also planned to be doing? After many emails and a few phone calls with the IRB office, it was determined that including any research methods that involved physical activity would require a clinical approach and application, as well as close supervision from Sports Medicine. After many weeks of amending my thesis proposal, I decided a truly interdisciplinary study, one with both exercise-based measurements and injury narratives, would not be possible with current restrictions. So I decided to pursue what I felt was most lacking in the academic and clinical literature I had been reading: sports injury narratives.

My interdisciplinary challenge mirrors the deep distinction in academia between clinical research and the more qualitative, social research I have conducted in this thesis. Injuries are treated as medical diagnoses which usually require a medical intervention. What is often missing in the clinical literature, however, is the humanity behind the injury. The injuries do not occur in

isolation, and more often than not they come with a story. It was disappointing not to be able to blend the physical and the social in my research as I originally hoped to do, but I embraced the opportunity to listen more deeply to athletes' words and to think about how they reflected the tensions between identity and change. I found that the research methods of cultural anthropology, and specifically medical anthropology, were useful to me in that exploration.

Before I came to Tufts, anthropology was nothing but a clothing store to me. But as I became more familiar with the methods and theory of this discipline through three of my classes, anthropology became the clear way for me to conduct my thesis. In an ethnographic fieldwork methods class that focused on the Boston Public Market, I learned how to conduct ethnographic research. A second project-based class, "Practicing in Food Systems," mapped the flow of donated food from grocery store to food pantry in partnership with the Somerville Food Security Coalition, developing a more holistic understanding of the complicated network of food rescue in the city. Finally, I discovered the ideas of biopower and illness narratives through a Medical Anthropology class with Sarah Pinto, which has provided the theoretical framework for my own analysis in the thesis. Unlike medical research, ethnographic research also allows me, the researcher, to recognize my own positionalities and use them as valuable data. I am an athlete, I have been injured, I live in "diet culture" and have experienced its pressures. My own experience therefore adds depth to my research. This set of methods also allows the voice of the athletes to be the true source of data, rather than a questionnaire with limited options or a controlled trial with a single variable and hypothesis. I truly did not know what I would find by talking to injured athletes, but anthropology made it possible to recognize the importance of their stories in gaining a fuller sense of what the injury involved and meant.

Anthropologists develop categories of analysis and interpretation based on what we observe and hear in our fieldwork. In other words, although we start with guiding questions and theory, we do not know what we will find and we do not have preconceived categories for analysis. Instead, we wait to see what emerges from the research itself. I went into my research intending to listen to athletes' sports injury narratives. I sent an email to the Track and Field team and explained my thesis in a team meeting in order to recruit individuals who wanted to talk about their injuries. I ended up conducting a dozen interviews. In the thesis, I created a pseudonym for each athlete to protect their identity. However, I did not change the gender of the athletes, as I found this to be an important influence on their injury experience.

The interviews I conducted were mostly done in the gym where the athletes practiced, either before or after their practice, and sometimes while they were cross training on a bike. I would begin by asking them to tell me about a time they were injured, which would usually elicit an injury narrative. Often the athlete would ask what counted as an injury, or when their injury was supposed to have occurred, and I encouraged them to talk about whatever they felt was important. I asked follow up questions about their injury experience, timeline, feelings and the impact the injury had on their daily life. My basic interview guide is included as Appendix 1. After discussing the injury, I asked them how they described and/or defined themselves, and asked if there was anything else they wanted to include in our interview. Each interview lasted between fifteen and thirty minutes. I recorded the interviews and transcribed them using online transcription software. I then coded the transcriptions, looking for patterns or exceptions in people's responses. The clusters of ideas from this process became the basis for my thesis chapters.

Literature Review

In researching and writing this thesis, I have drawn on a number of different disciplines that address the topics of sport, injury, health, narrative, and identity, including anthropology, sports psychology, sports medicine and weight-based nutrition science. However, I found that no single field directly addressed my questions about how athletes' experience of injury affects their sense of identity and how they express this by telling their own stories. I have therefore worked toward a new concept: the sports injury narrative. Sports injuries are not just limited to the physical body. They are the stories that shape the athlete's understanding of their experience, as well as the impact the injury has on the athlete's teammates, coaches, and college career. Injuries impact how athletes travel on campus, who they associate with, and what they think or feel, which is why I am adding this concept to the already well-established anthropological and clinical notion of illness narratives.

"Illness narrative" is a term first coined by anthropologist Arthur Kleinman but now used widely by scholars and many medical researchers (Kleinman). Sports psychology is perhaps most aligned with the purpose of this thesis, to investigate the impacts of injury beyond the physical body. However, psychology does not draw from the athlete stories as my research does. Sports medicine currently defines injury and treatment, and generally seeks to understand the physiological changes during an injury process, the risk factors, and methods to improve healing, rather than focusing on athletes' sense of identity. I drew extensively from weight-based nutrition science in Chapter Four to challenge popular arguments about obesity and fears of weight gain, but again, weight-based nutrition science focused more on the physical rather than social and emotional factors. Recognizing the gaps in anthropology, psychology and medicine, I offer a view of injury through a new lens, that of the athlete.

My thesis began with anthropological works, as anthropologists see things in broadly cross-cultural ways, and they recognize that Western biomedicine is a culturally-specific way of thinking about health and human bodies. There are social and cultural determinants of health, and this realization is now being adopted more widely in many fields of study and practice. The purpose of illness narratives is to bring these determinants to the forefront, and to allow people to understand and fully bring their experience into being through the act of narration to a medical practitioner or someone else (Fadiman 1998; Kaplan-Myrth 2007; Kleinman 1988). I consider sports injury narratives to be a subgroup of illness narratives. Illness narratives are understood by medical anthropologists as being a way through which people can become aware of, make sense of, and bring into existence, their experiences. Illness narratives give meaning to a lived experience, and therefore can be therapeutic and transformative (Kaplan-Myrth 2007). The sports injury narrative is no different.

In addition to illness narratives, the concept of biopower and the question of social expectations of the body emerged as major themes in the anthropological literature. Michel Foucault, a key thinker in this area, identified biopower as a mode of power characteristic of large-scale modern societies that aren't governed by some single top-down entity (Foucault 1990). He studied how conceptions of health, normalcy, efficiency, and more were mobilized in various ways by official actors, and sometimes contested and renegotiated by other actors, resulting in a power that is both voluntary and involuntary, official and non-official. Though biopower is not inherently "bad," it can become problematic because it tends to mirror existing disparities and exclusions within a given society. In this way, it manifests as the reinforcement of diet culture, influencing how women, in particular, perceive their bodies, diets, and values of self-control.

The sentiment of oppression and stigma towards women who do not meet beauty ideals were also common themes in anthropological literature and weight-based nutrition literature. Some writers (for example, Naomi Wolf) have argued that as the social powers of women increase, so do pressures to adhere to beauty standards that are unrealistic for most women. This leads to an increased emphasis on appearance, unhealthy behaviors to achieve these standards, and less respect towards woman as accepted members of society (Wolf 1991). Discussions of diet, though most commonly found in medicine and nutrition literature, were also prevalent in qualitative social scientific writings. Anthropologist Julie Guthman challenges widely held assumptions about the causes, consequences, and treatment for the obesity epidemic (Guthman 2012). The history of the American diet and the advent of what some have termed “diet culture” led to many of the unrealistic and harmful standards of today (DuPuis 2015). The discussion of food and body image as powerful influencers on the thoughts and actions of women is prevalent in both quantitative nutrition science and social science literature alike.

Sports psychology fills some of the gaps in biomedical literature on the understanding of injury. It identifies some of the social and personal impacts of injury, how self-efficacy is affected, and how personality type plays a role in the response to challenges. I define self-efficacy as the belief in one’s self that they are competent and effective at what they do. For example, some work from the psychology literature recognizes the loss of identity and the trend of social isolation in injured athletes (Claytor 2019). However, most psychology research methods use survey questions that are based on pre-established scales with subsections for key psychological attributes. Self-efficacy and sports injury are not well discussed in the psychological literature, although I found one study that did identify how self-efficacy declined as the fear of injury increased (McCaffrey 2014). Though this study was related to my own

research, I found in contrast that self-efficacy declined with injury *regardless* of the fear of future injury. I also made use of psychological literature exploring correlations between personality types and styles of coping (Rim 1987, 1990), even though these were not specific to the field of sports psychology. I, too, found personality played a large role in the response to injury.

In the field of weight-based nutrition science, a few key themes emerged in the literature: the prevalence and health risks of disordered eating for female athletes, the potential ineffectiveness of dieting, the health risks of dieting, and the health risks of weight stigma and negative body image. The first key piece of data from weight-based nutrition science is that the majority of female lean-sport athletes struggle with disordered eating. The National Eating Disorder Collaboration defined disordered eating as unhealthy eating patterns that reflect some of the patterns of eating disorders and can include restrictive dieting, compulsive eating or skipping meals.

Disordered eating and over-exercising can have severe impacts on the menstrual cycle and bone health (American College of Obstetricians and Gynecologists 2017; Bratland-Sanda 2013; Nazem & Ackerman 2012; Reinking 2005; Slof-Op 2017). The consensus view among researchers studying weight-loss nutrition science is that dieting does not work for the vast majority of people (Bacon 2008; Fildes 2015; Lee 2001; Stunkard 1959) and can, in fact, be harmful (Guagnano 1999; Olson 2000). The field of anti-weight loss nutrition science has emerged to combat the influence of the weight loss industry on nutrition studies, as the diet industry uses both money and bias to publish pro-weight loss results.

Another theme in the weight-based nutrition science is the dangers of weight stigma on health. According to one study by economists in Chicago, weight stigma affects salary, as larger

people tend to make less money than smaller people (Han 2009). Anti-diet researchers and advocates (like registered dietician and eating counselor Christy Harrison) have found that the emotional and physical trauma that exists for people in larger bodies results in worse health outcomes due to stress, inflammation, and lack of adequate care (Harrison 2019). Nutrition researchers have also found that weight dissatisfaction tends to result in worse health markers (Hunger et al. 2015; Muennig 2008; Puhl 2010), and widely-used categories of “overweight” and “obesity” are not the health hazards they are perceived to be (Flegal 2013; Guthman 2012; Kang 2006; Troiano 1996).

In this present moment, there is considerable popular literature coming from young women runners on the harmful effects of dieting and the mistreatment they experience in Track and Field, if not yet the scholarly literature. Mary Cain, who was once one of the fastest girls in the country, describes her suffering on the Nike Oregon Project running team in a video and article in the New York Times (Cain 2019). Molly Seidel, 2020 Olympic marathon qualifier, describes her struggle with disordered eating and obsessive-compulsive disorder that was cultivated in running (Gretschel 2020). Twenty-five Wesleyan University women’s cross country runners recently exposed the abuse they experienced from their coach, as they were encouraged to continue to lose weight and eat less to perform better (Parsons 2020). As more people talk about these issues it gives confidence to the voices of other women suffering, including the athletes I interviewed. It shifted my own thinking and thesis, and helped me to listen between the lines of the sports injury narratives.

After reviewing the academic literature, I found there was extensive study of illness narratives, medical diagnoses and treatments for specific musculoskeletal injuries, psychological approaches to sports, and nutrition science relating to body size and health outcomes. However, I

found no existing literature that combined all of the elements I bring together here: sports, injury, and narrative. I found that what the athletes I interviewed wanted to discuss in relation to their injury did not correspond directly with any of the approaches in the current literature. My research and thesis therefore fill a gap in previous study of these topics by adding a qualitative dimension to clinical studies and an attention to sport within the literature on illness narratives. In sports injury narratives, I present the athletes' stories as they told them, and bring the issues athletes themselves felt were most important during the injury experience to the fore. Rather than diagnosis and treatment, I found the athletes were far more concerned with the loss of identity, the social isolation that can accompany injury, and the fear of weight gain. My attention to sports injury narratives helped bring light to larger issues, such as women's health in sports and the effects of competitive capitalist values.

Chapter Overviews

In Chapter One I investigate what identity is, and how athletes define themselves through the injury process. My own injury experience and sense of identity as a runner led me to expect that other athletes would be well aware of their defining traits, and would feel threatened by injury. I used to resort to the terms "optimistic" and "resilient" to describe myself, and I was well aware of my self-defined identity as a runner, which was compromised when my injury prevented me from running. But instead I found that many athletes were taken aback by questions of identity and self-description. When asked how they would describe themselves, most of my interviewees answered with adjectives surrounding their personality or approach to the sport. When asked how they would *define* themselves, however, they did not see this differently from describing their character traits, and were reluctant to use definitive nouns for

what or who they considered themselves to be. To me, this suggested that the athletes I interviewed did not have a clear sense of their identity outside of the qualities promoted in sports and society.

I found that personality type, as well as the nature of Track and Field, were variables that come into play when constructing sports injury narratives. Chapter Two seeks to explain the values of Track and Field, as well as the varying personalities in different event groups that impact the injury narratives.

Subsequent chapters focus on a few major themes that emerged after transcribing and listening to my interviews. First was the trend for athletes to belittle or minimize the injuries they experienced in comparison to the injuries of others. Interestingly, though, the comparison was not made to a person or experience they had known, it was to an injury that they had not experienced or were not as familiar with and assumed to be “worse” in some way. This made me consider what, exactly, makes an injury not just bad, but “worse” than others? And why is it that athletes choose to see their injury as less than, when it is evidently very impactful on their life? I explore this idea in Chapter Three.

Half-way through the process of researching and beginning to write my thesis, I started to learn more about the Health at Every Size™ movement (Bacon 2008), the dangers of weight cycling, and the arguably racist and sexist history of what many have termed diet culture. As numerous studies have shown, there is no evidence to support the idea that weight is under individual control, and that diets result in sustained weight loss (Harrison 2019a). However, this is not popular opinion, and larger bodies are frequently stigmatized and experience oppression in American culture. The more I learned about the problematic nature of the “obesity epidemic,” the more I felt I could not stay silent when so many of my peers on the Track and Field team

struggled with disordered eating and body dysmorphia. Athletes, though concerned about performance, still live in diet culture and experience the pressures to be thin and dissatisfied in a “rebellious” body.

I trace some of the history and effects of our society’s emphasis on leanness in Chapter Four, and then delve into the athletes’ accounts of the high stakes of injury, weight gain and body-control in Chapter Five. There is a distinction between the societal preoccupation with leanness and diet culture as a specific manifestation of that preoccupation. The term “diet culture” is deployed by those who are critical of the preoccupation with dieting bodies and its effects on people. Unfortunately, I found in my interviews that the critique of diet culture and the embrace of Health at Every Size™ is not currently mainstream enough that Track and Field team members would discuss it without prompting, and talk of Health at Every Size™ can also be threatening to long-held beliefs and identities. So even after this began to emerge as a common theme in my interviews, I chose to avoid direct questions about it, and let interviewees talk about any aspect of their injury experience they wished. I was not at all shocked by what I found, I am sad to say. In a world that promotes weight loss, nearly all of my interviewees spoke about their fears of gaining weight and the dissatisfaction they felt towards their bodies.

In Appendix 2 I return to my original goal of producing a thesis that could actively help to improve athletes’ experiences and health. I offer a new perspective to approaching injury treatment for Track and Field athletes, based on what I learned from the experiences of my interviewees. I hope that if athletes, coaches and athletic directors have a more complete picture, rather than just the clinical diagnosis and treatment regimen, then the injury experience can result in fewer disordered behaviors as both athletic performance and self-identity change in the context of diet culture.

