

“TO PUSH OR NOT TO PUSH?”; EXPLORING LIVED EXPERIENCES OF FORMER  
WOMEN TRACK AND FIELD STUDENT-ATHLETES WHO TRAINED AND COMPETED  
THROUGH PAIN AND INJURY

by

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## ABSTRACT

ARNA EREGA. "To push or not to push?"; Exploring lived experiences of former women track and field student-athletes who trained and competed through pain and injury. (Under the direction of DR. HENRY HARRIS)

Athletes are aware that with involvement in the sport they are exposed to the risk of getting injured. Suffering an injury can be one of the most stressful experiences in a student-athlete's athletic career and can cause a series of psychological, emotional, and social responses, as well as impact one's sense of identity. The very sparse literature in the counseling field regarding student-athletes and lack of research in general, exploring women student-athletes and women track and field student-athletes in particular, contributes to the need for this study. The purpose of this study was to explore lived experiences of former women track and field college student-athletes who trained and competed through pain and injury. This study utilized a phenomenological approach and implemented semi-structured interviews. A total of 10 women track and field former student-athletes participated in this study. Moustakas' (1994) methods consistent with qualitative phenomenological research design were used to facilitate the data analysis. A total of five major themes emerged from the data, including identity, perception of pain and injury, student-athlete-coach relationship, support system, and psychological impact. This research found that the themes are interconnected and impact each other. The findings indicate that women track and field student-athletes who chose to train and compete through pain and injuries face identity challenges, which are further facilitated by the student-athlete-coach relationship, one's support system, and acceptance of the "push through the pain" mindset. This mindset was found to be further facilitated by the underlying belief that the student-athlete role is a job for which participants have been compensated. Participants were also found to minimize and justify their pain as a coping mechanism to help them in continuing to train and compete

despite being in pain and injured. The relationship between participants and their coaches was found to contribute to negative psychological experiences. All themes were closely connected with the cognitive and emotional functioning of the participants. Implications for counselors and counselor educators as well as future research recommendations are discussed. However, the emphasis for counselors is to approach working with student-athletes from a holistic standpoint, disclose personal experiences with athletics early on in the therapeutic relationship, and provide substantial psychoeducation regarding intercorrelation between mental health and athletic performance.

## DEDICATION

To my wounded inner athlete/child- This is your Olympic Gold Medal!

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## CHAPTER I: INTRODUCTION

With involvement in sport comes a possibility of a physical injury. Every athlete knows that each time they step out on a field whether it is for practice or a competition, they expose themselves to a risk of getting injured. Sustaining an injury may be one of the most stressful experiences student-athletes face in their athletic career. A physical injury in a collegiate student-athlete causes a series of psychological, emotional, and social responses, and also impacts one's sense of identity. More specifically, athletic identity has been defined in terms of the degree to which an individual identifies with their athletic role and is composed of cognitive, behavioral, affective, and social characteristics that all relate to the role of being an athlete (Harrison et al., 2002; Steinfeldt et al., 2010). One's gender and race identity can play a role in athletic identity development as well, as they have their own set of developmental characteristics that contribute to the intersectionality of identities. Henceforth, when one suffers an injury and is unable to participate or perform at a level most authentic with their identity they may encounter additional challenges. Furthermore, university athletics is influenced by the surrounding society's culture, which reinforces dominant ideologies and practices rooted in masculinity. Henceforth, women student-athlete populations have not been foci of independent research. Furthermore, research investigating women track and field collegiate student-athletes is even more sparse.

Athletic injuries may be categorized in many different ways; however, they are most commonly classified as acute or chronic. The injuries are then further classified as mild, moderate, or severe and most of them cause sports participants to experience some level of time loss from their athletic participation (Walker, 2018). It is important to note that Wiese-Bjornstal (2010) emphasized the need for a broader and more inclusive definition of injury, which would include "transient" injuries as they do not necessarily cause time-loss from athletic participation,

yet they still have debilitating effects on one's psychological and emotional well-being. Furthermore, transient injuries may cause student-athletes to adopt the attitude of playing through pain and injury due to the normative culture of sport (Wiese-Bjornstal, 2010).

There are several studies available that documented the prevalence of athletic injuries. Conn et al. (2003) found that almost 7 million injuries occur every year in sport and recreational settings. Williams and Anderson (2007) gathered a much larger estimate indicating that 25 million people in the United States suffer an injury while participating in some kind of sport, exercise, or recreational activity. The most recent data indicates that during the 2019-2020 academic year, there were 1,108 schools affiliated with the National Collegiate Athletic Association (NCAA), with 18,702 teams totaling 503,623 participating student-athletes (NCAA, 2020). Kerr et al. (2014) provided data for the 2013-2014 academic year indicating that among 25 sports, student-athletes had an estimated 28,860,299 practice exposures and 6,472,952 competition exposures. In a five-year longitudinal study, it was estimated that student-athletes suffered 1,053,370 injuries, which represents an average of 210,674 total injuries per year among which 63.8% occurred during practice. Also, 21.9% of the injuries prevented student-athletes from returning to participation for at least seven days (Kerr et al., 2014). These studies differed in their definitions of injury, populations studied, and methodology used to measure or document the injuries, hence the difference in the estimates.

It is challenging to find research that specifically investigated women student-athletes, let alone women track and field student-athletes. Currently, there are several studies that explored the prevalence of injuries among 25 men and women in NCAA sports by using the NCAA Injury Surveillance System, however, there are no studies that investigated women's track and field. Kerr et al. (2015) reported average annual national estimates of the number of injuries by 25

NCAA sports between 2009-2010 and 2013-2014 academic year. All NCAA women's sports estimate an overall total of 80,674 injuries, out of which 25,004 occurred in competition and 55,670 occurred during practice. Regarding women's track and field, there were a total of 17,686 injuries, with 2,535 taking place during competition, and 15,150 during practice (Kerr et al., 2015). The fact that scholars are aware that women student-athletes suffer injuries and yet there is a lack of research exploring it, is a strong argument for the need for this study.

Historically it appears that when an athlete experiences an injury, regardless of the level of performance, the attention is automatically focused on the physical and visible aspect of the injury. It appears that little attention is paid to the psychological experience encompassing student-athletes internal thoughts, and feelings. Tracey (2003) pointed out when recovering from an injury, both men and women collegiate student-athletes experience a variety of emotions such as anxiety, fear, confusion, and even anger. Additional studies also presented findings reflecting emotional fluctuations among Division I football players (Albinson & Petrie, 2003), men and women Division II student-athletes (Granito, 2001), and as reported by athletic and physical trainers who work with collegiate student-athletes (Hamson-Utley et al., 2008). Unfortunately, there are no studies available that specifically investigated women collegiate student-athletes and their responses to pain and injury. Despite the evidence of injury occurrence among women collegiate student-athletes, psychological impact, and emotional consequences, some women student-athletes opt to play through pain and injury. To further explain this phenomenon with the collegiate women student-athlete population, it is important to consider their identity and the current sports culture, which minimizes the significance of the injury and promotes the idea of playing through pain and injury and therefore impacts their athletic identity. In this study, I explored women student-athletes more comprehensively by examining not only their physical

responses to the injury but also the impact of psychological, emotional, and social influences as this phenomenon has not been researched yet, especially not with this particular population nor in the counseling literature.