A central goal of this thesis is to move beyond the biomedical approach to injury by adding the ethnographic research of illness narratives as sports injury narratives, creating a more holistic picture of where and how injuries are experienced by specific athletes—in this case, mainly female college Track and Field athletes. The context of the injury, in addition to the medical diagnosis, impacts how the athlete experiences pain, and what repercussions the injury has on their daily life and identity. Identity is a tricky research topic, as not everyone has answers to the questions: “How would you describe yourself?” and “How would you define yourself?” I asked the athletes both these questions, and few could find answers or truly elaborate. There is caution surrounding the idea of identity, and yet it is evident that a sense of identity does exist, or else there would be no predictable behavior, no commitment to a sport, and no clear trend in injury narratives. Repeated thoughts, words and behaviors all shape athletic identity, whether or not the athlete is aware.

A second goal of my thesis is for it to be read by the Tufts Track and Field coach and athletic director, and for the defense to be attended by athletes and non-athletes alike. I do not think the sports injury experience is unique to Track and Field athletes, and the pressures of diet culture can apply to nearly anyone in the modern world who is alive and breathing. Whenever someone asks what I am doing this semester, and I say I am writing a thesis, my explanation of sports injury narratives is met with curiosity. I interpret this strong curiosity as evidence that student athletes are not only intrigued by injury narratives and diet culture, they are more deeply concerned about these issues than they let on, or perhaps even realize themselves. Given how deep-seated these tensions and anxieties are in our modern world, it makes sense that there would be concern.

I am writing this thesis at a moment where everything seems to be falling apart. Donald Trump is President, and the world is experiencing a global pandemic as COVID-19 sickens thousands, resulting in uncertainty in housing, food, and healthcare. It is easy to get lost in each crisis we face, each component that manifests from larger issues. So I preface this thesis by saying that even though I am using the perspective of women's bodies in sport, it has evolved from larger societal issues that can be witnessed in far more than just college sports. Recognizing and studying these issues matter, because without acknowledgment there can be no change. And currently woman's issues and our hyper-competitive mindset go without question, leading to oppression, inequality, and harm. This thesis is meant to not just vocalize the problems in sport, but also offer a course for change.

Chapter 1: Exploring Questions of Identity and “Becoming Well-Rounded”

In this chapter I will note some of the general factors affecting how people create an identity and how they relate to athletics and injuries. An athlete’s sense of individual identity can be deeply affected by social identities and expectations as well as family and social background, personality traits, and personal history. Biopower, too, comes into play here, creating a certain level of internalized pressure to perform and to live up to expectations. Identity is also somewhat malleable, and can contain multiple overlapping components, sometimes referred to as “dividuation” (Strathern 1991). People may rebalance and choose among their many identities.

People respond in different ways to challenges or changes to their sense of identity. Individual athletes, more specifically, may describe their qualities as if these are unique to them, but often they are not. College is a particularly “liminal” stage of life, when students’ sense of identity changes with maturation. In this stage of life, athletes—who may have entered college seeing themselves more in terms of their sport—often achieve the commonly-accepted goal for the college years of becoming well-rounded humans. This chapter explores the balance between societal influences and individuals’ need for control in creating student-athlete identities, some patterns in how student-athletes dealt with challenges to their sense of individual identity, and some of the ways that injury experiences affected the sense of self-identity and self-efficacy among student athletes.

What is Identity?

For many of the athletes I spoke with, the properties that they felt defined or described them, or allowed them to distinguish themselves from others, had to do with their sport and their involvement in it. According to the Stanford Encyclopedia of Philosophy,

‘personal identity’ usually refers to properties to which we feel a special sense of attachment or ownership. Someone’s personal identity in this sense consists of those properties she takes to “define her as a person” or “make her the person she is”, and which distinguish her from others. (The precise meaning of these phrases is hard to pin down.) To have an “identity crisis” is to become unsure of what one’s most characteristic properties are—of what sort of person, in some deep and fundamental sense, one is. (Olson 2019, no page)

As this definition suggests, identity is very difficult to pin down. It can also change, and depends a lot on what is happening both internally and externally at any given time in life. This was true of the sports injury narratives, as athletes attached sentiments relating to transition and a sense of undergoing “rite of passage” through injury in this period of their life. A clear and bounded sense of individual identity is not, however, a human universal. Individuality reflects modern and western ways of thinking, and has impacted this understanding of identity in psychology. Following anthropological perspectives, I recognize that this idea of individual identity is relevant for the athletes I interviewed, but it is not true for the world at large.

Individual Control and Social Identity

Certain descriptors of the individual identity, such as hard-working and dedicated, repeatedly came up in my interviews. These descriptors suggest a sense of force as an underlying concept, which is reflected in my interviewees' actions as athletes. Force is evident in how they train, how they push through injuries, or attempt to force their bodies to do certain things or look a certain way. For many, their identity is also the identity of sport itself. Even the most competitive, or exclusive, athletes are operating within a social context (the world of sport), and the pressures they face, even when they may see it as only a personal challenge, always have ties to a social world.

At times identity is durable and fiercely defended, and at others it is quite malleable. Identity depends on a lot of different factors, including who a person interacts with, where a person is, a person's entire life history, and what a person does every day. All of these factors make identity seem not in our voluntary control. And yet many athletes actively chose to claim specific qualities that made them an "athlete" or a "runner," and whether or not they actually participated in their sport had little to do with it. Identity is therefore both self-determined and socially generated, with plenty of gray space in between.

Developing a sense of identity allows us to differentiate between the self and others, and fills the need to specify what is unique about us as individuals. This uniqueness makes us who we are. And yet, the qualities listed by the athletes I interviewed (competitive, determined, hard-working) are not unique, far from it. They are very common. The qualities that are internalized by athletes, whether injured or not, exist due to an inherently social world. Even the most individualized sports, such as Track and Field, are inherently social because they reflect socially shared goals. They reflect the strivings of society to better the self, to achieve attributes of value,

and to develop skills such as discipline and speed that are embedded in social and cultural settings.

Every single athlete on the Tufts Track and Field team works hard, as they have already proven it by simply existing on a college-level team that consistently performs well on the division 3 stage. Every athlete is dedicated, as they have sacrificed a lot of time and energy to be on the team. (Sacrifice is a highly valued quality, as expressed by the coach and athletes during the team goal meeting, where athletes were encouraged to alter their daily life in order to best serve the team). Paradoxically, even though identity makes us unique, a large part of athletes' individual sense of identity came from these clearly social settings and relationships.

When it comes to identity and its formation, some qualifiers can be controlled, but some are not. We can sometimes shift how we are perceived by altering how we appear to others, such as gender self-presentation, but other aspects of our reality, such as skin color, are outside of our control. Other things, such as weight or body size, can only be partially altered under some circumstances. The reasons and mechanisms through which we alter our identity may be self-directed, but sometimes they may be a result of internalized social expectations. Many more fall somewhere in between pure self-design and social generation, making it difficult to precisely determine which is which. Injury exists somewhere between “in our control” and “not in our control” so in a very fundamental way, sports injury narratives and responses may be an important opportunity for student athletes to work out what they can control about their lives and what they need to let go of. This sorting process is part of the overall maturation process that happens in college, but it is heightened by injury.

It is also heightened by competition and the need for achievement as self-worth. Athletes reproduce societal restraints on identity by looking for satisfaction, if not excellence, in order to

formulate an idea of who they are. Sport is essentially a mirror of the world, where values, ideals, and skills of the surrounding society appear on the level of sport. The relationship between sport and the world is not causal, it is “synecdochic,” where sport serves as a trial for society at large, in all its complexity and contradictions. The ultimate question in sport is always: How far can I go? How much more can I sacrifice before it becomes too much? This push to find the edge, without falling off it, is seen both in training for a sport as well as in trying to live up to the expectations and demands of a modern, Western, industrial, capitalist society, with its hyper-emphasis on competitiveness, individualism, progress, and efficiency. Sport is a place of finding that edge and trying to decide who to trust, and whether to fall off or over. Because what would happen if you did fall off? If you let go of internalized and personal pressures for productivity and achievement?

Self-Efficacy and Shifting Identity

An identity crisis occurs when someone becomes unsure of the most fundamental properties or characteristics of one’s deepest self. In other words, “who am I?” I found that most athletes could not answer this question directly. In the interviews, when asked how they would describe or define themselves in general, they would laugh out of uncertainty, struggle to answer, and some would fail to answer at all. So does this mean the athletes were already going through an identity crisis? Is that perhaps why they relied on descriptors that were not unique but actually described most people on the team in general?

Transitions are inherent not only in sports, but also in the lives of college students in general. There are other life changes happening during this time of life, but injury can heighten the identity crises that occur with maturation, contributing to making self-descriptors uncertain.

For example, how can you be an athlete if you are not on a sports team? This uncertainty results in various coping mechanisms, as explored in Chapter Three, as well as the need for an argument to support a current identity or to create a new one.

Self-efficacy is a relatively large player in self-identity. Self-efficacy can be defined as the ability to produce an intended and desired result on one's own. For high performing athletes, their identity in sport may be closely tied to their success. When they are no longer able to perform, either during the injury or after it has healed, their self-efficacy may also decline (McCaffrey et al. 2014, p. 30). The link between self-efficacy and self-identity is based on the athlete's belief that they had to run a certain time, throw or jump a certain distance, or look a certain way. As soon as any of the above changed, which is apt to happen in the eyes of the injured athlete, the athlete's sport-based identity may also be threatened.

But how does self-efficacy relate to self-identity? According to the psychological literature, people tend to regulate their behavior to be consistent with their goal identity, and they will continue with the behavior in order to maintain that aspect of their identity (Baumeister & Vohs 2003, Stratchan 2007). The more the individual assimilates the behavior into their identity, the more effort and persistence they will put into the behavior (Ryan & Deci 2003). It may seem to make sense that if I can do something, I must be a doer of that something. But this logic does not need to be true, as it is entirely possible to do something without associating and defining the self as an owner of that thing. And yet the idea of "I do therefore I am" was prevalent amongst the athletes. They tended to associate what event they did with who they were: "I am a thrower, I am a runner," rather than "I throw, I run," etc.

Following this same logic, if an athlete is no longer able to do something, they are no longer the actor of that something. But again, it was not always the case for the injured athlete.

Many athletes still considered themselves to be an athlete, or a specific type of athlete, even while they were unable to engage in their sport or training. For example, a runner who I will call Miranda used to run every day. She got injured (as I will discuss in more detail in Chapter Five) and is not able to run as frequently as before. However, she came to the conclusion that she could take long breaks from running, years even, and she would forever be a runner. Miranda substantially altered her definition of a “runner” in order to keep her identity constant by allowing herself days, weeks or even months off from running.

Miranda’s perspective sharply contrasts that of Michael, whose story we will hear in Chapter Three. Michael sees himself as an athlete right now because he is on a sports team. But once he graduates, he will no longer be an athlete regardless of how physically active he is, because he is no longer on a sports team. For him, the identity of athlete can only be applied to those on a competitive team. Michael kept his definition constant, and was willing to shift his own identity in response.

At least temporarily, the threat to “being” held true for some athletes. Injuries are hard because they threaten ability, and also how the athlete spends the majority of their time and who they interact with. Injuries can result in a total life overhaul, and this can lead to an identity crisis. Identity is strongly entrenched not just in what we do, but what we do well (Petosa, Suminski, & Hertz 2003).

Some of the athletes I spoke with chose to shift their identity to other things they did, including things they did well. Interestingly, not everything needed to be done well (for example, one athlete got involved in photography and identified as a photographer, even though their photos rarely got published), but for many, it seemed that something must be done well in order to prevent the panic and sense of loss that comes with lack of self-efficacy. As long as they still

excelled in school, for example, some of the athletes seemed to be okay with being slower on the team. Their identity then shifted to highlight the student half of student-athlete.

This brings up another aspect of how identities can shift: identity is multitudinous. Marilyn Strathern has suggested that even in Western societies that assume individuals to have a single, bounded identity, people should actually more accurately be seen as “dividuals” within different networks of relationship (Strathern 1991, p. 584). Within these multitudinous identities, individuals may mix and emphasize different aspects of their self at different times of life based on what is happening around them.

The Role of Injury in Identity Formation

Some of the same qualities that lead to success in athletics, such as competitiveness, a determination to push past limitations, and toughness may actually get in the way of athletes moving beyond seeing themselves as simply an athlete. Sport encourages an optimistic attitude, which is great on the surface, but it neglects the need for additional ways of handling an identity crisis. As discussed in Chapter Three, obsessive tendencies can be harmful for the athlete, because it prevents them from dealing with the identity crisis at hand. There are many benefits to participating in sports, including the seemingly endless health benefits of exercise. But the demands of competitive athletics, especially at elite levels and perhaps especially in specialized sports like Track and Field, can become all-consuming, to the point where friendships, goals, and life purpose become centered around the sport. In many ways, this is not healthy, and prevents the development of other identities.

In this way, an identity crisis that results from injury can potentially be beneficial. The athletes I spoke with agreed that injury can result in a good hard look at the self and the

attachment to the sport. Some athletes saw the injury as something to overcome in order to return to their own “real” identity, but a few athletes were able to shift their focus to exploring how to define themselves in other areas of their life. One athlete, Ari, knows she will always be an athlete because to her, being an athlete means being someone who pursues exercise and sports with the desire to improve. She loves to be active, so she knows she will always be an athlete. However, since getting multiple stress fractures in her feet, she has been able to formulate an identity away from running:

I'm really curious. I really like to learn and question things in the world. I just always want to be learning about the world, about things that I'm interested in. I want to help people, I really care about making the world a better place whether through small actions or large actions. I think it can be as simple as just making one person's life better or it can be something great like inventing something that reduces the amount of plastic that we use or helps save species or whatever. I am really creative. I definitely think in ways that other people don't necessarily think. My brain makes some really strange connections. And I'm grateful that I am that way. Movement is really important to me. I really like to be active and I like to be moving around and I don't do so great with sitting still.

Ari was the only athlete who was able to answer with this much detail the question of how she would describe herself. She seems to have put a lot of thought and work into cultivating an identity for herself outside of running. But even though she had a well-established identity as creative and curious, she was also one of the athletes most threatened by her injuries. This threat level had less to do with the injuries themselves, and instead had to do with how much she invested in running. She was the only athlete who was able to recount specific races and injuries, complete with what place she finished the race in. She has also gone to an extreme to prevent

future injuries; she stretches and rolls, which is pretty common for all the athletes, but she also takes fish oil, does “lots of cross training,” goes to a massage therapist, wears specific shoes, and does strength-based exercises multiple days a week. Her response to the injury was more extreme than the other athletes because she was not comfortable letting go of the “runner” facet of her identity. This made her search for other ways to hold onto her old self.

For Damion, a Track and Field athlete who is also a football player, injuries have not seemed as threatening as they did for Ari. He has experienced more injuries than he could count, some that still give him pain years later. But in our interview, he said that his sense of identity has stayed pretty constant through all the injuries, and he described himself as good humored and positive. Unlike many of the other athletes who used optimism to minimize their injuries, Damion simply did not think about his injuries that much. He enjoys sports, competing, and improving, but injuries do not threaten this enjoyment. He mentioned that his mother died when he was in elementary school, which has helped to give his life perspective. Perhaps this is why injuries have little impact on his identity. Losing a parent so early in life could have pushed him toward more mature dilemmas and questions earlier than his peers. So perhaps Damion had a painful head start in the progression toward becoming a more mature human.

In the healing process and return to sport, some of the athletes I talked with had regained their original identity, while others had shifted to a new one that accommodated injuries and allowed for change. The athletes who resisted their injuries tended also to experience social isolation and fears of weight gain. The athletes who adapted to their injuries were able to find a new sense of normal with an altered sense of identity, without letting external expectations delineate their whole sense of self. There is nothing wrong with hard work or dedication. But if the messaging of sports, and by extension the whole of society, is to hold onto the idea that excellence brings

self-worth, it prevents a more well-rounded identity formation. Internalizing blanket values of competition and achievement can get in the way of athletes developing a wider range of coping strategies that can help to balance their sense of a unique self with the values and expectations of their society.

Chapter 2: Sports Injury Narratives among Track and Field Athletes: Specialization, Subjectivity, and Isolation

In this chapter I explore how sports injury narratives reflect different identities and athletic specializations on the Tufts Track and Field team. After considering the makeup of the team itself, I examine differences in the injury experiences of pain and social isolation, which may be influenced by event group and personality as well as by gender. Athletes on the Track and Field team self-identified as either a power/speed athlete (sprinter, jumper, thrower) or endurance athlete (distance runner), and their injury narratives reflected their event group mindset. Some athletes pushed through pain, whereas others adapted, which also tended to adhere to event group standards. However, regardless of event group, athletes experienced a decline in sense of self-efficacy and tended to feel isolated after an injury.

Power/Speed vs. Endurance Narratives

In my interviews, I found that for all of the athletes I spoke with, the initial diagnosis was more important to the athlete narrative than the pain experience. In most interviews, the athlete began by naming the injury, as well as when it occurred, but there were noticeable differences between event groups. Sometimes they would explain what they were doing when the injury occurred, but not always. The distance runners would recount the race or practice that led up to the injury, but many others did not explain the reason behind the injury unless prompted. For the distance runners, overuse injuries such as pelvic, leg or foot fractures were most common. And yet, they had explanations for the injury besides just overuse. One athlete I spoke with described how running in one direction on the circular track, rather than switching between clockwise and counterclockwise directions, was what resulted in her knee pain. Quite a few athletes attributed

their injuries to not stretching or foam-rolling enough, or using old shoes or the wrong type of running shoe: “I have to buy different types of shoes and think about what shoes I wear in general.”

The power/speed (sprints, jumps, throws) event groups, however, were less likely to perceive injury as something that was under their individual control. Multiple sprinters experienced hamstring injuries, but they did not elaborate on the initial injury process unless prompted, and even then, their recounting was often similar to the interviewee who said: “The only [injury] I can think of would be pulling my hamstring, or tweaking it. It wasn't a full pull. That wasn't too bad, took a couple weeks to recover.” There was no explanation as to why the injury occurred when or how it did; all that mattered was the diagnosis, as if it spoke for itself. Notably, not a single power/speed athlete mentioned anything about running in old shoes. The power/speed event groups recounted the rest period post-injury, whereas distance runners tended to look retroactively for an explanation of their injury, as well as actionable steps they could then take to prevent the injury from reoccurring.

The distance runners attributed their injuries to something they could theoretically control, whereas power/speed athletes saw injuries as something that just happens, as part of the sport. For the distance runner, regardless of whether or not the perceived cause of injury is proven in scientific literature, it seemed to have an impact on future behavior. They become particular with the type of shoe they buy, how many miles they run, and how much stretching or core strengthening they do. This obsession is built into the injury recovery and prevention process from then on.

Since this is unique to the endurance event group, however, I do not believe obsessive behavior is caused by injury, as all event groups experience injury as a common factor. I am

hesitant to generalize and say that all distance runners have obsessive tendencies, but in the words of one of the athletes I interviewed, “people who run a lot are usually really controlling... it takes a certain type of person.” Another athlete described the level of control she witnessed in her teammate: “she organizes her RX bars by color, and when we run together, I have to force her not to run more mileage.” I also found that the athletes who believed they had control over their bodies tended to express a lowered sense of self-efficacy when they experienced injuries. Self-efficacy was threatened either when performance declined, or when athletes felt they were not in control of their bodies anymore.

If certain personality types are drawn to different events on the team, it would explain why the distance runners I spoke with had drastically different injury narratives than those of power/speed athletes. I cannot help but notice the parallel between controlling injury predictors and controlling what one eats in order to control body size, the subject of Chapter Five. The sport of distance running even requires a separation between mind and body, with the mind overcoming what is often perceived as a rebellious body in order to push through fatigue. It does not seem like a coincidence to me that the injury narratives that describe controllable factors as contributing to injury belong to the athletes that are also the most affected by body dysmorphia and the diet culture-induced desire to control body size.

The sport of Track and Field requires one thing: always doing more. The more you train, the thinking goes, the more you can push through pain, and the more you can achieve. This elicits more obsession, more time and thought centered around working harder than your peers. However, different event groups require different training and mindsets, which is why the endurance athletes in particular may be more likely to push through injury. For the endurance athletes, losing the ability to run elicits the fear of weight gain and deconditioning that then

dictates their daily thoughts. Meals become another aspect to control in lieu of mileage, and social relationships built around running may also suffer because of this single-minded focus on training. Track and Field encourages teamwork, exercise and resiliency, but especially for the distance athletes, it can also cultivate the never-satisfied mentality that heightens the stakes of injury.

Subjectivity and Responses to Pain

As part of the interview, I asked athletes how the injury impacted their daily life, if at all. Nearly all listed different activities that resulted in pain: dressing, walking, sitting too long, or walking up or down stairs. Even though pain was present during many daily activities, the athletes all claimed their injuries were not very serious. I explore this more in the next chapter, but I mention it here to emphasize how daily pain was not a significant part of the injury narrative, as they chose to minimize the importance of pain-free activity.

The injury itself is experienced differently for each individual. Pain, though generally thought as an objective measure of injury severity, is not experienced the same by everyone (Dekkers 2015). I witnessed this in several of the athletes I interviewed, but one in particular. This athlete played multiple sports, as most Track and Field athletes once did, including football. He had by far the greatest number of injuries compared to any other athlete I spoke with, and yet he had little concern for their impact, severity and, in particular, pain.

Because he was always in a light mood, it was impossible to tell that he experienced pain with nearly every motion. While lifting one afternoon, he casually mentioned how he was unable to run due to a bruise on his heel. When I asked him how that happened, he said he didn't know,

but that it had begun many months ago, around the same time he injured his rib. His rib, apparently, could have been broken, but he never got it checked.

Immediately my clinical mindset attempted to diagnose his heel injury, as a bruise should have healed by now, but a stress reaction or fracture would likely still result in pain. This difference, however, was not important to him. And as painful as a broken bone may be for many people, he simply avoided the most painful exercises and ignored the pain during others. His pain was inevitable because he believed injuries were a part of sports that he would always have to live with, and yet in adopting this mindset, his pain became secondary to other experiences. His awareness of the pain itself seemed to be reduced due to the magnitude of injuries he experienced.

Pain may be influenced by gender expectations, so perhaps he chose not to admit pain in order to uphold the persona of masculine toughness. When he fractured his wrist, he continued to throw shot put, and refused to take anti-inflammatories or rest days when his female peers did. The gendered expectation of pushing through pain was “often subliminal,” as one male athlete described, but “definitely there.” There were not enough athletes who participated in my interviews to draw conclusions about gender differences based on their injury narratives, but I recognize the influence of masculine toughness, which may reflect how gender influences the injury experience. Regardless, the response to pain is different from the experience of pain, and it did not adhere to strict gender binaries.

There is a difference between how the athletes experienced pain, in the sense that some felt more pain than others either because the injury was more severe or because they genetically were more receptive to pain, and how the athletes responded to pain. Some athletes felt pain and chose to avoid actions that would elicit the pain, which resulted in them cross training or

adapting how they put on clothes in the morning or sat in class. This was common of the power/speed athletes, who continued to attend regular practice hours and cross trained to mimic their normal training volume.

Some athletes chose to ignore their pain, and would continue their training or daily life activities with gritted teeth. I found this to be more common of the male athletes, as well as the distance runners, who would frequently experience aches and pains that they chose to run through. This was also found to be true in the psychological literature, as the individuals who strongly identified as distance runners were the most likely to continue the identity behavior (running) at all costs (Stratchan 2007). One of the athletes I interviewed had a severe cough, and yet still arrived at 9:30am on a Sunday to run ten miles. Another athlete experienced severe calf pain after a race, but decided to run into Cambridge without any thought on how she would get back should her calves seize up again, which they did. This gray space, where athletes decide whether to avoid or ignore pain, is what may be influenced by gender or more likely by event group and their corresponding personality types. Endurance female athletes, the self-described “Type-A” athletes, were far more likely than female power/speed athletes to grit their teeth as they attempted to control their bodies.

Isolation due to Injury

For many athletes, the treatment involved relative rest, which in practice meant adaptation. The injuries experienced by Track and Field athletes are often of the lower limb, which are nearly impossible not to use in day-to-day activity. For this reason, the simplicity of the treatment protocol (rest) does not align with the lived experience of needing to use these parts of the body in ordinary life. In theory, treatment would be to simply not engage in the actions

that cause pain and continue to irritate the injury. However, this often means not being able to walk, climb stairs, or bend the knees. This also means the athlete cannot engage in the practice as scheduled, and the hours of the day normally spent with the team become empty. This seems to produce complex narratives surrounding the repercussions of the injury, as it is no longer isolated to practice time. I found this to be especially true of the distance runners, since their normal outlet of control (exercise) was taken away by injury. Injury treatment is absorbed into daily life, the activities that build or break relationships, and the identities that rely on these actions.

The most common complaint about injury, far more than the pain level, was the inability to relate to teammates. Isolation is a common result of injury, especially season-ending injuries, and can lead to loss of identity (Claytor 2019, p. 30). Athletes who base their identity not just on the sport they participate in, but also on the level of competition at which they perform, experience a greater loss of identity. However, social isolation is common regardless of how talented the athlete is. Teammates bond from a sense of shared suffering during workouts and meets, but the injured athlete does not experience this as their injury is theirs alone. This underscores the importance of the injury narrative, as otherwise the athlete would have no way to share their suffering.

The injury narrative, like the illness narrative, is social (Kleinman 1988). Pain and injury are inherently isolating, even if there are others with the same or similar injuries. Never can suffering be truly understood by another. Despite the experience of injury in a social world where sacrifice and achievement for the sake of the team are emphasized, the injury itself occurs in only one athlete's body. However, when teammates or coaches attempt to empathize and listen, the sense of isolation is minimized (Claytor 2019, p. 27). The longer the injury recovery

time, the more likely the athlete is to feel like they do not belong on the team, and the more likely they are to experience a sense of loss of identity.

Part of the reason why long-term injuries increase the risk of isolation and identity loss is because of the performance decline that results from deconditioning. The fear of deconditioning and performance loss may be minimized with cross-training, and may help athletes to maintain their identity as a “good” athlete, which is why nearly all injured athletes would cross train. However, there was a stark difference in the approach to cross training between distance runners and power/speed athletes. Most power/speed athletes would cross train during practice, and would attend dinner with their peers after. This allowed for some level of socialization and normalcy despite the injury. For distance runners, on the other hand, they tended to cross train whenever it was convenient, and often for far longer time intervals than they would normally run. This interfered with their relationship to the team, yet provided an outlet for their need for control.

Chapter 3: Athleticism, Injury, and Maturation: Minimization in Sports Injury Narratives

The injury experience involves pain management, adaptation, isolation, and threats to self-efficacy and self-identity. Knowing this, injury is serious and has severe consequences. And yet, the athletes I interviewed frequently chose to minimize their injury severity and compare it to what they deemed more serious injuries. This may be a way of coping with the threat of injury, and may be influenced by the presence of other teammates and competitive expectations.

I begin this chapter by summarizing some of the sports injury narratives I collected, grouping them based on their tendency to minimize injury. I then seek to understand why athletes minimize, how their relationship to sport changes through the injury experience itself, and how the level of competitiveness expressed by individual athletes impacts the injury experience. In doing so, I hope to emphasize an important aspect of injury: the desire to return to competition as a way to cope with the effects of a potentially shifting identity.

Athlete Narrative: “It’s not that bad”

Nearly every interview I conducted began with the athlete saying: “I haven't really been injured much,” “I don’t know if that counts,” “I’ll see if I can remember,” or “I haven't had any major ones [injuries] I would say.” However, after some thought, the athlete would begin to remember their injuries and I would reassure them that yes, that counted as an injury, and yes, it was severe enough to list in our discussion. I offer a summary of a few athletes’ injury narratives that display the tendency to minimize blow. I have changed all names and identifying features for the athlete’s’ privacy. However, I have not changed the gender of the athletes, as gender seems to be a factor in how the athlete narrates and responds to injuries.

Jessie – radial head (wrist) fracture

Jessie was sprinting in a high school track meet when he broke his arm. One of the delights of indoor track is that it comes with a chance to barrel into walls after finishing the 60 meter dash. The wall was lined with pads, but this did not protect Jessie's arm from striking the wall in a compromised position. Jessie was in a cast for 6 weeks, and continued to have limited strength and mobility, as well as discomfort and instability, for the next year.

When Jessie began his narrative, he opened it by saying: "I haven't been injured." Apparently, he had forgotten about his fracture, cast, and rehab. However, once he began telling the story, he admitted he really enjoyed sharing it because he felt it showcased his goofiness. He takes pride in his optimism and positive attitude. Despite his good nature, he allowed that having a broken arm made many aspects of his daily life more difficult, especially getting dressed. He was also disappointed that he was not able to compete that season and felt pressure to return to his prior level of competition in order to measure up to his teammates.

Perhaps most notably, he described his fracture as not as serious an injury as, say, an ACL tear. For this reason, he claimed it was not that bad, and this is why the injury felt like it had occurred a long time ago. Consistent with his optimistic attitude, he also described injuries in general (except ACL tears, though, which he admitted are devastating) as "a big proving point for an athlete if they get hurt, because it's a roadblock in their performance. But oftentimes, it's a place to overcome an adversity."

Emily – stress fracture in foot

At Emily's high school, being on the Track and Field team meant running every day. No one ever cross trained if they didn't have to, partly because their gym was not equipped with the

appropriate bikes and ellipticals. So for two and a half years, Emily ran every single day. She stopped menstruating from over-exercising, but she did not realize this was a problem, as many of the girls on her team had also lost their periods. To them, not having a period meant they were running enough to improve and be a “good” runner. It was a rite of passage.

Of course, losing a period is neither healthy nor sustainable, and can lead to weakening of the bones (Nazem & Ackerman 2012). According to Emily, the lack of a period combined with the high impact of daily running led her to develop a stress fracture in her foot. At the time she found this “tragic,” and felt isolated from the team as the only way to cross train was on a bike in a small gym, separate from the rest of the team. She entered college dealing with the same injury, believing that since the injury was “never a level of pain that was, like actually just awful,” it was not very serious.

Now, Emily’s perspective on injuries and athletics has shifted. She used to believe she “had to” work past the point of health in order to be fast enough, but she now recognizes the need to treat herself kindly. Whenever she has tendonitis or injury flare ups, she does strength and balance exercises as treatment, and does not run every day anymore. She also realizes that she “doesn’t need to be a superstar to feel fulfilled” by exercise, and is now able to participate in sport just for the enjoyment of it.

Gabriella – back pain

Gabriella has been throwing competitively for seven years. Once she came to college, she started throwing a new implement, weight. Weight is a 20 lb ball with a little handle, and is thrown by spinning heel-toe to build up momentum and speed before releasing it. Last year she

started experiencing back pain after throwing, possibly because the implement was so heavy. Interestingly, she had forgotten about the injury until our interview.

When asked about her pain level, she explained that her back would hurt during the day, and she frequently felt the need to twist and crack it while sitting in class. Despite the pain while sitting in class, she described her injury as “not that major.” She does not throw weight as often as she did before, and she believes this has allowed her injury to heal.

She explained that injuries “humble you,” and she strives to be a humble athlete. She knows that there is always someone better or more talented than her, so even if she performs well, she doesn’t like to tell people about her achievements. She also doesn’t push through injuries anymore like she used to, and now either tells a coach that she is in pain, or stretches and applies heat to treat her injuries.

Michael – piriformis syndrome

Michael began his interview with: “I haven’t had any major ones [injuries].” However, in the past few years of college Track and Field, he has strained his hamstring twice, pulled his pectoralis major muscle, and had piriformis syndrome, which is an injury where a gluteus muscle spasms and can irritate nearby nerves. Michael ended up dealing with piriformis syndrome for at least six months. For his hamstring and pectoralis muscle injuries, he had to take a few weeks off from lifting to let the muscles recover.