### **NCAA and the Sport Culture**

National College Athletic Association (NCAA) is a member-led organization dedicated to the well-being and lifelong success of collegiate student-athletes. There are 1,108 colleges and universities that are a part of the NCAA, and they compose 102 athletic conferences. There are 351 schools that belong to Division I, 312 schools in Division II, and 445 schools in Division III. Each year these colleges and universities make up 19,784 teams that send over 57, 661 participants to compete in 90 championships in 25 sports across three divisions. Student-athletes create a large percentage of the student body population, with over 500,000 individuals across universities in the U.S., who compete in NCAA intercollegiate athletics programs across the three divisions (NCAA, 2020c).

Given the role of student-athletes, it is important to address the cultural significance of athletics in higher education institutions across the United States. Leonard (1984) identified sport as a "microcosm of society" and further argued that, as such, it is difficult for the sport to isolate or insulate itself from the wider societal interactions (p. 64). Beyer and Hannah (2000) stated that university athletics, like all sports, affects and is affected by societal cultural interchange; hence, "university athletics carries cultural meaning to the wider society" (p. 106). In the United States, athletic programs have organized all sports into teams, hence in a sense losing the individualized component, which is so prevalent in the U.S. society (Beyer & Hannah, 2000). This collectivistic approach is grounded in making decisions in regards to what is best for the team rather than what is best for individual performance (Beyer & Hannah, 2000). Several previous studies confirmed

that collegiate athletes' decisions to play through injury were grounded in the sports culture, which is accepting of this phenomenon (Albert 1999; Howe, 2001; Pike & Maguire, 2003; Roderick et al., 2000). Weinberg et al. (2013) found that athletic identity is significantly related to athletes' attitudes toward injuries and that sports culture encourages ignoring and normalizing the injuries.

### **The Integrated Model**

Student-athletes face unique stressors and mental health challenges, and unfortunately, in addition to experiencing an injury, they have been historically an underrepresented population within counseling centers on college campuses (Beauchemin, 2014). Wiese-Bjornstal et al. (1995) were the first researchers in sport psychology to propose an integrated model. This model was then further developed by Wiese-Bjornstal et al. (1998) into a comprehensive way of examining psychological responses to injury and the rehabilitation process by its inclusive and cyclic nature. The integrated model suggests that various injury factors affect one's psychological responses and that those psychological reactions dynamically change over time. The recovery becomes a process outcome in both physical and psychological sense (Wiese-Bjornstal et al., 1998). The integrated model was developed in such a way to help us understand the experiences of injured athletes from a psychological, physical, and social viewpoint.

DeGaetano et al. (2016) pointed out the effects of psychological factors on injury rehabilitation, further stating how from the psychological standpoint, injury has been greatly associated with distress level. Tracey (2003) conducted a study that focused on emotional responses of both male and female student-athletes who were recovering from injury, and the findings indicated that participants experienced a “roller coaster” of emotions as they attempted to deal with and adapt to being injured” as well as to the process of recovery itself (p. 283).

Tracey (2003) found that internalized thoughts of worry and concern, questioning future plans, time lost from training, and the injury's impact, not only on training, but on the season as well, all had a strong emotional influence as the student-athletes reported feeling depressed, more anxious, down, low self-esteem, frustrated, and aggravated. DeGaetano et al. (2016) did not discuss any gender differences, however, they emphasized that the emotional response to injury and rehabilitation process was multifaceted, differed depending on the athlete, and accentuated the variations in emotional responses. In a qualitative study, Granito (2001) examined male and female collegiate student-athletes' experiences with, as well as their responses to, injury. The findings regarding feelings associated with injury indicated that frustration was the most common response followed by isolation, boredom, depression, anger, fear, confusion, and sometimes even relief.

### **Need for the Study**

With very sparse literature in the counseling field regarding student-athletes and a lack of research, in general, exploring women student-athletes including women track and field student-athletes, it is essential that this particular population receives much needed attention in order to provide a significant contribution to the existing literature and the counseling field. With sports injuries being so prevalent within NCAA student-athletes and the influence sport culture has on the normalization of playing through pain and injuries, we need further insight into athletes' own experiences, especially women student-athletes. This particular study provides potential benefits for current women track and field student-athletes as well as implications for counselors and other professionals within athletic departments working with women student-athletes.

Considering the very slow improvement in collegiate student-athletes attitudes toward seeking psychological help and the stigma surrounding the same, this study provides creative

insights from former women track and field student-athletes, who can now speak freely and without fear about what they wish was done differently or they had access to during their experiences with injuries, which could have had a positive impact on their emotional and psychological well-being. The research indicates that injuries may become chronic in nature, mainly due to the mentality of the athlete who has found ways to manage and cope with playing through pain and injury (Howe, 2001; Madrigal et al., 2015; Roderick et al., 2000). Therefore, having a better insight into how athletes' mentality changes as they not only experience an injury but as the injuries continue to occur or get worse due to student-athletes continuation of play, is another important benefit. Counselors may benefit from this research by having a better understanding of factors that play a role in student-athletes decision-making process to continue to play through pain and injury, factors that may play a role in student-athletes lack of honest feedback to coaches and trainers about the level of pain they experience, and how that mentality affects student-athletes off the field in their academic and social lives. Additionally, by exploring the experiences of former women track and field student-athletes, we may have acquired more honest responses, because participants did not have to fear coaches, athletic trainers, and other staff within the athletic department finding out the truth about their pain level and injury severity, the possibility of being forced to sit-out, potentially losing opportunities to compete or even worse, a scholarship. Furthermore, women track and field student-athletes provided some insight into gender and athletic identity intersectionality pertaining to the pain and injury experience. Lastly, we acquired some suggestions or ideas about what would have been helpful and beneficial for participants during the times when they played through pain and injury, which also indicate aspects or resources that are missing within athletic departments and campus counseling centers.



### **Purpose of the Study**

The purpose of this study was to explore lived experiences of former women track and field college student-athletes who trained and competed through pain and injury.

### **Research Questions**

The overarching question for this study is: What are the lived experiences of former women track and field student-athletes who trained and competed through pain and injury during their intercollegiate career at NCAA institutions?