Because he took only a few weeks off due to his injuries, he felt that being injured as a thrower was not as bad as being injured as a sprinter, because he could still largely participate in the sport. However, one of his hamstring strains occurred while on the team spring break trip to San Diego, where the team both trains and engages in team bonding activities. During this time

they were either training, which included lifting, or being active in the form of beach games, surfing and sailing. Because of his hamstring strain, he was not able to participate in many activities, and was “bummed” he couldn’t engage in much of the team trip.

When Michael began experiencing back pain, it “crept up on him” so he didn’t think anything of it at first. He just accepted the pain and continued to engage in his normal activities. Once it became so uncomfortable during class to the point where he couldn’t focus, he went to a physical therapist and was able to find immense improvement. Now, he’s mostly forgotten about the injury, despite feeling significant pain for six months. To him, what makes an injury “severe” is the amount of time it takes to heal, the pain level, and the resulting change in lifestyle in order to manage it. Apparently, this was not the case with his injury.

Michael does not feel changed by his injury, though he does believe he has matured with time. He does not see being an athlete as important to him anymore, and instead feels free to choose whether or not he is on a sports team. He acknowledges that after he graduates, he will be active in other ways, but will not be an “athlete.” And he is okay with that.

Nikki – torn ACL

Nikki was playing basketball in middle school when she landed a jump and tore her ACL. She got surgery, but was under the impression that it would completely repair her injury and she would return to sports in no time. In reality, she was in a wheelchair for two weeks, crutches for five days, and was not able to play basketball ever again. She felt like her whole athletic career was over. Though she may have been able to return to basketball eventually, she did not take rehab seriously at the time, and has been afraid ever since of reinjuring her knee.

When she entered high school she felt like she was letting her friends and family down by not participating in a sport. Since she was tall, people assumed she was an athlete, so she wanted to join a team to live up to their expectations. She became a thrower on the Track and Field team, and soon learned to enjoy the sport.

Today she regrets not having taken rehab seriously, as maybe she could have played basketball again. She continues to have pain even to this day. She once dreamed of going pro for basketball, so the ACL tear literally shattered her dreams. And yet, she believes “everything happens for a reason,” and she wouldn’t be where she is now if it hadn’t been for the injury. In addition, she claims that her ACL tear wasn’t as bad as others’ ACL tears, because it *actually* ends their career. Her injury wasn’t as bad, she claimed, because she found another sport. Time, she said, helps to figure out the next steps.

Recognizing the Gravity of Injury: Athlete Narrative Outliers

May – chondromalacia patella (runner’s knee)

Before college, May belonged to a variety of sports teams, including basketball, swimming and equestrian. When she came to college, she discontinued her previous sports and only participated in Track and Field as a sprinter and hurdler. The sudden specialization in sports soon led to overuse injuries, and she developed a stress fracture in her foot. She was unable to compete for the season, but felt like she remained a part of the team. Even though she had to cross train and was unable to run, other athletes also would cross train, and everyone was close by in the practice area. After practice they would all eat dinner together in the dining hall, and at meets she would cheer on her peers.

Over the summer she developed runner's knee, and experienced pain during nearly all exercise, including walking. At the time she was doing a stressful internship, so losing exercise as a stress-relieving tactic was difficult. Since she was nearly always in pain, it was impossible for her to forget her injury. She had a constant reminder that she was not able to do what she enjoyed. As a result, she was more stressed during that summer than normal.

Since recovering from both her injuries, she has realized how integrated the human body is, and how every part of the body can influence another part, regardless of how far apart they are. If something is tight, overworked, or weak, it can lead to injury elsewhere in the body. She is now more appreciative of her health, and feels grateful that she is able to exercise anytime she trains.

Annabelle– pelvic stress fracture

Annabelle was in the midst of her cross country season when she began having pain in her pelvis. At first she thought it was a pulled muscle, so she increased her stretching and rolling, and expected it to go away. At first it seemed to get better with cross training, and she was able to race one of the post-season races. However, after an easy run one day, the pain became unbearable. She decided to get an MRI, and found out she had a pelvic stress fracture.

Annabelle described the injury as being very disappointing, as she had big hopes for her season that all came crashing down. She put in a lot of hard work, and it all felt like it was for nothing since she was no longer able to run, and she knew recovery would take a long time. She has been cross training intensely ever since, but she finds biking a lot more difficult than running due to the pedal resistance, and it also is boring. For this reason, her injury has had an impact on her emotional wellbeing.

However, since she was going abroad for the spring semester, she does not have anything to train for, and therefore does not have to rush to get back in shape. She can take her time and manage as best she can in the spring and summer before she will have to race again. Despite the lack of pressure to return to running, Annabelle struggled with being so separate from the team even in the weeks before she left. She rarely saw or talked to anyone on the team, and would just listen to music while cross training for many hours a week.

Why Do Athletes Minimize?

If the preceding narratives are reflective of athletes more generally, the majority of athletes minimize their injuries. However, there were a few athletes among my interviewees who recognized the gravity of their injuries and the impact it had on their life. They did not dismiss the mental and physical burdens of pain and loss of a beloved activity. The contrast between the two approaches to injuries helps to determine what may cause minimization in the first place, and what factors may result in not everyone doing so.

The major differences between the five athletes who minimized and the two athletes who did not were their location and current status on the team. Those who minimized their injuries, Jessie, Emily, Gabriella, Michael, and Nikki, all experienced their injuries while participating in the sport at the time, while surrounded by teammates. Their rehab and recovery also occurred during their sport season, and they often would adapt their training as best they could while their teammates carried on with the regular training and competition.

May and Annabelle, on the other hand, were not actively a part of the team for the majority of their injury experience. May's injury occurred over the summer when she was not with teammates, and she had more flexibility and less guidance over her training. Annabelle's

injury occurred towards the end of her season, but the entire recovery process occurred while she was studying abroad. Neither May nor Annabelle was actively engaging with the team for the course of their injury rehab.

This isolation from the team appears to have had an impact on the injury process. First, the athlete was overall more pessimistic about their injury, and more realistic in terms of the recovery process and severity of the injury. May recognized how her mood had declined as a result of her injury, and how her stress increased because she was not able to run. Annabelle also expressed her disappointment about being injured, especially since cross training was more difficult for her than running. The sense of increased effort that resulted from the injury experience held true for the athletes that did not minimize their injuries.

On the other hand, the five athletes discussed above were more likely to recognize that athletics were only a small part of their life. Or perhaps they developed a new relationship with sport as a result of injury, and therefore the injury was not as threatening to their life as a whole. By remaining a part of the team, and continuing to cross train in a competitive environment, the athletes were able to maintain some level of self-efficacy and adapt to the changes caused by their injury.

Jessie described injuries as an opportunity to overcome adversity, Emily no longer feels she needs to be a “superstar,” Gabriella sees injuries as humbling, Michael doesn’t feel the need to be an “athlete,” and Nikki believes everything happens for a reason. The perspectives I heard from the athletes who minimized were more optimistic in general, and they often used the injury as a way to see the world or themselves in a new way.

Minimization as a Coping Mechanism

A 1990 psychological study investigates the relationship between personality traits and coping mechanisms. The authors found that optimism was associated with minimization as a coping mechanism, most commonly in women (Rim 1990). Both optimistic men and women tended to use substitution and seeking succorance (desired social support) as coping mechanisms. I reference this study to highlight the potential correlation between optimism and minimization in athletes, as they remembered their injuries as being less than severe. For the athletes who minimized their injury experience, all of them appeared to be optimistic based on their vocalization of the “opportunities” of injury.

Additionally, another study by the same authors showed that neurotic traits were found to be associated with minimization as a coping mechanism (Rim 1987). The tendency for neurotic behavior in distance runners was vocalized by two of the athletes, and implied by others: “it takes a certain type of person... type A, obsessive [to be a distance runner].” If this is true, the correlation between neurotic behavior - defined as an automatic, unconscious effort to manage deep anxiety that is often drastic and irrational - and minimization held true for many of the athletes. The athletes who sought to control small details about their shoes, training, and body engage in what I consider to be semi-neurotic behavior, which I define as a drastic and automatic, though not completely irrational, effort to manage deep anxiety. These same athletes would also minimize their injuries, making them something to overcome and to control. It was rare for athletes to recognize the wider implications of injury, such as larger health problems and disordered eating, even though these factors likely contributed. I discuss the impacts and prevalence of disordered eating in Chapter Five.

For the athletes who did not minimize their injuries, they tended to seek succorance, but were not able to find it as they were isolated from the team at the time. There is no evidence to say that lack of optimism results in social support as a preferred coping mechanism. However, the isolation and general life stressors that May and Annabelle were experiencing at the time of their injury may have lowered their overall mood, and therefore their reduced levels of optimism at the time may have altered their perception of the injury. Rather than seeing it as something temporary and controllable, they may have been more likely to feel stuck in their life circumstances and also with their injury.

Impacts of Competitiveness on the Injury Experience

Paradoxically, the athletes who were able to separate their core sense of identity from the team and their sport as a result of their injury were also the athletes who remained closest to the team and sport through the injury process. It may be easier to say “I don’t need to be an athlete, a good runner, etc.” when the sport has not completely left the athlete’s life. They claim they are able to function without it and pursue other interests, but they still hold onto the sport. The athletes who were separated from the team geographically experienced more difficulty with the injury because they had no social support or reassurance that they were not alone. The athletes truly *were* on their own, as they were not immersed in the competitive environment that encouraged team involvement regardless of physical ability. This social isolation also encouraged maturation as they went through broader life transitions from youth to adulthood, something that was already taking place in their passage through their college years and was perhaps heightened in the case of study abroad, which is often a kind of rite of passage in itself.

The competitive environment, in this sense, can be both beneficial and harmful to the athlete. It is beneficial by allowing the athlete opportunities to stay physically close to the happenings of the team through group cross training, meals or watching competitions. The proximity allows some athletes to realize that their injury has not completely overhauled their life, and they can still interact with the same people or practice at the same time in the schedule. This quality also shows the complex nature of sport itself, particularly team sports, as both competitive and collaborative. This ambiguous, liminal space may help facilitate transitional periods in life or shifts in identity.

On the other hand, the competitive environment can be harmful, as there is an expectation that athletes will recover within a certain timeframe, and will return just as well-prepared for their event, if not better. The athlete may therefore delay rest in order to compete through their injury, exacerbating symptoms and its severity. They may also cross train obsessively, thereby worsening disordered behaviors, body obsessions and fatphobia. And if their injury reoccurs, or they find their performance has declined after they have returned to competing, they may experience a second threat to their self-perception. This second threat is that their injury is, in fact, severe, and they must alter other aspects of their life. They would need to find new areas that bolster their self-efficacy, other activities for their social life, and new methods for stress relief. This adaptation is not easy, and therefore offers a serious threat to identity, as the transitional processes are incomplete or resisted.

Neither minimizing nor accepting appears to be healthier than the other. Both eventually lead to shifting identity as a result of injury, but they occur on different timelines. Whether the athlete identifies with the injury or not, they will continue to experience injury, and their future responses may vary. There is not an end destination where the athlete no longer minimizes,

accepts, fears, or denies injury, and therefore there is no end destination of an unchanging identity. Both sport and injury can play important roles within the larger process of becoming a mature person, which is not a once-and-for-all event but a truly ongoing process. Experiences of both competing as an athlete and dealing with sport-related injuries can be central to this process, or occasionally hinder it.

Chapter 4: Weighing Heavy: Questions of Discipline, Stigma and Body Image

In my own injury experience, my first concern was weight gain if I stopped my high level of activity in order to heal my stress fracture. This is a disordered mindset, yet unfortunately it is not unique to me. I began my research asking solely about what athletes did when they were injured, and how it affected their ability to engage with the sport and team. I soon learned, however, that there was a deep desire among female athletes in particular to talk about a widespread, though often unmentionable, fear - the fear of weight gain. In fact, six out of nine female athletes I interviewed, and others in casual conversation, expressed this anxiety.

This fear is not unique to athletes. According to a 2017 study published in the *International Journal of Public Health*, women are more likely to be afraid of weight gain than men, with 53.9-74.5% of men unafraid to gain weight compared to 25.7-46.2% of women (Slof-Op 2017, p. 916). According to the same study, the fear of gaining weight was most prevalent in women aged 16 to 25, at 73.2-74.3% (Slof-Op 2017, p. 916). This fear may or may not result in the development of an eating disorder, but regardless, the fear of weight gain itself can be harmful to health. In a 2008 study of 170,000 nationally representative subjects, the difference between perceived ideal weight and actual weight was found to be a better marker of health than actual BMI (Muennig 2008). In other words, body dissatisfaction is associated with worse quality of life and certain aspects of physical health, regardless of body size (Mond 2013). If my interviews are an accurate reflection of the overall female contingent of the Tufts Track and Field team, the great majority of these athletes are afraid of gaining weight if they feel their body does not meet the perceived ideal, and they are also at an increased risk for developing adverse health conditions that may actually contribute to injuries.

Understanding the implications of this requires a deeper exploration. Why is it that so many women struggle with body image? One possible answer lies in the long history of attaching moral values to idealized body images which have been unevenly applied in gendered ways in the modern world. More recently, “diet culture” is a new way of naming this existing phenomenon, focusing specifically on the harmful and widespread effects of diet trends, the idealization of thinness, and the effects of seeing dieting and self-restriction as moral values. Christy Harrison, an anti-diet registered dietician and certified intuitive eating counselor, defines diet culture as:

a belief system that views being thin as a mark of health and moral virtue, promotes weight loss as a means of attaining higher status and better health, demonizes some foods while elevating others and oppresses people who don't match culture's image of health and beauty. (Harrison 2019b)

Diet culture has little to do with what a person eats, and far more to do with the idea that in order to be worthy, one must self-restrict and control the food one eats. As a result, American women in particular feel perpetually unworthy and “immoral” due to misogyny and societal fear of women's power, as our male-dominated culture seeks to limit the physical expression of female power through body size (Chernin 1981; Harrison 2019). As shown in the scientific literature, at least 90% of people who diet regain lost weight or more within five years (Fildes 2015; Gardner 2007; Howard 2006; Stice 1999; Coackley 1998; French 1994; Stunkard 1959).

The inability to find success in weight loss is widely perceived as a lack of self-discipline, resulting in the demotion of women to a lower social status if they do not meet the thin ideal (Saguy 2013). Many women in modern societies perceive their bodies as acting against them in a never-ending war, which results in them spending massive amounts of time, energy

and money on dieting. It is worth noting that the diet industry is worth a record \$72 billion (Wood 2019). This hypervigilance with food and body can distract women from their purpose, pleasures and their power, and can disproportionately harms people with already lowered socioeconomic status who cannot afford to partake in the diet industry and therefore are seen as lesser by their peers.

The term diet culture has been adopted by dieticians and health professionals involved in the Health at Every Size™ movement, which rejects the view that heavy bodies are inevitably unhealthy. Health at Every Size is part of the “fat acceptance movement” whose proponents work against anti-fat bias. I use the term diet culture here as an umbrella term for social pressures to be thin, which I link to Foucault’s concept of biopower and ideas about how these idealized body images become internalized moral norms. But I also recognize diet culture per se is only a piece of the problem and seek to give a larger perspective. Diet culture reflects many aspects of capitalist, competitive and patriarchal systems, where leanness is often linked with control, power and modernity. Sport can also reflect and reinforce these values, and thus acts as a microcosm for societal attitudes and behaviors. Before returning to my interview findings in Chapter Five, I will first trace some of the history of diet culture in the modern world as well as some of the physiological and psychological outcomes of dieting on health.

Biopower

Everyone has heard that they should eat more vegetables, eat less processed food, and exercise more. There is probably not a soul in the United States who is not aware of the “obesity epidemic,” and perceive messages in the media as encouragement for smaller bodies in the name of health. However, fewer people are familiar with the terms diet culture or biopower, which

offer critical perspectives on those accepted ideas. The influence of ideas about morally right ways of eating has a history and an impact. This history explains how restrictive eating and self-control came to define virtue. Diet culture today acts as an internalized moral norm, instilled in the United States as a self-inflicted mode of control. It influences how we create our identity, as we're doing it within structures of thought and power and bodily discipline that we tend to internalize long before we're really aware of it. This self-reproduced, self-regulation through food restriction and fear of weight gain represents the operation of modern biopower.

Michel Foucault traced the shift away from absolutist power to modern bureaucratic nation-states. He thought that the former operated by holding the power to kill subjects at will, and the latter by regulating and disciplining people's productive and reproductive energies. He describes this new form of power, which he termed biopower, in his book *History of Sexuality, Volume 1*:

The disciplines of the body and the regulations of the population constituted the two poles around which the organization of power over life was deployed... [biopower] directed toward the performances of the body, with attention to the processes of life - characterized a power whose highest function was perhaps no longer to kill, but to invest life through and through. (Foucault 1976, p. 139-140)

The investment in life Foucault references is a vast, diffuse type of power that has become so ingrained in modern life that its presence is no longer recognized. It has no center, no clear entity who benefits, yet some people do benefit while others suffer.

Biopower is not a completely external influence. It is a subtle combination of external and internal pressures, which makes it hard to define and recognize. However, biopower is not completely evil. It is also what allows large-scale, modern societies to exist without total disorder

and in the absence of a single central authority. Biopower gives a general idea of what is right and wrong, without an external rulebook. This form of power affects different people differentially. Those who are more willing or able to play by the rules of biopower tend to end up being the ones who benefit while others are excluded, oppressed, or made examples of. There is also a large gray area between the beneficiaries and the oppressed, and between those who hold power and those without it. A key facet of biopower is that people tend to be unaware of how they are self-reproducing its disciplines. In terms of diet culture, a lean, disciplined, productive body tends to be the favored one because these bodies supposedly visibly embody values of competitiveness and efficiency. Foucault saw these qualities as foundational to modern, capitalist societies, and they are also foundational in sport. Sport reflects and expresses the values and some of the conflicts of modern capitalist societies, making sport a location where we can identify and perhaps even change some of the problems that modern societies produce for people living within them (Besnier, Brownell, and Carter 2018).

Origins of Diet Culture

Sociologist Melanie DuPuis describes the start of diet culture in the U.S. (although she does not use this term) with the start of the nation itself. Dupuis describes how “the Founders asked: ‘How do we instill a sense of virtue, or self-control, into free American citizens?’ They saw individual self-control, ‘virtue,’ as the discipline that would prevent a democracy from turning into a chaotic mob” (DuPuis 2015, p. 18). With the Calvinist idea of self-restraint as the definition of virtue, early American ideas about what to eat centered around the idea that there was a perfect diet, and eating a perfect diet would result in perfect citizens and a perfect nation. This was a message aimed at men, as women were not full citizens at the time. But women were

the keepers of the house and were tasked with providing a morally approved diet, and so they certainly absorbed and disseminated the messages about proper behavior as well.

Before and during the Civil War, northern ideas of moral purity based on a “good versus bad” dichotomy led influential reformers such as Sylvester Graham and William Alcott to advocate a similarly good versus bad way of eating. They wrote of “the evils of overeating and advised avoiding rich foods such as condiments and sugar” (DuPuis 2015, p. 44). The diets of today are revolutionary only in the sense that they have been in existence since the Revolution, and they have always been based on control. The idea of food purity is linked to the attempt to purify and control society through environmental pressures, perceived morally correct behavior, and self-imposed regulation. Even though Dupuis is discussing the U.S., particularly the northeast whose Puritanical ways of thought were different from those of Southern states and Europe, the underlying moral messages are the same as the ones Foucault identified in France. In both locations, the modern nation-state instills moral messaging in its citizens as part of a delicate balance of control, participation, and productivity.

By the early 1900’s, consumers became dependent on emerging disciplines like home economics and nutrition science that created new kinds of knowledge about eating. This, linked with both increasing government regulation of food safety and enduring ideas about moral purity and self-discipline, resulted in a desire for “pure” food (DuPuis 2015, p. 77). Eugenics advocates latched onto perfect eating to portray ideal bodies and morally “good” Americans. Even the popular cereal brand, Kellogg, “linked ideas about dietary efficiency with ideas of racial purity” (DuPuis 2015, p. 83). With the discovery of germs and the immune system, striving for food purity flourished even more. This has impacted later diets, as detoxes and probiotics have more recently become the preferred way to “cleanse” the internal body (DuPuis 2015, p. 140). With

World War I, the search for the perfect diet continued as a way to fuel soldiers. The perfect diet, which became the “American diet” of meat, dairy and some vegetables, offered a way for all citizens to embrace feelings of national superiority based on their diet (DuPuis 2015, p. 88).

The 1920’s brought the rise of youth and rebellion, with the straight and slim lines of the flapper dress that starkly contrasted the voluptuous Victorian figure (Harrison 2019, p. 32). As women gained more freedom, including the right to vote, reproductive freedoms, and the right to work outside the home, “standards of ideal beauty became significantly thinner and the pressure on women to adhere to those standards increased” (Harrison 2019, p. 33). This is not coincidental. Some, like Naomi Wolf, have hypothesized that dieting and body concerns require so much time, energy, and money that often women are not able to focus on changing the world or fighting the patriarchy (Wolf 1991). Beauty ideals and the industries that fuel them actively work to limit female power.

In the late ‘90’s, The National Institutes of Health (NIH) created the obesity epidemic. I say “created,” because one day, millions of Americans were considered healthy according to the NIH standards of measurement. The very next day, they woke up overweight or obese according to the BMI (Body Mass Index) standard, which is traditionally used to measure the relationship between weight and height. The NIH was pressured by the World Health Organization to change BMI standards to match their own, which were written by the International Obesity Task Force, or IOTF. The IOTF was primarily funded by two pharmaceutical companies, Hoffmann-La Roche and Abbott Laboratories, both of which made weight loss drugs (Moynihan 2006). By lowering the BMI standards for being overweight to 25, and obese to 30, the diet industry gained millions of customers who “needed” to lose weight based on their new BMI. However, even though the NIH chose to lower the BMI standards, the evidence they provided in their report

actually showed evidence in support of raising the standards, not lowering them, as there was not a statistically significant increased mortality risk until BMI was greater than 40 (Troiano 1996). Since then, BMI has been useful for providing uniform codification of body weight and height reporting, but it is not useful for expressing body fatness and leads to unfounded fear and prejudice surrounding overweight (Nuttall 2015).

BMI, of course, has its issues as a measure of health, and many health professionals today are no longer in support of its use. One reason for BMI's lack of scientific validity is its dubious history. BMI was developed in the 1830's by an astronomer named Adolphe Quetelet as a statistical exercise to test whether the laws of probability could be applied to populations (Harrison 2019, p. 35). Additionally, the BMI equation was developed using the population available to Quetelet, which was white Europeans. Therefore, the original BMI equation does not account for differences between ethnic groups (Bhanoo 2009). Even though there is evidence for different BMI cutoffs for different ethnicities, the cause of the increased risk of diabetes and hypertension for non-white Americans may be due to socioeconomic status, food availability, and race-based stigma more than body weight alone (Hsu 2015). What's more, a 2013 study found that people considered to be overweight by the BMI standard actually had the lowest mortality risk (Flegal 2013)! Another study found that half of overweight individuals and 29% of obese individuals were cardiometabolically healthy, compared to 30% of normal weight individuals (Tomiyama 2016). Additionally, a 2006 study found that overweight and obese adults had a decreased risk of complications from atherosclerosis compared to normal weight adults with atherosclerosis (Kang 2006). In other words, being "overweight," according to the BMI, may actually be protective for at least some people.

According to those who adhere to set-point theory, the body is not biologically primed for weight loss. It really wants to stay within its genetically determined set-point weight that tends to fluctuate within a range of 10-20 pounds when left to its own accord (Muller 2010; Bacon 2008). However, when the body perceives a period of starvation, or diet, it does everything it can in order to maintain or even gain weight, rather than lose it. In this view, the reason weight loss attempts often results in net weight gain is because the body responds by slowing the metabolism, altering hormone levels, and increasing the energy extracted from food. The body is doing its job to protect itself in the face of starvation, which is how it perceives dieting. What's more, weight regain may occur even if caloric intake stays the same (Bacon 2008, p. 48). The solution to health woes, according to diet culture and often health professionals, is to diet. But this is perceived cure may actually be a cause of weight gain, amongst other possible causes.

Weight Stigma and Corresponding Health Risks

The following sections may seem like a detour, but they are relevant to the fear of weight gain that many athletes on the Tufts Track and Field team experience. Weight stigma and the idea that weight gain leads to adverse health outcomes both encourage the fear of weight gain and reinforce disordered behaviors. The idea that fat is bad instills fear of natural body changes in women, and the perceived risks of weight gain on health offers excuses as to continue disordered behaviors that theoretically promote weigh maintenance. In this section I explore the prevalence of weight stigma in our society, and why it is crucial to become aware of its harmful effects.

The support for weight loss is based on the assumption that being overweight or obese is the cause of adverse health outcomes and diseases. This is not, in fact, true. Contrary to popular

belief, there is little evidence that weight itself is the cause of disease, only an association between them. There is an association between high body weight and disease, but correlation does not equal causation. Physiologist, nutritionist, and researcher Linda Bacon notes seven different studies that show the relationship between activity and longevity is stronger than the relationship between weight and longevity (Barlow 1995; Blair 1999; Church 2004; Farrell 2002; Gulati 2003; Lee 1999; Sui 2007). Since larger people are less likely to be active due to fear of judgement and harassment based on their weight, as well as the difficulty in finding comfortable exercise clothing for larger bodies, the correlation between body size and mortality risk may be influenced in part by increased sedentary behavior.

Additionally, since attempts at weight loss nearly always result in regaining weight within two to five years, efforts at weight loss are may instead result in weight cycling (Brody 1992; Crawford 2015). When the weight returns, people often blame themselves rather than the diet, and attempt to diet again. The repeated cycles of weight gain, weight loss, weight gain, has tremendous effects on the body. Even just once cycle of severe weight fluctuation can damage blood vessels and increase the risk for cardiovascular disease (Olson 2000). One study showed that obese woman who had dieted had high blood pressure, whereas obese women who had not ever dieted had normal blood pressure (Guagnano 1999).

Since heavier people are more apt to try to diet due to pressures from peers and health professionals, the increased risk of cardiovascular disease that is traditionally associated with larger bodies may be due instead to weight cycling (Bouzas 2019). Indeed, a recent study showed that weight cycling can account for all of the excess mortality risk that is normally attributed to being in a larger body (Flegal 2013). When health professionals encourage their

patients to diet in an attempt to improve their health, they may actually be further harming them (Strohacker 2009).

Another reason for the supposed increased risk of adverse health conditions in larger bodies is due to the avoidance or delay of medical treatment. Since many larger people fear discrimination based on their weight, they may not seek out medical treatment until their condition has progressed. And once they do go to the doctor, they may not receive legitimate health interventions because many physicians withhold treatment, saying they need to lose weight first (Amy 2006; Olson 1994). This difference in treatment, as well as biases, discrimination, assumptions and fat-phobia, can all be defined as weight stigma.

It goes without saying that stigma is stressful, and chronic stress is not good for the body. But weight stigma, more specifically, has been shown to increase the risk of mental health conditions including disordered eating, negative body image, low self-esteem, and depression (Puhl 2010). Weight stigma does more than just impact emotional well-being, though. It also limits the life and career opportunities for people in larger bodies. A 2009 study showed that people in larger bodies are less likely to be hired compared to thinner people, and when they are hired, they are paid less (Han 2009). Since this creates additional stressors, it makes sense that weight stigma has also proven to be an independent risk factor for diabetes, heart disease and other chronic diseases, regardless of body size (Hunger 2015). The stress associated with stigma, as well as the perceived personal responsibility to control one's own weight, increases allostatic load to the point where "the health risks posed by weight stigma are greater than what the researchers called 'poor-quality dietary patterns'" (Harrison 2019, p.137).

In summary, the stress of weight stigma, the corresponding desire to change the body, and the harmful impacts of weight cycling contribute to poor health, and possibly even more than

eating a standard American diet, for all its nutritional flaws (Vadiveloo 2017). It is also worth noting, especially in the context of athletes, that exercise is great for health but does not have a large impact on body size. The fear I witnessed in injured athletes at Tufts was the fear of weight gain. However, body size is mostly determined by genetics, and cannot be manipulated long-term, except for a very, very small portion of the population (Stunkard 1990). This inability to change the body applies not only to diet-based intervention, but also exercise. In a study of 40,000 women, the difference in weight between extremely active women and very inactive women was found to be 0.4 BMI point, which is equivalent to 3 pounds for a 5'4" woman (Lee 2001, p. 1452). The fear of weight gain that many athletes experience after injury is unfounded, but most athletes do not know this.

Thin Privilege... Not Immunity

Thin privilege refers to the opposite of weight stigma. People in thinner bodies are privy to all kinds of benefits that larger people are not. Clothing sizes are more available in stores for thinner bodies, dating may be easier and accompanied by less ridicule, and thin people do not have the financial costs of buying two seats on an airport or movie theater. It is highly likely that most people on the Track and Field team experience thin privilege, but this does not mean thinner people are immune to diet culture's messaging, as my own research among Tufts Track and Field athletes – particularly females – shows. Although this is nothing like a clinical trial, the qualitative data that I gathered, along with my own experience on the team for four years, provides honest narratives of athletes living through diet culture and injuries which can illuminate the complex ways that weight stigma can shape eating and body perceptions even of those who may be at a socially accepted weight.

One athlete noted that when she experienced an injury that kept her from running for a month, she was more concerned with weight gain than she was with performance decline. Not being able to run was discouraging, it threatened her identity, and had the long-term impact of shifting her perception of the sport and her goals. She said that our interview was the first time she said aloud that she was also afraid of weight gain while injured, and she suspected many other athletes felt similarly. She noted that when certain athletes were injured, the negative comments they made about their bodies increased. These were very thin people, she explained, and added that any weight they gained was probably healthy.

Athletes on the team monitored each other's weight closely and did express concern that others might actually be too thin, but this existed alongside concerns of gaining weight themselves. This was echoed by a number of athletes. Identifying others who "should" gain weight came easily to the athletes, but speaking aloud that they, too, were afraid of weight gain was more difficult. It feels taboo to admit fat-phobia or negative body image, but it is clear that the athletes fixated on bodies in general, and that how they altered their behavior when injured was shaped in part by diet culture.

A previous assistant coach on the Tufts Track and Field team once said to me, "Everyone has eating issues" when I expressed that I was feeling low about my body. She meant it as a way of dismissing my concerns. It is true that many other people feel as I did with negative body image as a result of diet culture, but just because something is common, it does not make it acceptable. It is concerning, and unacceptable, for athletes of any body size to fear injuries largely because they are afraid of weight gain. This fear often results in negative body-centered thoughts, compensatory behaviors including excessive cross training or choosing to run with more clothes to hide the body, and restrictive or obsessive eating habits. For many Americans,

and I would argue the majority of Americas, diet culture is a subconsciously agreed upon reality. The ideas on which this mutual agreement is based are not accurate, but it is widely held, and therefore it encourages disordered eating and behaviors and negative body images.