### **Research Design**

This study utilized a phenomenological approach and implemented semi-structured interviews to capture participants' lived experiences of training and competing through pain and injury during their intercollegiate career at an NCAA institution. A phenomenological research method is useful when one is attempting to describe a phenomenon that is shared by a group of individuals who have shared experiences of it (Creswell, 2013; Moustakas, 1994). In qualitative research, saturation occurs when no new themes appear in the data analysis, even after adding additional participants. This allows for the sample size to be adjusted to ensure the researcher has met the saturation (Moustakas, 1994; Vagle, 2018). A semi-structured interview protocol was developed and followed during each interview. Each interview was audio-recorded and the data was analyzed consistent with phenomenological inquiry methods. Additional detailed information about the methodology of this study is provided in Chapter Three.

### **Assumptions**

The assumptions made in this study:

- The participants voluntarily participate in the study.

- The participants in the study trained and competed through pain and injury during their intercollegiate career at an NCAA institution.
- The participants have a shared experience of training and competing through pain and injury.

### **Delimitations**

The factors researcher can control in this study:

- The researcher set the criteria for participation in this study:
  - Participants must be former women track and field student-athletes at an NCAA institution.
  - Participants must have been citizens of the United States at the time of their participation in intercollegiate athletics.
  - Participants must have graduated from an NCAA institution.
  - Participants must self-report they have trained and competed through pain or injury at some point during their intercollegiate career.
- The researcher developed an interview protocol and questions that were posed to all participants equally.
- The researcher continued with the interviews until saturation has been reached.

### **Operational Definitions**

#### ***National College Athletic Association (NCAA)***

Is a member-led organization dedicated to the well-being and lifelong success of college athletes.

***Women Track and Field Student-athletes***

For the purpose of this study, a woman track and field student-athlete is defined as an individual who participated in track and field during the indoor season, outdoor season, or both at an NCAA Division I, II, or III college or university, and identifies as a woman in terms of gender identity. The individual may have been a walk-on, on a partial scholarship, or a full scholarship athlete.

***Training and Competing Through Injury***

For the purpose of this study, training and competing through injury is defined as a self-reported injury or injury determined by an athletic trainer that a former woman track and field student-athlete experienced during participation in a sport-related athletic activity, including both practice and competition. The former women track and field student-athletes self-report feeling pain in such a way that the injury required some level of mental attention during participation, the self-reported injury caused some level of loss or change in function, which then directly affected performance, and former women track and field student-athletes engaged in a mental process to determine whether participation should be initiated and continued, while the self-reported injury was experienced.

***Training and Competing Through Pain***

For the purpose of this study, training and competing through pain is defined as self-reported physical pain experienced by a former woman track and field student-athlete during participation in a sport-related athletic activity, including both practice and competition, which required some level of mental attention during participation, caused some level of loss or change in function, which then directly affected performance, and a former woman track and field

student-athlete engaged in a mental process to determine whether participation should be initiated and continued.

### **Summary**

Chapter one introduced a phenomenon of former women track and field student-athletes who trained and competed through pain and injury. The current literature presents several key points, the prevalence of athletic injuries, the sports culture, and how the current sports culture impacts the attitudes toward playing through pain and injury, however, it is important to note that the literature examining women student-athlete population is limited. The integrated model is presented as a theoretical framework which will be integrated later in the discussion section as a lens to help interpret and contextualize the data gathered during the course of this study. The existing literature clearly delineated the need for further investigation of this phenomenon as every sport is different and every population is different, hence the available studies are limited in their generalizations. The goal of this study was to contribute to the growing body of literature by providing insights from perspectives of former women track and field student-athletes who competed in the NCAA intercollegiate athletics and trained and competed through pain and injury and to focus on how their experience with the phenomenon affected their physical, psychological and social well-being.

### **Organization of the Study**

This dissertation includes five chapters. The first chapter presents an overview of the bigger issue and proposes an argument for this study. It also provides a brief overview of the literature organized into themes, operational definitions of significant terms used in the study, research question, assumptions, limitations, and delimitations. In chapter two, a thorough review of the literature is provided. Additional information about student-athletes who train and

compete through pain and injury, sports culture, sport ethic, and psychological factors they experience as a result of those experiences is also included. This chapter also reflects a void in the literature addressing women student-athletes; yet outlines what we currently know about the impact of training and competing through injury on mental health well-being. Chapter three outlines the methodology used in this study. This includes participants, setting and materials, the researcher, data collection procedures, and data analysis. Chapter four presents a summary of demographic information and overall results including the main themes and subthemes that were discussed by the participants. Lastly, chapter five includes a discussion of the results and how they contribute to the current body of knowledge. Chapter five also presents implications for counselors working with women student-athletes and counselor educators who have entrusted the privilege of preparing the new generations of counselors to be multiculturally aware and competent to work with a variety of populations.

## CHAPTER II: REVIEW OF THE LITERATURE

On college campuses across the United States, collegiate athletes are considered a high-risk subculture due to various factors. Student-athletes who are undoubtedly part of creating and contributing to the athletic culture, face extreme time demands, rigid schedules, and must be able to balance their social lives. As they struggle to maintain their athletic eligibility and their academic performance they may over-train, sleep poorly, exhibit considerable stress, experience mental health challenges, and ultimately suffer injuries. Sometimes the experience of pain and injury can impact the quality of sleep, level of distress, and cause other psychological and emotional symptoms. Experience of one or more of these factors may lead to severe injuries, which as a result oftentimes may lead to unhealthy coping skills and mechanisms such as alcohol or substance use and abuse, and an increased likelihood of eating disorders.

### **Contextual Theories and Models**

In the current literature, there are several contextual theories and models that have been used by researchers who explored and investigated student-athlete injuries, rehabilitation from injuries, the overall recovery process, and playing through injuries concept. For instance, Petrie (1993) used the stress response model in exploring psychological variables related to the injury. Thing (2006) utilized a theoretical framework inspired by concepts of risk, body, and identity in a qualitative exploration of females in rehabilitation from an athletic injury. Bennett et al. (2016) utilized a comparative narrative approach as they investigated the lived experiences of NCAA student-athletes during the rehabilitation process. Several researchers used the integrated model as a theoretical framework while exploring responses to injury (Albinson & Petrie, 2003; Tracey, 2003; Wiese-Bjornstal et al., 1998), overall athletic injury experience (Granito, 2001), responses

of student-athletes during the rehabilitation and recovery process (Clement et al., 2015; Lu & Hsu, 2013; Mardigal & Gill, 2014).