The alterations to behavior and mindset that accompany fatphobia and body dysmorphia are a direct result of the circulation of biopower within modern society. The diffuse nature of biopower, and its manifestation in diet culture, influences what people eat, where they shop, how they exercise, and what they think about. Imagine the collective hours of productivity lost in this country by the people who cannot think of anything besides their body and the need to shrink it in order to be worthy. A dieting brain is also a hungry, possibly sick brain, unable to question pertinent social issues such as inequality, poverty, racism, violence, government corruption, or anything outside of the self. What a dieting brain can do, however, is spend money on the diet industry.

Chapter 5: A Case Study, How Diet Culture Impacts the Injury Experience of Female Athletes

This background on the emergence and logic of diet culture helps to explain why female athletes in particular struggle with disordered eating and body dysmorphia, and how diet culture reflects the operations of biopower. Studies show that a significant percentage of female lean-sport athletes have disordered eating patterns, which I also found in my conversations and observations of the women on the Tufts Track and Field team (Bratland-Sanda 2013; Reinking 2005). The prevailing norms on the team downplay this as a potential or actual problem, as in my own observation the most successful runners are severely underweight and many engage in disordered behaviors. Individual athletes negotiate these pressures and tensions in different ways, as shown in the athlete narratives in this chapter. I will return to my own experience with diet culture's impact on my injury experience, and will then turn to a few athlete narratives that focused on their own diet culture stories.

After struggling with an eating disorder in middle school, I discovered high school cross country running, which became both a motivator to recover as well as a way to continue disordered behaviors in a state of what is sometimes called pseudo-recovery. Pseudo-recovery occurs when someone with an eating disorder is weight restored and has stopped treatment, but still engages with disordered thoughts, eating and exercise behaviors (Keski-Rahkonen 2005). Even for athletes who are never clinically diagnosed with an eating disorder, their disordered behaviors are very similar to the state of pseudo-recovery because they are able to pass off many of the disordered behaviors as "healthy" or for the purpose of their sport. In my experience of this gray area, I continued to count calories using the app My Fitness Pal (which in my opinion does no good for anyone and no young person should ever be counting calories). I ate enough to

maintain my weight, but did not have a regular menstrual cycle and severely restricted what foods I deemed safe to eat.

Fear of weight gain, and the disordered eating that results, manifest for athletes who are already relatively thin. Even though they do not experience the shaming effects of weight stigma, the fear of what would happen to them if they were ever to gain weight results in a state similar to pseudo-recovery. The competitive pressures of sports, which are so reflective of larger pressures to be competitive and productive in our society, potentially contribute to the development of unhealthy behaviors and obsessive thoughts.

The injury I struggled with for most of high school was shin splints, but my behaviors surrounding food and exercise were so disordered that I would frequently run through the pain. I was more motivated by the fear of gaining weight than by the pain of the injury. The trouble with shin splints is that they can eventually progress to a stress fracture, which eventually happened for me. So in the moments of such severe pain that I feared I had broken a bone, I would cross train for up to two hours in an attempt to burn as many calories as I would running.

I did not trust my body to maintain my weight, and I was afraid that if I stopped running, I would continuously gain weight until I reached the “dreaded” destination of “fat.” To be clear, I was severely underweight and have never been anywhere close to even the BMI definition of overweight, so I write from a place of thin privilege. If BMI had not been so widely used in my own life, and instead my health was measured using a non-weight-based tool such as RED-S (Relative Energy Deficiency in Sport), perhaps some of my fears would have been alleviated. However, this is often the same perspective of the female athletes I competed with and against, as they, too, experienced both thin privilege and disordered behaviors.

My fear of weight gain was so severe that when I fractured my right tibia in the fall of my senior year of high school, my identity crisis had just as much to do with a changing body as it did with my involvement in sport. This aspect of the injury experience, the fear of weight gain, I never mentioned to anyone. It was taboo because I thought I needed to be perceived as fine, just as many other athletes also are afraid to talk openly about their fears surrounding food and exercise because they do not want to admit they are not okay.

Even though there are many female athletes who are unwilling to elaborate on their food and body struggles, they would turn to other people who had, most recently Mary Cain. Mary Cain is a female distance runner who used to run for the Nike Oregon Project, an elite professional running team. In 2019 the New York Times published an article and video of Cain explaining her experience with the Project, and the mistreatment she suffered. Her coaches at Nike told her she was too heavy numerous times, encouraged her to take extreme measures to lose weight, and criticized and humiliated her based on her body in front of others: “After months of dieting and frustration, Cain found herself choosing between training with the best team in the world, or potentially developing osteoporosis or even infertility. She lost her period for three years and broke five bones. She went from being a once-in-a-generation Olympic hopeful to having suicidal thoughts” (Cain 2019).

Other female Track and Field athletes have also recently exposed the damaging effects of extreme weight-loss approaches. Wesleyan University’s women’s cross country team recently published testimonials of body shaming by their coach and the injuries that resulted from weight loss attempts. One runner wrote, “[the coach] informed me that I was ‘overweight for a runner.’ He told me to keep a food journal, recording daily the amount and types of foods I consumed. At this time, he also asked me to refrain from talking to others on the team about our meeting,

telling me that these types of conversations could stress and worry others on the team” (Parsons 2020). Molly Seidel, who finished in second place in the women’s Olympic Marathon Trials in 2020, has also spoken up about her struggles with an eating disorder that were amplified by running: “When you get to college, it’s almost like this echo chamber where you see other women excelling in the sport with very low body weight. I think the collegiate structure of running is great, but in a lot of ways is super harmful and not necessarily the most positive environment for girls, especially as they’re coming into their bodies as women” (Gretschel 2020).

Several members of the Tufts Track and Field team referenced Mary Cain’s story as a way to explain how they feel about their bodies, showing that many female athletes feel that Mary Cain is vocalizing the experience of women in Track and Field at all levels. The female athletes I interviewed believe they experience a culture that promotes weight loss in order to succeed, and do not know how to speak up about their struggles. The underlying message that weight loss leads to success in running is emphasized by the fact that some of the fastest girls on the team appear underweight. I share two interviews in this chapter that spoke directly on this issue of weight loss as a way to succeed, and the fear that injury will lead to weight gain.

Athlete Narratives on Diet Culture

Eliza – sprained ankle and “feeling fat”

On the first day of college cross country, Eliza sprained her ankle. She ended up being unable to run for months, and felt disconnected from the team as a result. College represents a complex, transitional phase of maturing as a young adult, with various rites of passage based on the student’s many identities and activities. Eliza expressed this, as she felt like she didn’t know who she was in college, and losing a piece of her identity was difficult. She had to learn to invest in other aspects of her life, such as hobbies or school work.

Eliza also noticed a shift in her body image as a result of her injury. Since she could no longer run, an activity that improved her mood and got her outside, she found her mood declined and she began to see her body differently. She prides herself in having a relatively positive body image, so it was hard to feel like she was not living up to her previous mentality. She noticed she no longer wanted to take her shirt off during practice to run in only a sports bra as most distance runners commonly do.

She told me that she also noticed changes in her teammates when they got injured. They seemed to be overworking themselves with intensive cross training rather than resting and letting their injuries heal. They also started to make more negative comments about their bodies. Before her own injury, Eliza was very aware of the harmful impacts of body negativity. However, this did not make it any easier when she got injured and began to worry about gaining weight.

Looking back now, Eliza realizes that when many distance runners get injured and take time off from running, their bodies may not change or gain weight as a result. But if they do, it is likely healthy. She sees her peers as thin to the point of bad health, and believes that when they gain weight during an injury, it is likely because their body needed it.

Eliza was one of the few athletes I spoke with who did not engage in disordered behaviors. She is also more informed about diet culture than some of her peers, so she is often able to separate her own thoughts and feelings from the negative messaging many women receive about their bodies in our society. If Eliza, who was generally well-protected from diet culture, still grew insecure about her body and changed her behavior as a result, then her more vulnerable peers likely experience even worse body dysmorphia.

What Eliza told me about her conversations with her peers supports this finding. Though most of the suffering happens inside the mind with unspoken self-criticism and fear, some of the female athletes still vocalized some of their disordered thoughts to teammates like Eliza. The athletes who experienced injuries and who were not able to run would then vocalize self-deprecating thoughts about their body. Whether or not weight changes were occurring, the descriptor of the body as “fat” was used by the athletes with a negative connotation as a *feeling*, and as a way of expressing that they were struggling. They would then respond by cross training obsessively, claiming it was to maintain fitness, when the real motivator was the fear of fat. One athlete who asked to speak to me after I had concluded my interviews admitted that she cross trained for 3 hours after learning she had a sacral stress fracture. I have a sense that she felt the need to talk about this previously-taboo topic with someone who was writing about it. This further proves the significance of athlete narratives and the encouraging effect they can have on other athletes voicing their concerns and working for change.

Fat is truly a neutral descriptor, but both the word and the physical reality are conflated with undesirable characteristics, including laziness, ugliness, and inefficiency, that contrast with the values of our society. I use it here because it is the word choice of the athletes, and I believe it exposes their fears and true motivators for disordered behaviors. “Fat” refers to a type of tissue

that plays a crucial role for survival in our bodies. The internalization and reproduction of diet culture has demonized fat, and female athletes, as well as others, now use the term “I feel fat” as a way of expressing fears surrounding weight gain, and that they are wrestling with disordered thoughts and behaviors. It is both a call for help, as it often leads to reassurance from peers that they are not fat, and a way of safely sharing their feelings without having to make any changes.

Part of the reason why the fear of weight gain during injury is not openly talked about by athletes may be because it is perceived as a marker of severely disordered behavior which would then result in an intervention of some kind, and then forced weight gain. I perceived it as a red flag for an eating disorder when I experienced injury, and therefore I did not share it because I did not want to return to treatment, as I felt I “should” have been fine. Even though some female athletes feel bodily discontent, or even hatred, they may not see an alternative to disordered behaviors because the fear of weight gain is so strong. So instead they express feelings of “fat,” and then continue with food and exercise obsessions.

Eliza’s example of not wanting to take off her shirt during practice is more revealing than it may seem at the surface. Many female athletes with whom I’ve trained with over the years have expressed similar sentiments. I, myself, felt like I could only run shirtless if I was underweight. Interestingly, I had an overall negative body image, but I was able to recognize my thinness and ran in a sports bra in order to prove myself as worthy through my thinness. Being underweight is perceived as a qualifier to run shirtless for female athletes struggling with body dysmorphia.

Miranda – femoral & foot stress fractures

Miranda has always been tall. She is long and lanky, and for much of her life she never worried about what she looked like. Many people would comment on her body, so when she entered middle school and stopped growing taller, she began to worry about what people would think if her body ever changed. Being around smaller girls in college, too, exacerbated her worries that she was too big.

During the spring semester of her freshman year, she experienced pain in her thigh. After an MRI, she found out she had a femoral stress fracture. At the time this didn't surprise her, because she had jumped right into hard training after winter break. But she soon learned that femoral fractures are relatively rare, especially due to exercise, because the femur is the strongest bone in the body. This was a warning sign she did not fully acknowledge until the following fall, when she began experiencing pain in her foot. For a while the pain was tolerable and she could run through it. But when someone accidentally kicked her in the foot, she was in so much pain she was unable to walk. This was her second fracture in a year.

The back-to-back fractures made her realize that there was something else wrong in her body. Despite the lack of concern from doctors who did not even attempt to find something else wrong, Miranda knew her disordered eating had contributed to her injuries, as the cessation of menstruation, referred to as secondary amenorrhea in the medical community, contributes to weakening bone tissue and 10-20% less bone mass density (Nazem & Ackerman 2012).

Looking back, Miranda remembers that all through high school, she wouldn't snack. She would eat a pretty big lunch, but she would go through her day hungry, believing it was fine and good to be hungry - that the feeling of hunger felt good. She would avoid drinking beverages that had calories, and would try to cut out foods wherever she could.

Now, Miranda tries hard to eat more, but surprisingly has not experienced any weight gain. She expresses how crazy this feels, and how disappointed she was that she wasted six years of her life worrying about what to eat, when in reality her body has stayed exactly the same. She also recognizes that it is not normal, realistic or healthy to expect a woman's body to look exactly the same as it did in eighth grade. It is supposed to change and gain weight, not be 100 pounds forever, and that is a good thing.

Miranda expressed her frustrations that there is little talk or action on the team surrounding disordered eating and body image struggles. She said she has been open about her struggles, and other teammates have been too, but the conversations have not gone anywhere. And there continues to be comparison and unhealthy behaviors on the team.

Miranda attributes much of the disordered eating on the team to the fallacious idea that lower body weight leads to faster race times. This results in fatphobia often being spoken as a fear of losing progress or "fitness," but in reality, body weight and fitness are perceived as the same thing to the athlete. There is an association between BMI and race times, but bodyweight has not been shown to be the sole cause of faster running. Most studies look at male runners, who have very different physiology and body fat requirements than women, and race times can be more accurately predicted for woman based on previous personal best performances and training volume (O'Loughlin 2018).

Miranda believes that injuries can actually turn out to be helpful for overcoming disordered eating. She sees injuries as not good, but at the very least a necessary wake-up call to an unhealthy body. She wishes that the team had a clear action plan so that if someone is struggling with disordered eating or other unhealthy behaviors or thoughts, something can be done. The trouble right now is that the fastest girls on the team have very clearly troubled

relationships with food, their bodies and exercise. But nothing is done because they have so much success in running. This replicates the patterns in Mary Cain’s testimony and that of the Wesleyan women’s runners, who found that they were encouraged to continue to maintain unrealistically low weights. If they were unsuccessful in running, they were blamed for also being unsuccessful in weight loss. When they experienced injuries caused in part by lower body weight, they have been ignored or—worse yet—encouraged to diet even more.

There is a culture on the Tufts Track and Field team that expects anyone who gets injured to cross train a lot and then come back even faster. But Miranda sees this as unrealistic and unfair. She explains an alternative: “What if you get injured, and you’re like, okay. And you’re just okay. And you’re going to be healthy and you’re going to be fine.” She recognizes that, “this is D3, none of us are getting paid for this.” Miranda found respite from the pressures of sport, as the division-three level of collegiate sport does not give athletic scholarships and is far less intense than division-one. Miranda’s strategy of pushing back against the misplaced demand for thinness was to reduce the importance of Track and Field overall. She put athletics into perspective as just one aspect of going to college rather than the be-all and end-all, which is part of the process of maturing and gaining perspective in college. Miranda illustrates that becoming well-rounded often includes letting go of things that perhaps initially seemed all-consuming.

Additionally, Miranda expressed how “tricky” disordered eating can be, since it can so easily be hidden. She could eat a lot at meals with friends and then not eat between those meals, so it appeared she was eating enough. Even if someone does not have a full-blown eating disorder, it does not make them immune or okay. Disordered eating is far more common, and just as dangerous, if not more, because it often goes untreated. The studies I was able to find on

the subject estimate about 25% of female “lean”-sport athletes have disordered eating patterns (Bratland-Sanda 2013; Reinking 2005).

However, I argue these statistic are very conservative, because the methods most often used to identify disordered eating only investigated disordered eating with the intent of weight loss. As I discovered in my interviews, many athletes did not explicitly say they wanted to lose weight, but rather they wanted to eat to improve performance or control their body. Much disordered eating, I found, is with the purpose of weight *control*, often accompanied by fear and a warped understanding of one’s own body as the enemy. Therefore, I argue that disordered eating probably occurs in female athletes at more than 25%.

Despite feeling like she is beyond disordered eating and that she no longer struggles with it, Miranda admitted that she is afraid of fat and weight gain, and she also called the dining hall food “bad,” as though it was immoral, because it was cooked in canola oil. This exact complaint was reiterated in two other athletes I spoke with. This is an example of disordered eating, even though she does not have the intention to lose weight. Miranda still gives food moral values and does not allow herself to eat from certain establishments, which also impacts how social her meals and team involvement are, and she is afraid to gain weight.

Miranda wishes there would be more open discussion on the team of disordered eating and shared struggles. She found it helpful last year when previous teammates admitted to struggling with body image or disordered eating, and believes it would be helpful for others to hear, too. She expressed that other teammates have shared similar views with her and she wishes there was a clear action plan for disordered eating on the team. Currently, nutrition education is the main “treatment”. I take this into account in Appendix 2, where I lay out an alternative approach.

As a result of her injury, Miranda now feels less constrained by the identity of “runner.” She believes she will always be a runner, regardless of how much or little she does run. She also enjoys other activities now, especially lifting, as she can see and feel the progress. She finds the flexibility in training, the acceptance of changes in performance, and support from her boyfriend in eating more have made the biggest difference for her.

Injury, Weight Gain, and Identity

Miranda and Eliza are more aware of the impacts of diet culture on their injury, mindset, and self-perception than some of their peers. However, their identities are still affected by the misogyny and hyper-competitiveness that make themselves felt within our society. These factors weigh heavily in the way they understand their identities of “runner” or “athlete.” This shows that despite the progress some athletes have made with identity development and disordered behaviors, it is still difficult to separate the self from society. The fear of weight gain does not go away after the injury process, and this places a particularly damaging limit on how much identity is able to change for female athletes.

The loss of a menstrual cycle for female athletes is also common, as multiple female athletes I spoke with lost their cycle or had irregular cycles as a result of running. In the medical community, the loss of a menstrual cycle is understood to be dangerous for long term health. However, for the athletes who are underweight or over training, the loss of a period is relatively common, convenient, and can even be seen as a marker of high performance. Recent studies have reported the prevalence of clinical disordered eating at “16–47% in slender build female athletes compared with 0.5–10% in the general population (male and female)” (Committee on Adolescent Health Care 2017, no page). Additionally, “In women who participate in sports that

emphasize aesthetics or leanness, such as ballet or running, the prevalence of secondary amenorrhea can be as high as 69%, compared with 2% to 5% in the general population” (Nazem & Ackerman 2012, p. 302). One of the authors of this study, Dr. Ackerman, is also the physician for the Tufts Track and Field team.

For female athletes, menstrual cycles are used as a way of measuring health and safety in sport. However, if over two thirds of lean-sport athletes have lost their period, there is evidently not enough being done to support female athletes through the body dysmorphia they experience, nor treatment of disordered behaviors. Because sport is so entangled with societal demands to compete, excel, and win at all costs, the health of the athlete suffers. The fear of weight gain often prevents athletes from recovering a healthy menstrual cycle, and their identity may also be affected as their body changes. What does a “runner” look like? There is a general consensus that a runner is lean, and for women lean may not actually be healthy, as evidenced by the loss of a period. However, when an athlete is not lean, their identity may come into question as they no longer look the part.

Diet Culture: A Gendered Issue?

The hyper-competitiveness exemplified by sport also tends to reproduce masculine ideals and models of success. One result of this hyper-competitiveness has resulted in a recently popular topic, concussions, which are especially high profile in the bodies of young male athletes. Many concussions occur at a time when young athletes are supposed to be coming of age and maturing, whether in high school or college. It raises the question, “what are we willing to do to win?” There has been pushback in sport as concussions are taken seriously, resulting in rule changes, research and greater awareness (Weibe 2011). But the response to disordered eating and injuries in female Track and Field athletes has not matched that of concussions, even

though they are just as common in Track and Field as concussions are in other sports, if not more. So why has it been so hard to recognize the pain that women are going through?

The impact of diet culture, and all the heavy baggage that comes with it, is indeed a gendered issue. Men and women have different physiology, different responses to training, and different internalized moral norms. Women also have different health markers and a higher body fat requirement, and can develop severe health problems if they lose a regular menstrual cycle. Additionally, the relationship many women have with food is so unhappy and unhealthy that it often results in these severe and noticeable health issues. Men, on the other hand, do not struggle with their relationship to food as much as women do, according to one male runner I interviewed.

However, there are exceptions to this. Despite the mostly female narratives I gathered in my own research, one male distance runner described how he felt like he did not meet the standard of what cross country runners “looked like,” because he was too bulky. He brought up the concept of “what fast looks like,” and how this results in body insecurity for men if they do not meet that standard. Coaches and teammates would make subtle comments about someone being too large, or would joke about teammates being fat even though they were far from it. They would judge each other based on whether or not they looked “fit,” which really implied thin. And for the men who struggle, they are often too uncomfortable to talk about a “women’s problem” with their peers, resulting in an equally inadequate response. Current ways of monitoring athletes’ health, for both men and women, are failing athletes and causing additional problems. Both men and women should be talking about body image concerns, otherwise the issue goes inadequately addressed in all athletes.

The fact that these conversations are happening, to some extent, suggests that we may have gone too far in sports. This thesis occurs in an era of post #MeToo responses, where phrases such as “toxic masculinity” are now a part of public discourse. There is improvement in the sense that there is more conversation and solidarity, but many women continue to struggle as the system remains harmful and unchanging.

Diet culture’s long, deeply embedded history has influenced how athletes see themselves, and therefore it has shaped how they see themselves through injury and the narratives they construct around those experiences. Activists in professional women’s sports offer solidarity and a voice for female athletes’ struggles, but my experience suggests that there is still little discussion, treatment and prevention within teams or between athletes and coaches. Eliza and Miranda were only two stories, but countless other women struggle silently. I discuss my recommendations for how women’s sports can be improved to encourage healthy behaviors, as well as how the injury experience is addressed for all athletes, in Appendix 2.

Epilogue

As I write this epilogue, the world is in the midst of an unprecedented crisis. My peers and I were required to leave campus two months earlier than expected to reduce the spread of a novel virus that has taken and will continue to take thousands of lives. Some of my friends had no home to go to, and were denied extended housing on campus. But we are the lucky ones, as most of us will make a full recovery if we get sick, and we are likely able to afford basic requirements such as food. Many Americans are out of work, or unable to work as there is no childcare available with school closings, and unable to pay for medical bills. This pandemic is exposing the flaws in our capitalist system, as we have no universal income, healthcare, or a sufficient safety net. Our healthcare systems will be overwhelmed, and our lives as we know them will be completely changed with no clear end in sight.

I believe that this thesis is important. It gives a voice to the women and men who suffer in sport, and offers both a better understanding of sports injuries and what can be done to improve the health and treatment of athletes. But with the cancellation of both college and professional sports, this suddenly seems less pressing. It is difficult to write knowing that there are more pressing issues at hand. However, I still write, for two reasons.

First, one of the only ways to maintain some semblance of normalcy during this time is to carry on with my school work. When everything else has changed, I can at least continue writing. Second, I believe this thesis helps to expose larger issues that are at play both in sport and in the COVID-19 pandemic. Sports and pandemics are two lenses that expose the flaws of our society, and the harm that can come from patriarchal systems and values of hyper-achievement and competition. Humanity is lost, the needs of people are ignored. And the harm becomes clear when athletes start breaking or the world gets sick without care. There are

thousands of illness narratives now, all expressing fear and pessimism because the federal government has been unable to help.

One of the most complex things about these issues is that there are often no clear-cut villains. There is no single “evil being” that has caused sport injuries, disordered eating, or diet culture. Everything explored in this thesis is a result of broader societal values of competition, achievement, and idealization of lean athletic bodies. I looked at the impacts these systemic issues have on women’s bodies and identities in particular, and how recent movements have helped women athletes gain a voice. In Appendix 2, I have offered some recommendations for change. But even with my recommendations in place at the college level, the problems will not be resolved for long, because in many ways there is a desire for a changed system without a changed outcome.

The hyper-competitiveness and partisanship of professional sports reflect some of the highest values of our our capitalist, modern, Western society. With so much money, power, and moral value in sports, implementing reform is hard to do because society at large does not truly want professional sports to change. Even I enjoy watching football, concussions and ACL tears and all. I want to work in the NFL, despite the abhorrent lack of women in the industry. Every viewer wants their team to be competitive, strong and excellent, and many people at least subconsciously want these qualities in themselves, too. With such mass support for sports as they are, it is unlikely there will be any meaningful changes to how athletes reach the pinnacle stage.

I use football as an example because I have such a passion for the New England Patriots. Track and Field simply does not have the same TV presence. But professional athletes in Track and Field struggle with the same issues that the college athletes shared with me. Pro athletes, too, struggle with injury and the identity shifts that occur when they retire from their sport. But

without a deep attachment to the values of competitiveness and excellence that Track and Field reflects, I doubt these athletes would have reached the extreme level of success that they did. I want athletes, and all people, to be aware of how biopower and societal values have impacted their identity, and how this plays out in what they do. But I also do not want the New England Patriots to go away, or to lose the joy that comes with incredible athletic achievement in all sports.

The only way I can reconcile these desires is in knowing that interventions will only be partially successful. Changing the structure of athletics will result in improved health and body image for many, but not all. There will still be values of competition and achievement, and therefore there will still be professional sports as some college athletes continue to reach for a new edge. Athletes will choose to go to extremes to fulfill these values, even if they are aware of Foucault's teachings and the effects of diet culture. I wish that everyone would take an anthropology course, but I know change will be limited, and this will allow college sports and pro sports to continue without much disruption.

There are good, brave people working to pass support packages, develop a vaccine and care for ill patients. In a few months, a year, or however long it takes, we will recover from this pandemic. And at that time, long term changes must be made, which is why this thesis remains relevant. When we come out on the other side, and athletics resume as usual, I hope that my thesis will be read and the recommendations will be implemented. And maybe it will contribute to large scale change, too.

References

- Amy, N. (2006). Barriers to Routine Gynecological Cancer Screenings for White and African-American Obese Women. *International Journal of Obesity and Related Metabolic Disorders*. 30(1), 147-155.
- Bacon, L. (2018). *Health at every size: the surprising truth about your weight*. Dallas: Benbella Books.
- Barlow, C. (1995). Physical Fitness, Mortality and Obesity. *International Journal of Obesity*. 19(4), 41-44.
- Baumeister, R. F., Vohs, K. D. (2003). Self Regulation and the Executive Function of the Self. *Handbook of Self and Identity*. New York: Guilford, 197-217.
- Besnier, N., Brownell, S., & Carter, T. F. (2018). *The anthropology of sport: bodies, borders, biopolitics*. Berkeley, CA: University of California Press.
- Bhanoo, S. N. (April 14, 2009). Study Suggests BMI Scale is Weighted Against African Americans. *Washington Post*.
- Blair, S. N. (1999). Effects of Physical Inactivity and Obesity on Morbidity and Mortality: Current Evidence and Research Issues. *Medicine and Science in Sports and Exercise*. 31(11), 646-662.
- Bouzas, C. (2019). Relationship Between Body Image and Body Weight Control in Overweight >55-Year-Old Adults: A Systematic Review. *International Journal of Environmental Research and Public Health*. 16(9), 1622.
- Bratland-Sanda, S., & Sundgot-Borgen, J. (2013). Eating disorders in athletes: Overview of prevalence, risk factors and recommendations for prevention and treatment. *European Journal of Sport Science*, 13(5), 499–508.
- Brody, Jane. (1992). Panel Criticizes Weight-Loss Programs. *New York Times*. Retrieved from <https://www.nytimes.com/1992/04/02/us/panel-criticizes-weight-loss-programs.html>
- Cain, M. (2019, November 7). I Was the Fastest Girl in America, Until I Joined Nike. Retrieved from <https://www.nytimes.com/2019/11/07/opinion/nike-running-mary-cain.html>
- Chernin, K. (1981, October 11). How Women's Diets Reflect Fear of Power. Retrieved from <https://www.nytimes.com/1981/10/11/magazine/how-women-s-diets-reflect-fear-of-power.html>
- Church, T. (2004). Exercise Capacity and Body Composition as Predictors of Mortality among Men with Diabetes. *Diabetes Care*. 27(1), 83-88.

Claytor, Ally W. (2019). Isolation, Athletic Identity, and Social Support: An Exploration Among Injured Collegiate Student-Athletes. Electronic Theses and Dissertations. <https://digitalcommons.georgiasouthern.edu/etd/1995>

Coackley, E.H. (1998). Predictors of Weight Change in Men: Results from the Health Professionals Follow-Up Study. *International Journal of Obesity and Related Metabolic Disorders*. 22(1), 89-96.

Committee on Adolescent Health Care, & American College of Obstetricians and Gynecologists. (2017). Female Athlete Triad. Retrieved from <https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Adolescent-Health-Care/Female-Athlete-Triad?IsMobileSet=false#5>

Crawford, D. Can Anyone Successfully Control Their Weight? Findings of a Three Year Community-Based Study of Men and Women. *International Journal of Obesity*. 24(1), 1107-1110).

Dekkers, W. (2015). Pain as a Subjective and Objective Phenomenon. *Handbook of the Philosophy of Medicine*, 1–15.

DuPuis, E. Melanie. (2015). *Dangerous Digestion: The Politics of American Dietary Advice*. Berkeley, CA: University of California Press.

Fadiman, Anne. (1998). *The Spirit Catches You and You Fall Down: A Hmong Child, Her American Doctors, and the Collision of Two Cultures*. New York: Farrar, Straus and Giroux.

Farrell, S.W. (2002). The Relationship of Body Mass Index, Cardiorespiratory Fitness, and All-Cause Mortality in Women. *Obesity Research*. 10(1), 417-423.

Fildes, A., Charlton, J., Rudisill, C., Littlejohns, P., Prevost, A. T., & Gulliford, M. C. (2015). Probability of an Obese Person Attaining Normal Body Weight: Cohort Study Using Electronic Health Records. *American Journal of Public Health*, 105(9), 54–59.

Flegal, K. M., Kit, B. K., Orpana, H., & Graubard, B. I. (2013). Association of All-Cause Mortality With Overweight and Obesity Using Standard Body Mass Index Categories. *Journal of the American Medical Association*, 309(1), 71–82.

Foucault, M. (1990). *The History of Sexuality vol 1*. New York: Vintage Books.

French, S.A. (1994). Predictors of Weight Change Over Two Years Among a Population of Working Adults: The Healthy Worker Project. *International Journal of Obesity and Related Metabolic Disorders*. 18(1), 145-54.

Gardner, C. (2007). Comparison of the Atkins, Zone, Ornish, and Learn Diets for Change in Weight and Related Risk Factors Among Overweight Premenopausal Women: The A to Z

Weight Loss Study: A Randomized Trial. *Journal of the American Medical Association*, 297(9), 969-977.

Gretschel, J. (2020, February 26). The Olympic Marathon Trials Are Just the Start of Molly Seidel's Comeback. *Runners World*. Retrieved from <https://www.runnersworld.com/runners-stories/a31093821/molly-seidel-marathon-trials-comeback/>

Guagnano, M. T., Pace-Palitti, V., Carrabs, C., Merlitti, D., & Sensi, S. (1999). Weight fluctuations could increase blood pressure in android obese women. *Clinical Science*, 96(6), 677–680.

Gulati, M. (2003). Exercise Capacity and the Risk of Death in Women: The St James Women Take Heart Project. *Circulation*. 108(13), 1554-1559.

Guthman, J. (2012). *Weighing in: obesity, food justice, and the limits of capitalism*. Berkeley, CA: University of California Press.

Han, E., Norton, E. C., & Stearns, S. C. (2009). Weight and wages: fat versus lean paychecks. *Health Economics*, 18(5), 535–548.

Harrison, C. (2019). *Anti-diet: Reclaim Your Time, Money, Well-Being, and Happiness Through Intuitive Eating*. New York: Little, Brown Spark.

Harrison, C. (2019a, Month day). I Help People Recover From Disordered Eating. Don't Give Your Child This App. *The New York Times*.

Harrison, C. (2019b, Month day) It's the Way We Were All Born Eating. *The New York Times*.