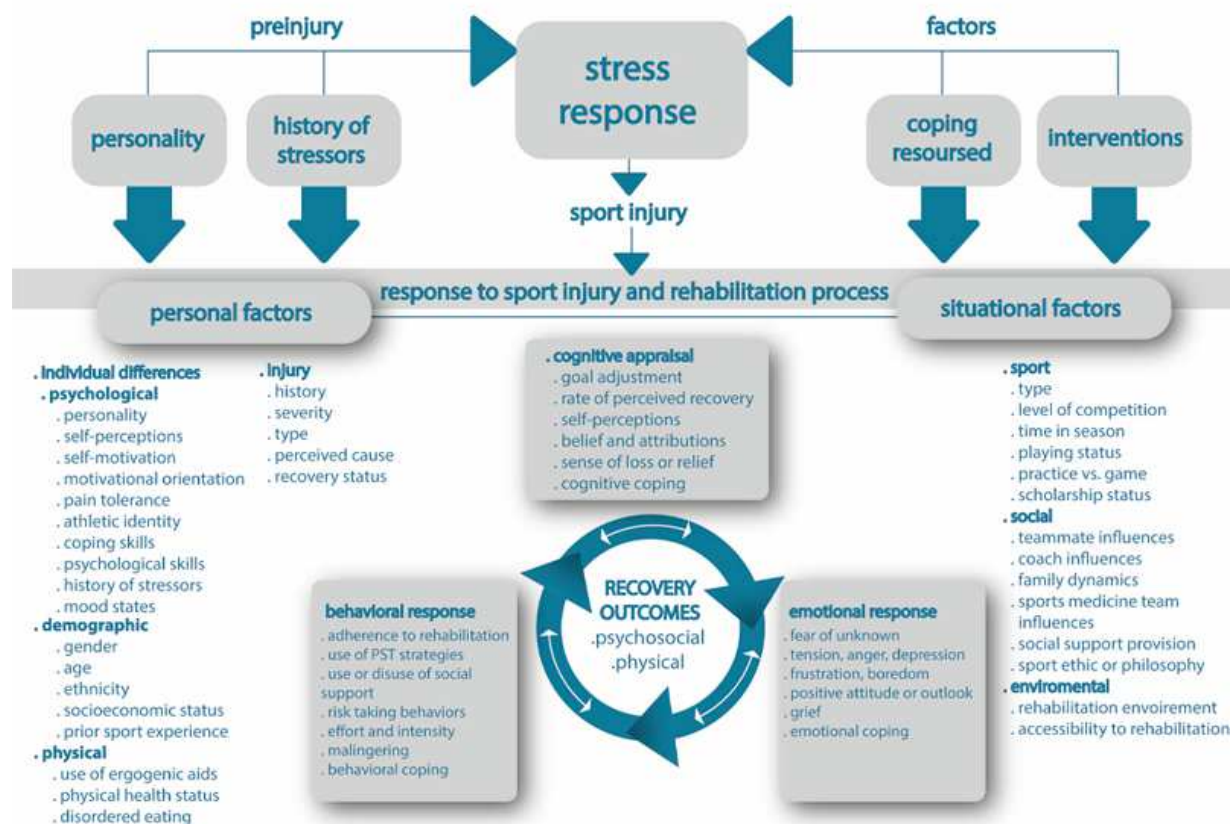
### **The Integrated Model**

I will briefly present the integrated model to provide some insight into a contextual model that will be introduced in more depth later on in this study's process. In this phenomenological study, the contextual framework will be used after the data collection, analysis, and interpretation have been completed to avoid following the preexisting understanding and knowledge. Furthermore, this approach will allow for the codes and themes to organically emerge as opposed to myself, the researcher, trying to fit the themes into the integrated model during the data analysis and interpretation process, hence allowing new knowledge to be generated, which will contribute to the existing literature, perhaps even add to the current integrated model. Figure 1 presents the visual representation of the integrated model.

Weise-Bjornstal et al. (1995) were the first researchers in sport psychology to propose an integrated model. This model was then further developed by Weise-Bjornstal et al. (1998) into a comprehensive way of examining psychological responses to injury and the rehabilitation process by its inclusive and cyclic nature. The integrated model is developed in such a way to help us understand the experiences of injured athletes from a psychological, physical, and social viewpoint. The cultural context of sport has a major influence on cognitive appraisals and emotional responses. Also, once sports injury occurs, the psychological effects of the injury include cognitive, emotional, and behavioral responses (Wiese-Bjornstal et al, 2008).

Figure 1

Visual representation of the Integrated Model



Note. From “An integrated model of response to sport injury: Psychological and sociological dynamics,” by D. M. Wiese-Bjornstal, A. M. Smith, S. M. Shaffer, and M. A. Morrey, 1998, *Journal of Applied Sport Psychology*, 10, p. 49, (<https://doi.org/10.1080/10413209808406377>)

According to the integrated model, several conceptual models provide a frame of reference to help understand the psychological response to sports injury. The two models Wiese-Bjornstal et al. (1998) discussed include the stress process and the grief process models. The stress process model considers the athletic injury as a stressor that stimulates cognitive appraisal, which then influences the emotional responses, which ultimately affect the behavioral responses.



Kubler-Ross (1969) first identified the five stages of grief: denial, anger, bargaining, depression, and acceptance. She was the main influencer on Pedersen (1986) and Gordon (1986), who investigated and discussed the possibility of athletes experiencing a grief response to their injuries. Rose and Jevne (1993) conducted grounded theory research that originated a risk model that consisted of four phases: getting injured, acknowledging the injury, dealing with the impact of the injury, and achieving a physical and psychosocial outcome. A fundamental process in Rose and Jevne's (1993) risk model was learning the lessons of injury. The integrated model postulates that pre-injury and post-injury factors influence psychological responses, that those psychological responses change dynamically over time, and that recovery in both physical and psychological sense is the process outcome (Wiese-Bjornstal et al., 1998).

***Psychological Impact.*** According to the integrated model, the psychological responses of the recovery process include cognitive appraisal and emotional response. Athletes' cognitive appraisals include perceptions about the injury, recovery process, and availability of social support. Athletes also continuously appraise their ability to cope with the sports injury itself. According to Wiese-Bjornstal et al. (1998), the central part of the integrated model argues that cognitions, such as self-perceptions, are essential because they affect how one responds emotionally and behaviorally to the injury. Wiese-Bjornstal et al. (1998) wrote that self-perception, which is the view one has of oneself, encompasses self-worth, self-esteem, self-confidence, and self-efficacy and all of them become affected to a certain degree when athletes become injured.

***Physical Impact.*** DeGaetano et al. (2016) emphasized how from the psychological standpoint injury has been associated with significant distress; however, the athletes who return to training and competing before they are psychologically ready are exposed to greater risk for

not only psychological but also physical difficulties. Granito (2001) conducted a qualitative study with a focus group design including intercollegiate student-athletes and student trainers and discovered that physical factors may have a relationship with the emotional and psychological responses to injury. Student-athletes and student trainers in Granito's (2001) study reported several physical aspects of the injury that became present including, pain, physical deconditioning, use of painkillers, and surgery. Granito (2001) noted that each of the physical factors may have an impact on student-athletes emotional state.

***Social Impact.*** Armstrong and Oomen-Early (2009) found that social networks and support are the foundational markers of most athletic teams, and they proceeded to say that social network and team connectedness may be the contributing factors that protect collegiate student-athletes from depressive symptomatology.

### **Sport Culture in the U.S.**

Sport is a global concept that allows people from anywhere at any age to connect. The definition of sport and its criteria are applicable all over the world as in modern industrial societies there is an agreement on rules and regulations pertaining to international participation in sport (Gems & Pfister, 2014). From a global standpoint, the sport has been used as an institution based on worldwide agreement and acceptance as a practice and has also become an object of consumption (Gems & Pfister, 2014). Gleaves (2017) argued that sport has one of many universal features of human social existence. Regardless of people's location or time, the communities have historically organized and shared various customs of physical activity, which often resulted in some form of competition. Furthermore, this interest in the sport has become a tool for understanding human culture and as Gleaves (2017) argued this feature of sports culture within the larger context is worthy of investigation.

Gems and Pfister (2014) further argued that sport has become increasingly commercialized during the twentieth century, which as a result contributed to the American economy and culture of the sport. Beyer and Hannah (2000) reasoned how sports have a cultural significance at many levels and that university athletics is "influenced by, and reflective of, the culture of the surrounding society" (p.106). Furthermore, sports appear to have carved out a special space where participants have the ability to create meaning through explanatory stories and narratives (Gleaves, 2017). These meaningful experiences, Gleaves (2017) argued are intentionally introduced and shaped by the culture. Zingg (1986) also wrote how the created narrative effectively carries the theme of sport and serves as a mirror to the ideological and social themes that are present and often dominate the American experience.

Zingg (1986) summarized how throughout American history sport has existed as an integral part of the American culture and it has changed as various ideologies and trends shifted over time. Guttmann (1994) focused on a more fundamental analysis of sport in the American context and wrote how American society, in general, prefers team sports, such as baseball, basketball, and football, over individual sports. Weiss (1971) wrote that sport is about the pursuit of embodied excellence, which athletes pursue and spectators admire. Furthermore, modern sport, which is essentially identified as a Western competitive sport, emphasizes competitiveness, the characteristics of secularism, equality for the participation, bureaucratization to govern the sport, specialized roles, rationalization of rules and training, quantification of results, and a quest for records, which are all prevalent in the U.S. (Beyer & Hannah, 2000; Guttmann, 1994; Zingg, 1986).

Bayer and Hannah (2000) argued that culture at any level consists of two major components they defined as: "(a) sets of shared beliefs and values we refer to as ideologies, and

(b) patterns of behavior that reflect those beliefs and values are called cultural forms" (p.108). They continued to say how many facets of intercollegiate athletics in the U.S. function as cultural forms by voicing, affirming, and praising the cultural beliefs and values of the wider society. Current athletics, ideologies, and other aspects of culture are all products of historical and social development. One of such assumptions in American society contends that winning athletes and their fans feel as if their success proves that they are more worthy than their opponents. Both Beyer and Hannah (2000) and Cheska (1972) framed competitiveness as a struggle for power, control, and dominance in society. Furthermore, Beyer and Hannah (2000) wrote how sports play an important role in socializing American youth to a particular way of thinking and feeling that is consistent with a bureaucratic mentality in the U.S. A bureaucratic mentality is supported through achievement orientation, which is focused on performance and rationality and is reflected in athletics. Additional bureaucratic values include acceptance of the hierarchical structures and systems and one's subordination to authority. Athletes who are ranked at the lower levels on the hierarchy scale have to obey everyone above them. Researchers noted how athletes who decide to participate in intercollegiate athletics must accept this bureaucratic mentality in order not only to fit in but to survive within the system, however, many athletes have already been conditioned to this mindset during the sports participation in high school (Adler & Adler, 1988; Beyer & Hannah, 2000).

### **NCAA and Intercollegiate Athletics**

Student-athletes create a large percentage of the student body population across universities in the U.S. There are over 500,000 student-athletes who compete in the National Collegiate Athletic Association (NCAA) intercollegiate athletics programs across the three divisions (NCAA, 2020c). The NCAA has several purposes: (a) "initiate, stimulate, and improve

intercollegiate athletics programs for student-athletes and to promote and develop educational leadership, physical fitness, athletics excellence, and athletics participation as a recreational pursuit”; (b) “to uphold the principle of institutional control of, and responsibility for, all intercollegiate sports in conformity with the constitution and bylaws of the association”, (c) “to encourage members of the association to adopt eligibility rules to comply with satisfactory standards of scholarship, sportsmanship, and amateurism”, (d) “to preserve intercollegiate athletics records”, (e) “to supervise the conduct of, and to establish eligibility standards for , regional and national athletics events under the auspices of the association”, (f) “to cooperate with other amateur athletics organizations in promoting and conducting national and international athletics events”, (g) “to legislate, through bylaws or by resolution of a Convention, upon any subject of general concern to the members related to the administration of intercollegiate athletics”, and (h) “to study in general all phases of competitive intercollegiate athletics and establish standards whereby the colleges and universities of the United States can maintain their athletics programs on a high level” (NCAA, 2020, p.1). The NCAA advocates that the competitive athletics programs be designed as a vital part of the educational system at member institutions. Furthermore, the basic purpose of NCAA is to maintain intercollegiate athletics as an integral part of the educational program and the athlete as an integral part of the student body, and by following this, the NCAA is hoping to retain a clear distinction between intercollegiate athletics and professional sports (NCAA, 2020).

The NCAA has developed principles of conduct, and one of such principles addressed the student-athlete well-being, by stating that intercollegiate athletics programs ought to be conducted in a manner designed to protect and enhance student-athlete well-being regarding their physical health and educational matters. In regards to the principle of gender equity, the NCAA

states that it is the responsibility of each member institution to comply with both state and federal laws regarding gender equity and that the activities of the NCAA should be managed in a manner free of gender bias (NCAA, 2020).

### ***Title IX***

President Richard Nixon signed Title IX into federal law on June 23, 1972. Title IX was an amendment to the Civil Rights Act of 1964, and it mandated change in American education by making it illegal to discriminate against anyone based on their sex. This has expanded access and provided opportunities for the underrepresented sex, which has historically suppressed and oppressed women (NCAA, 2017). The text of the Title IX says the following: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance" (Education Amendments Act of 1972). However, this original text does not specifically address athletics and the members of Congress at the time did not envision it as a sports law. The Division of Girls and Women in Sport (DGWS) included women sport leaders who formed the Association for Intercollegiate Athletics for Women (AIAW) in 1971. The AIAW and Title IX evolved together and contributed to the advancement of women's intercollegiate athletics participation (NCAA, 2017). However, the NCAA filed a lawsuit in 1976, against the U.S. Department of Health, Education, and Welfare. The lawsuit challenged the validity of Title IX, however, after its failure, the NCAA started its own women's athletics programs and by 1982 completely took over women's sport governance. The first 45 years after passing the Title IX law has been described as a roller coaster ride (NCAA, 2017). Even though the NCAA filed a lawsuit to get rid of the law as it applied to athletics in the 1970s, over the last few decades, the NCAA has strongly supported the law and formed an NCAA Gender Equity

Task Force in 1992. The current NCAA President, Mark Emmert, advocated and formed the office of inclusion to focus on diversity and inclusion in a more comprehensive way. Moreover, the NCAA Board of Governors has collaborated with presidents and chancellors at member institutions to sign a voluntary pledge demonstrating their commitment to diversity even in the employment process, highlighting the hiring of minorities and women (NCAA, 2017).