Howard, Barbara (2006). Low-Fat Dietary Pattern and Weight Change over 7 Years: The Women's Health Initiative Dietary Modification Trial. *Journal of the American Medical Association*. 295(1), 39-49.

Hsu, W. (2015). BMI Cut Points to Identify At-Risk Asian Americans for Type 2 Diabetes Screening. *Diabetes Care*. 38(1), 150-158.

Hunger, J. M., Major, B., Blodorn, A., & Miller, C. T. (2015). Weighed Down by Stigma: How Weight-Based Social Identity Threat Contributes to Weight Gain and Poor Health. *Social and Personality Psychology Compass*, 9(6), 255–268.

Kang, X., Shaw, L. J., Hayes, S. W., Hachamovitch, R., Abidov, A., Cohen, I., ... Berman, D. S. (2006). Impact of Body Mass Index on Cardiac Mortality in Patients With Known or Suspected Coronary Artery Disease Undergoing Myocardial Perfusion Single-Photon Emission Computed Tomography. *Journal of the American College of Cardiology*, 47(7), 1418–1426.

Kaplan-Myrth, N. (2007). Interpreting People As They Interpret Themselves: Narrative in Medical Anthropology and Family Medicine. *Canadian Family Physician*, 53, 1268–1269.

Keski-Rahkonen A. (2005). The process of recovery in eating disorder sufferers' own words: An Internet-based study. *International Journal of Eating Disorders*. 37(Suppl), S80–S86.

Kleinman, A. (1998) *The Illness Narratives: Suffering, Healing, and the Human Condition*. New York: Basic Books.

Lee, C.D. (1999). Cardiorespiratory Fitness, Body Composition, and All-Cause and Cardiovascular Disease Mortality in Men. *American Journal of Clinical Nutrition*. 69(3), 373-380.

Lee, I-Min. (2001). Physical Activity and Coronary Heart Disease in Women: Is ‘No Pain, No Gain’ Passé? *Journal of the American Medical Association*, 285, 1447-1454.

McCaffrey A, Mrazik M, Klassen R. (214). The Relation Between Self-Efficacy, Injury And Fear Of Injury Among Elite Athletes. *British Journal of Sports Medicine*, 48, 636.

Mond, J., Mitchison, D., Latner, J., Hay, P., Owen, C., & Rodgers, B. (2013). Quality of life impairment associated with body dissatisfaction in a general population sample of women. *BMC Public Health*, 13(1), 920.

Moynihan, R. (2006). Obesity Task Force Linked to WHO Takes “Millions” from Drug Firms. *BMJ*, 332(7555), 1412

Muennig, P., Jia, H., Lee, R., & Lubetkin, E. (2008). I Think Therefore I Am: Perceived Ideal Weight as a Determinant of Health. *American Journal of Public Health*, 98(3), 501–506.

Muller, M. (2010). Is there evidence for a set point that regulates human body weight? *Faculty of 1000 Medicine Reports*. 2.

Nazem, T. G., & Ackerman, K. E. (2012). The Female Athlete Triad. *Sports Health: A Multidisciplinary Approach*, 4(4), 302–311.

Nuttall, F. (2015). Body Mass Index: Obesity, BMI, and Health: A Critical Review. *Nutrition Today*. 50(3), 117-128.

Olson, C.L. (1994). Overweight Women Delay Medical Care. *Archives of Family Medicine*. 3(10), 888-892.

Olson, Eric T. (2019) Personal Identity. *The Stanford Encyclopedia of Philosophy*. Retrieved from <https://plato.stanford.edu/entries/identity-personal/>

Olson, M. B., Kelsey, S. F., Bittner, V., Reis, S. E., Reichek, N., Handberg, E. M., & Merz, C. B. (2000). Weight cycling and high-density lipoprotein cholesterol in women: evidence of an adverse effect. *Journal of the American College of Cardiology*, 36(5), 1565–1571.

O’Loughlin, E., Nikolaidis, P. T., Rosemann, T., & Knechtle, B. (2019). Different Predictor Variables for Women and Men in Ultra-Marathon Running—The Wellington Urban Ultramarathon 2018. *International Journal of Environmental Research and Public Health*, 16(10), 1844.

Parsons, B. (2020, March 2). Part 2: 25 Testimonials From Womens Cross Country Alumnae. Retrieved from <http://wesleying.org/2020/03/02/part-2-25-testimonials-from-womens-cross-country-alumnae/>

Petosa, R.L, Suminski, R., Hertz, B. (2003). Predicting Vigorous Physical Activity Using Social Cognitive Theory. *American Journal of Health Behavior*, 27, 301-310.

Puhl, R. M., Heuer, C. A. (2010). Obesity Stigma: Important Considerations for Public Health. *American Journal of Public Health*, 100(6), 1019–1028.

Reinking, M. F., Alexander, L. E. (2005). Prevalence of Disordered-Eating Behaviors in Undergraduate Female Collegiate Athletes and Nonathletes. *Journal of Athletic Training*, 40(1), 47-51.

Rim, Y. (1987). A Comparative Study of Two Taxonomies of Coping Styles, Personality, and Sex. *Personality and Individual Differences*, 8, 521-526.

Rim, Y. (1990) Optimism and Coping Styles. *Personality and Individual Differences*, 11, 89-90.

Ryan, R.M., Deci, E.L. (2003). On Assimilating Identities to the Self: A Self-determination Theory Perspective on Internalization and Integrity Within Cultures. *Handbook of Self and Identity*. New York: Guilford, 253-272.

Saguy, A. C. (2013). *What’s wrong with fat?* New York: Oxford University Press.

Slof-Op ‘T Landt, M. C. T., Furth, E. F. V., Beijsterveldt, C. E. M. V., Bartels, M., Willemsen, G., Geus, E. J. D., ... Boomsma, D. I. (2017). Prevalence of Dieting and Fear of Weight Gain Across Ages: A Community Sample from Adolescents to the Elderly. *International Journal of Public Health*, 62(8), 911–919.

Stratchan, S., Woodgate, J., Brawley, L., Tse, A. (2007). The Relationship of Self-Efficacy and Self-Identity to Long-Term Maintenance of Vigorous Physical Activity. *Journal of Applied Biobehavioral Research*, 10(2), 98-112.

Stice, Eric. (1999). Naturalistic Weight-Reduction Efforts Prospectively Predict Growth in Relative Weight and Onset of Obesity Among Female Adolescents. *Journal of Consulting and Clinical Psychology*. 67(1), 967-974.

Strohacker, K. (2009). Consequences of Weight Cycling: An Increase in Disease Risk? *International Journal of Exercise Science*. 2(3), 191-201.

Stunkard, A.J. (1990). The Body Mass Index of Twins Who Have Been Reared Apart. *New England Journal of Medicine* 322(1), 1483-1487.

Stunkard, A.J. and McLauren-Hume, M. (1959). The Result of Treatment for Obesity: A Review of the Literature and Report of a Series. *A.M.A. Archives of International Medicine* 103(1), 79.

Sui, X. (2007). Cardiorespiratory Fitness and Adiposity as Mortality Predictors in Older Adults. *Journal of the American Medical Association*. 298(21), 2507-2516.

Tomiyama, A.J. (2016). Misclassification of cardiometabolic health when using body mass index categories in NHANES 2005-2012. *International Journal of Obesity*. 40(5), 883-886.

Troiano, R.P. (1996) The Relationship between Body Weight and Mortality: A Quantitative Analysis of Combined Information. *International Journal of Obesity and Related Metabolic Disorders*, 20(1), 63-75.

Vadiveloo, M. (2017). Perceived Weight Discrimination and 10-Year Risk of Allostatic Load Among US Adults. *Annals of Behavioral Medicine*. 51(1), 94-104.

Wiebe, D. J., Comstock, R. D., & Nance, M. L. (2011). Concussion research: a public health priority. *Injury Prevention*, 17(1), 69–70.

Wolf, N. (1991). *The Beauty Myth: How Images of Beauty Are Used Against Women*. New York: Doubleday.

Wood, L. (February 25, 2019). The \$72 Billion Weight Loss & Diet Control Market in the United States, 2019-2023 - Why Meal Replacements are Still Booming, but Not OTC Diet Pills - ResearchAndMarkets.com. *Business Wire*.

Appendix 1: Interview Guide

Tell me about the times you experienced a sports injury/injuries in your athletic career?

How did your injury/injuries impact your ability to engage in your sport?

How did your injury/injuries impact your ability to engage with the team?

How did your injury/injuries impact your daily mood?

How did your injury/injuries impact what you were able to do in your daily life?

Looking back on your injury experience now, how have your perceptions of the injuries changed with time?

How would you describe yourself in a few words?

How has your injury history changed how you thought of yourself?

Appendix 2: Addressing the Changing Athlete, My Recommendations for the Team

Injury and Diet Culture

Injury can result in changes in identity, but so can the natural process of maturing that happens sometime between high school and college graduations. How athletes view themselves in relation to their sport also shifts, and some athletes find an identity outside of sport as they realize they are not an elite athlete. There is also a difference between the male athlete experience and the female athlete experience due to the impact diet culture has on how women perceive their bodies. This difference in gendered experiences must also be addressed, as currently female athletes are not receiving the support they need to be healthy athletes, and men lack the space to talk about what they perceive as a “woman’s issue” of body insecurity. I offer the following recommendations based on my own experience, the voices of the athletes I spoke with, and the clinical data that exists.

Ultimately, team support in combating diet culture is helpful, but rumors, whispers and blame are not. In past years there would be chatter amongst teammates about who was severely underweight on the team, but those individuals did not receive access to treatment or team support. Instead, they were made to feel even further isolated and yet were also envied by their teammates. Open discussion will help to prevent any athlete’s struggles from going unrecognized. Whether the struggle is with identity, injury, maturation, body changes or food restriction, all deserve support without shame. I hope that my thesis and these recommendations can help current and future athletes through their college years.

Accounting for the Entirety of the Injury Experience

Current treatment of injury involves the diagnosis, rest, and sometimes medical intervention or rehabilitation. There are no measures that take into account the athlete's story as they experience injury, so this is what I recommend implementing.

- When the athlete is injured, pain levels should be discussed not only on a 1-10 scale for monitoring the injury, but also in terms of how the injury impacts their life.
- Sports medicine staff should ask questions that include: “what are you doing during your day that results in pain?” or “what have you modified in your daily life due to the injury?” to better understand the full pain experience, and recognize the personhood of the injured *people*. It would also be helpful for the athlete in better understanding their own injury experience.
- The process of maturing, changing, and developing new identities should be recognized by coaches, sports medicine, and the medical community.
- To combat the internalized sense of pressure to recover and improve, I recommend that coaches and sports medicine vocalize that there is no expectation for the athlete to recover within a certain amount of time or for the athlete to perform at a certain level post-injury.
- I recommend the athlete remains involved with the team through cross training to help ease the burden of change.
- Injured athletes should have an easy way to coordinate cross training times. A group on the team communication platform, Slack, or simply Facebook posts in

the team group, would prevent injured athletes from becoming isolated from the team.

- Cross training during an injury should be more closely monitored. Currently, injured athletes receive little guidance in how and how much they should cross train. This ambiguity results in a greater sense of loss and isolation, since the athlete loses their normal schedule, stress management tool, and social group. This may encourage an increase in the disordered behavior of compulsive exercise, as the athlete can cross train as much or little as they want, without regulation.
- To better monitor the athlete's injury experience, and to allow for identity shifts without increasing disordered behavior, cross training should be organized and assigned the same as running, jumping, or throwing workouts. This gives the injured athlete something to do, as well as an opportunity to maintain self-efficacy.

An Alternative Structure

Even though education can be beneficial, it has not resulted in change so far, so structural changes must also be implemented to reduce injuries and disordered behaviors. The education that remains should focus on giving athletes correct information about their bodies, injuries and diet culture. I recommend the following structural changes:

- Limiting the number of races athletes can participate in for NCAA competition would reduce overtraining and competitive pressures that lead to injury.

- Races may be minimized during the early fall season and/or during the indoor season, since athletes are just beginning their training, are not in peak condition, and have a long year of racing ahead. Long distance races such as the 5k and the 10k would be especially limited.
- The total number of races an athlete can participate in each year will increase over time, allowing athletes to slowly adapt to new training and college life outside of Track and Field.

The way in which athletes' health is monitored must also change. Currently the women's Track and Field team begins each season with a weigh-in, and may be required to return for additional weigh-ins if they are deemed "unhealthy." The men's team, on the other hand, uses BMI, but is never asked to return for additional measures throughout the year.

- Women should be monitored using other health markers, such as the Relative Energy Deficiency in Sports (RED-S) clinical assessment tools.
- Both men and women should receive blood tests if there is concern for anemia.
- Sports medicine should attempt to get to know their athletes and their concerns, specifically ask about body image concerns, and be able to direct athletes to dietitians, physicians, and mental health counselors as needed.

One of the topics that should be discussed with a sports psychologist is that of the separation between mind and body that exists for many athletes. For many athletes, seeing the mind and body as at odds or at war can result in the mistreatment or lack of compassion for either one. Part of the maturing process is recognizing that both are part of who we are, and both have real information to offer.

- A sports psychologist or therapist can help with the resolution between mind and body and can help shift the dialogue of the “rebellious” body.
- Athletes should be supported and taught alternative stress management tools, as exercise is routinely cited as a way that athletes reduce stress. When injured, athletes are often unable to engage in their normal stress relief activity and will require support in developing new tools.

Addressing the Impact of Diet Culture on Female Athletes

To combat the impacts of diet culture on the female athlete, first the athletes need to learn what diet culture is, where it comes from, and how it has impacted their life and understanding of their own body. This is why reading about the history of diet culture is so crucial, and why I included it in my thesis. There are various ways female athletes can learn about diet culture that I recommend:

- Athletes can read this thesis, or at least Chapter Four. This offers an overview of the history, as well as how it applies directly to female athletes.
- It would be ideal if the team held a speaker event that went over the information in my thesis, but this would require funding and scheduling commitments from every team member, which is difficult to make happen.
- The athletes could read *Health at Every Size* by Linda Bacon, or *Anti-Diet* by Christy Harrison. Linda Bacon has a PhD in physiology, and graduate degrees in psychology and exercise metabolism. Christy Harrison is a registered dietician and holds a masters in public health. Both are exceptionally detailed and inspiring, and much of the information in Chapter Four of this thesis comes from those books. They also offer advice on how to

begin intuitive eating, which I argue is the way all female athletes (and nearly all people in general) should be eating. I do not address intuitive eating in this thesis, but it is *not* a diet. Instead it is a return to listening to the body's natural cues, removing food labels and morality, and feeling comfortable to eat *all* foods, not just the “clean” or “diet” or “safe” foods. All foods fit.

- Athletes could listen to body-positive and educational podcasts. I found podcasts especially helpful in my own journey, and it is an excellent way to have “discussions” about identity, the body, and diet culture when there is not a real safe space to have them in one's own life. My personal recommendations are: Chasing Joy by Georgie Morley, Liveng Proof by Engrid Latina, and Food Psych by Christy Harrison. Each offers experience with body image and eating disorder struggles, and can help facilitate the discussion and de-stigmatization of weight gain.
- There needs to be open discussion about the very real fear of weight gain amongst athletes on the team. There needs to be open opportunities for athletes to share their feelings about the subject, as well as structured discussion times throughout the year.
- Formal discussion surrounding body image is especially important for the men's team to implement, as there is currently no discussion between coaches and athletes on body insecurities.
- During these sessions, there must be information provided on ways to access health professionals for athletes who are struggling to contact. This must also be *encouraged* by the coach and teammates, not just made available.
- It should be a requirement for athletes without a regular menstrual cycle to be referred to the appropriate health professionals, and not just sports medicine. Weigh-ins do not take

into account that not everyone who is struggling is underweight. There are severe health risks to disordered eating besides weight loss.