### ***Women within NCAA***

Currently, according to NCAA (2020), there are 86,645 women student-athletes in Division I, 52,524 in Division II, and 82,043 in Division III member institutions. For Division I intercollegiate athletics, the participation rate for women is at 46.7% while male participation is at 53.3%, creating a gap of 6.6%. In Division II the gap between men's and women's participation is at 16.6%, and in Division III at 16.8%. The NCAA states that the most recent data indicates more diversity in race and ethnicity, with Division I having 63.7% white and 36.3% minority women student-athletes. Division II has 68.1% white and 31.9% minority women student-athletes, while Division III had 80.1% white and 19.9% minority women student-athletes (NCAA, 2017).

In 2020, the NCAA reported Division I had a total of 13,437 women track and field student-athletes participating during the indoor season and 13,649 during the outdoor season. Division II had a total of 6,399 women track and field student-athletes during indoor and 7,699 during the outdoor season, while Division III had a total of 8,794 during indoor and 9,493 during the outdoor season. These numbers have been on a constant rise each year across all three divisions.

Regarding allocation of resources, Division I has the greatest gap in spending between men's and women's athletic programs. Athletic departments within Division I are spending twice

as much money on their men's programs than on women's programs, while Division II and III have more equitable spending. Currently, women hold approximately 23% of all NCAA head coach, athletic director, and conference commissioner positions. Even though Title IX started the process of the evening the field, there is still much work to be done until equity and equality is achieved (NCAA, 2017).

### **The Subculture Within Athletic-Academic Centers**

The NCAA has provided significant financial resources to universities to support the student-athlete academic performance, increase graduation rates, and enhance the overall student-athlete experience (Huml et al., 2014). Huml et al. (2014) and Rubin and Moses (2017) both emphasized how athletic academic support centers were initially built as a response to the outrage over the perceived lack of academic support for student-athletes. Due to scandals and low graduation rates among student-athletes in the 1980s, the NCAA reformed its academic policies. Once the NCAA started subsidizing academic services through the academic enhancement fund, the development of academic centers started to increase (Rubin & Moses, 2017). In 2003 the NCAA instituted the Academic Progress Rate (APR) as a part of the major effort to academic reform. The APR is a "team-based metric", which includes points earned for each student-athlete who is on an athletic scholarship, maintains academic eligibility, and remains enrolled at the institution (NCAA, n.d.). Furthermore, the APR is used as a means through which universities are held accountable for the academic welfare of their student-athletes, and for teams to participate in postseason championship competitions their teams must meet the APR standards (Gayles et al., 2018). Ridpath (2010) wrote that despite NCAA viewing APR as a positive change between sports and its relationship to higher education, he along with other researchers criticized APR as it leads to academic clustering and increased pressure staff



and administrators within athletic academic centers experience in order to keep student-athletes eligible rather than shifting their efforts to preparing and enabling student-athletes to pursue a legitimate education (Jenkins, 2005; Ridpath, 2002, 2010; Ridpath, Kiger, et al., 2007; Ridpath, Zullo, et al., 2009).

Wolverton (2008) and Huml et al. (2014) identified athletic academic centers as the "crown jewel" of athletic facilities on university campuses as they are constantly being refurbished or newly constructed and emphasize the institutions' commitment to academic development. In 2014 the Knight Commission on Intercollegiate Athletics reported that spending for student-athletes has increased by 43 percent since 2005, while spending for the general college student population increased only by six percent. Athletic academic centers have been designed to provide student-athletes with support from their athletic advisors, who are knowledgeable of NCAA eligibility regulations and aware of the challenges student-athletes experience due to their athletic responsibilities (Huml et al., 2014). Additionally, Ridpath (2010) emphasized how athletic academic centers also provide support to student-athletes regarding priority class scheduling and registration, tutoring, drug and alcohol counseling, study and academic skill development sessions, and life skills workshops.

Rubin and Moses (2017) noted how these centers are not only designed to support student-athletes and keep them eligible but also to compete with rival schools that are also investing in and building remarkable facilities. In 1991 the NCAA approved a bylaw 16.3.1.1, which made it a requirement that academic advising and other supporting services be provided to all student-athletes (NCAA, 2020). This bylaw helped in creating the Academic Enhancement Fund in 1991, which provides member institutions with financial support, which can then be used for summer school, tutoring, professional program testing, supplies, academic support

services, academic personnel salaries, and benefits, other academic or programming expenses, etc. This fund now provides over \$49 million in annual aid, which is equally distributed to each NCAA member institution (NCAA, 2020b). The NCAA bylaws, however, do not require a stand-alone academic center built specifically for student-athletes (Rubin & Moses, 2017). The National Association of Academic and Student-Athlete Development Professionals (N4A, 2013) defined a support center for student-athletes as "any location where the student-athletes are assigned to complete study hall/tutorial assignments" (p.2).

While development and access to academic centers have many benefits for student-athletes such as assisting them to focus on their studies and receive necessary and specialized support to be successful, there have been some criticisms as well. Adler & Adler (1988) argued that student-athletes exist "in a kind of cocoon," which supports the formation of a subculture that is different from the general student population. Student-athletes have quite different college experiences in comparison to the general student population as they experience more rigorous athletic, health, and time constraints placed upon them (Beyer & Hannah, 2000; Jolly, 2008; Rubin & Moses, 2017), and they must follow a strict regimen (Beyer & Hannah, 2000). Simons et al. (1999) wrote that "Student athletes may also feel isolated from the other students as they spend so much time and energy participating in athletics with their peers" (p.161). Furthermore, studies conducted by Watt and Moore (2001) and Rothschild- Checroune et al. (2012) further supported Simons et al. (1990) as they also discovered that student-athletes are more likely to be isolated from the general student population and faculty due to their athletic commitments. In addition to the separation of student-athletes from general student populations, critics also noted how the development of athletic academic centers cost millions of dollars and include private donations to the athletic department. Furthermore, criticism includes the negative effects of

extravagant costs on overall institutional finances, as it takes university money for athletic budgets and inadvertently limits potential donations to campus as a whole (Rubin & Moses, 2017; Smith 2009).

### ***Academic Support and Advising***

As student-athletes arrive at their respective universities, they are immediately introduced to athletic-academic centers and their supporting staff, and they quickly learn that athletic-academic advisors and counselors, learning assistants, tutoring services, and study hall are all part of an integral approach to support them during their athletic and academic journey at the institution (Rubin & Moses, 2017). Huml et al. (2014) noted a change in academic advising since the 1970s when the focus was mainly on scheduling classes for student-athletes to now shifting attention to increasing the retention and graduation rates and developing models that support success for student-athletes. Kuhn (2008) defined academic advising as to the provision of advice to student-athletes in regards to their academic, social, and personal concerns. The provision of advice could be used, as Kuhn (2008) described, to "inform, suggest, counsel, discipline, coach, mentor, or even teach" (p.3). In 2005 the Coalition on Intercollegiate Athletics made recommendations stating that athletic academic support ought to be further integrated within the already existing academic support services in order to avoid the pressure athletic advising might be experiencing in regards to minimizing student-athletes academic challenges for the benefit of one's athletic career aspirations. Judge et al. (2018) wrote that academic services staff, including directors, tutors, and counselors are essential to the overall function of athletic academic centers as well as to the success of student-athletes. As a part of the support system, the services staff are tasked with monitoring student-athletes academic progress in each course they are enrolled in and on a semester by semester basis to ensure that student-athletes are

making progress toward graduation as well as meeting the NCAA requirements (Judge et al., 2018).

In a quantitative study conducted by Huml et al. (2014) the results indicated that student-athletes have voiced satisfaction and need for the increased academic support. In their study with 123 women and 73 men participants, women reported greater satisfaction with faculty keeping their academics a priority. However, the results also indicated a statistical significance pertaining to athletic academic centers hindering student-athlete connections with faculty due to athletic academic centers providing support in an isolated environment on campus. It is important to note the difference between private and public institutions, as Huml et al. (2014) discovered that student-athletes who are attending public universities reported that the athletic academic center hindered their ability to connect with faculty, get involved with student organizations on campus, ability to study, and get involved in community service. Furthermore, student-athletes expressed doubts regarding their athletic counselors maintaining focus on providing them with support pertaining to their academic pursuits and career counseling. The researchers raised a valid point stating that if student-athletes do not feel confident their athletic academic advisors will prioritize their academics, then that reduces the potential benefit of having this additional layer of what appears to be academic support for student-athletes (Huml et al., 2014).

Similarly, Ridpath (2010) discovered in his mixed-methods study that particular subgroups believed they need assistance and support from athletic academic centers to maintain their eligibility. His study findings also presented a significant difference in how the specialized services within athletic academic centers are utilized between different sports, gender, and ethnicity. Furthermore, he found that student-athletes who participate in revenue-generating

sports (i.e. football and basketball) have developed a dependency towards utilizing these services in order to maintain eligibility (Ridpath, 2010).

### *Help-seeking Attitudes*

As previously stated, student-athletes face many demands, even though they are not competing on a professional level, they still face time constraints and must be able to balance their academic, athletic, and personal commitments. As such, student-athletes as a whole are a vulnerable population and may experience a variety of psychological issues including social isolation, maladjustment, poor athletic performance, self-esteem issues, identity development concerns, depression, eating disorders, etc. (Barnard, 2016; Watson, 2005). It is important to consider and understand how help-seeking attitudes and behaviors may affect or even prevent the student-athlete population from receiving support that they unquestionably need during their intercollegiate athletic career.

Jolly (2008) wrote how student-athletes tend to experience less positive attitudes toward help-seeking behaviors than students from the general population. Barnard (2016) examined the attitudes toward mental health and help-seeking behavior among college student-athletes and the general student population. The sample included 77 student-athletes and 50 students from the general population from Division I public university, Division I private university, and Division III college. The sample respectively included 32 men and 45 women student-athletes, and 13 men and 37 women students from the general student population. The findings indicated that participants from the general student population had significantly higher expectations of discrimination based on mental illness and that gender was a significant predictor in one's willingness to seek psychological help. Furthermore, Barnard (2016) discovered that women student-athletes were more likely to seek help in comparison to their men counterparts. However,

Watson's (2005) findings were opposite to Barnard's, as in his study with 135 student-athletes and 132 students from the general student population, he discovered that participants from the general student population were significantly more likely to seek psychological help.

Furthermore, Watson (2005) pointed out how student-athletes may not feel comfortable seeking help outside of their athletic departments as they fear that other service providers may not be able to understand student-athletes circumstances including special concerns, needs, and pressures. A recent study supports Watson's (2005) findings, as Hatteberg (2020) conducted a qualitative study and presented findings that show student-athletes perceive a number of barriers that prevent them from both seeking and receiving needed support. Hatteberg's (2020) data indicated that student-athletes perceived institutional staff members as unable or unwilling to provide emotional support and the fact that they ought to seek particular services outside of the athletic department made them unwilling to do so, mainly because of their busy schedules.

There is a lot of emphasis within athletic departments on maintaining student-athletes academic eligibility and graduation rates. Hatteberg's (2020) findings present student-athletes believed that supporting staff within athletic departments were more concerned with maintaining institutional goals and objectives met rather than addressing well-being and what is in the student-athletes best interest. Fletcher et al. (2003) emphasized the importance of collaboration between and within university departments, including the athletic department, for the development of a more holistic approach that advocates for interventions designed specifically to support student-athletes.

### **Role of the Mass Media**

Athletic events rarely occur without some form of interaction and communication; hence it is difficult to separate the global market from the sports. Reichart Smith and Smith (2012)

wrote that despite the short existence of social media it has had an immediate impact on sport consumers. Multiple factors ought to be considered before the sporting event even takes place. Tickets, arenas, sponsorships, and TV contracts are just a few of the factors of the phenomenon called professional and collegiate sports which sometimes, unfortunately, take away rather than contribute to the event on the field (Muniowski & Jachec, 2017). Muniowski and Jachec (2017) discussed modern society as an image-driven culture, where each public persona, in this case, an athlete, ought to conceal their individuality in order to contribute to entertainment. Society is seeking entertainment through athletic events and soothes the craving for stimulation by absorbing the headlines, stories, and images presented by various media outlets, which are more often than not absorbed without regard for reality. In the last couple of decades, the consumers have taken the conversation to boards, blogs, chat rooms, online forums, and a variety of social media outlets to discuss and debate everything that is happening both on and off the athletic field (Reichart Smith & Smith, 2012). Media outlets are mediators of sport and allow consumers easy and immediate access. Raney (2009) communicated his observation stating "overwhelmingly, media consumers report that they view mediated sports because of the emotional rewards they receive from doing so" (p.340). Scholarly literature investigated sports fans' motivation for use of media and identified motivation includes aesthetics, catharsis, drama, entertainment, escape, social interaction, and vicarious achievement (Reichart Smith & Smith, 2012; Zillmann & Paulus, 1993). Shultz and Scheffer (2008) noted the communication now follows a two-way model, which enables consumers to actively participate in the communication process. Sports fans are now not only consumers but are able to become content providers through multiple online tools such as blogs, websites, Facebook, and Twitter (Reichart Smith & Smith, 2012).

### *Injury Topics in Mass Media*

Research specifically exploring women injury topics in mass media is very limited, however, in this section, several studies with male populations are presented, along with implied interpretations of women's views. Sanderson et al. (2016) stated that injury topics have become more noticeable in the media, however, it is important to understand how these issues are framed in the mass media and used by journalists as a tool to package stories that will influence how the audience interprets them. For instance, in football playing through pain and suppressing injuries to appear tough is closely tied to a narrow version of masculinity that normalizes and values such behavior and choices (Darrow et al., 2009). Media coverage of athletes who decide not to play while injured may impact athletes' future decisions, as well as fans', attitudes toward those athletes. Athletes who decide to sit out may be presented as weak, while the ones who decide to play through pain and injury may be presented as a "warrior who embodies the ethos of sport" (Sanderson et al., 2016, p.4). It is important to understand that mass media has the power to influence public knowledge, attitudes, and behaviors, in particular those related to health concerns. Furthermore, mass media continues to frame these issues as they relate to sport (Sanderson et al., 2016).

**Framing.** Framing is defined as the process by which mass media organizations present news stories in particular ways that contribute to the formation of public interpretations (Kuypers & Cooper, 2005; Paxton, 2004; Tian & Stewart, 2005). Entman (1993) argued that the framing process means to “select some aspects of a perceived reality and make them more salient in a communicating text, in such a way to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (p. 52). Framing is perceived as a powerful skill because it allows communicators to emphasize



certain information and minimize other data, thus influencing the way audiences grasp the presented information (Stefanik-Sidener, 2013). Researchers further argued that framing becomes salient when health and safety concerns are involved (Rothman et al., 2012; Stefanik-Sidener, 2013).

### ***Women Athletes in Mass Media***

Framing is present among women athletes and unfortunately, although women in sport have made tremendous progress since Title IX, that progress does not equally translate to sports media. Kane et al. (2013) and Kane and Maxwell (2011) refer to the sports media commercial complex, which has been argued to have a massive influence on how society views women's sports and women athletes due to framing. Kane et al. (2013) discussed the far-reaching consequences of such framing. First, on a micro-level, the way women athletes are portrayed has substantial social and economic effects because media narratives presented in both written and visual format affect their acceptance and thus their marketability in ways that continue to reinforce traditional gender stereotypes. Secondly, on a macro level, the sports media complex has been identified as an intensely powerful and effective tool for preserving hegemonic masculinity and as a result male power and privilege (Kane et al., 2013). Messner (2002) argued that media representations replicate dominant ideologies and practices, which thoroughly position sport as a male terrain on every systemic level thus reinforcing a "cultural center of masculinity", all while women's athletic achievements are either trivialized, marginalized, or ignored altogether.

Kane et al. (2013) conducted a seminal study with women college student-athletes and explored how representation of women athletes is interpreted by other groups of people and how these interpretations impact beliefs and attitudes toward women's sports. Their results indicated

consistency in values and attitudes when it came to media representations of women's sport, however, a sharp difference was present when team sports have been compared to individual sports. One of their most significant findings was that women athletes repeatedly chose images that highlighted athletic competence reinforcing preference for a high degree of physical ability (Kane et al., 2013). These study findings are consistent with previous studies conducted by Daniels (2012), who investigated adolescent girls and college-age females, and Kane and Maxwell (2011) who explored adult men and women. Daniels (2012) and Kane and Maxwell (2011) discovered that when women athletes are presented as highly competent in the mass media, they evoke feelings of admiration and are perceived as positive role models.

Although the majority of the research regarding how media presents injuries is on men athletes from revenue-making sports like football and basketball, we can see that the mass media reinforces the dominant ideologies and practices with an emphasis on masculinity. The streamlined narrative in the media is that athletes ought to suppress their experience with injuries to appear tough, which leads to the normalization of playing and competing while injured. Although scholarly research has not investigated this phenomenon with the women athlete population, as Sanderson et al. (2016) pointed out, mass media has the power to impact the public and how they interpret and come to understand knowledge, attitudes, and behaviors in the sports domain.

### **Athletic Injuries**

The following section will present the classification and data of injury occurrences within NCAA institutions, however, all of the studies involve multiple men and women sports, as the research exploring specifically women track and field student-athletes are extremely limited. This continues to strengthen the author's argument for the need for this study with this particular

population. Given the high demands, student-athletes experience during their intercollegiate careers including academics, athletics, and in their personal lives, facing and experiencing injuries becomes an unavoidable phenomenon within this population. Also, despite the level of athlete's conditioning, use of proper form and technique, advancement in equipment, and various preventive strategies, athletes still get injured (Gotlin & Jazrawi, 2020). Injury patterns have become a key area of research among the NCAA student-athlete population (Kay et al., 2017). It is important to note that identifying an injury is vital to timely intervention and in most cases, a serious injury is obvious however when one is tending to other injuries, newer injuries may be overlooked (Gotlin & Jazrawi, 2020). Collegiate student-athletes are unquestionably exposed to higher intensity of training and their exposure to participation in sports puts them at risk for microtraumas. Furthermore, constant engagement in repetitive activities may not instantly cause an injury; however, accumulation of these exposures at practice and competition may lead to an increased risk of severe injuries and additional time loss from active participation (Kay et al., 2017). Walker (2018) defined physical injury as "any stress on the body that prevents the organism from functioning properly and results in the body employing a process of repair", he further defined sports injury as any form of injury, including pain and physical impairment that occurs as a result of the athletic-related activity (p.30). Athletic injuries are associated with the musculoskeletal system, which encompasses the muscles, bones, joints, and ligaments, and tendons, which are categorized as associated tissues and will be further addressed in the following section.

### **Classification of Athletic Injuries**

Athletic injuries are commonly classified as *acute* or *chronic*, regardless of which part of the body is injured or even how serious the injury is. *Acute injuries* refer to athletic injuries that

happen in an instant such as bone fractures, muscle and tendon strains, contusions, and ligament sprains. Frequently, these acute injuries produce pain, weakness, tenderness, and swelling and result in one's inability to use or place weight on the injured area (Walker, 2018). *Chronic injuries* on the other hand occur over a prolonged period of time and are often time also referred to as *overuse injuries*. Examples of chronic injuries include tendinitis, bursitis, and stress fractures and they also produce pain, weakness, tenderness, swelling, and prevent one from using or placing weight on the injured area (Walker, 2018).

Athletic injuries can further be classified as mild, moderate, and severe. *Mild athletic injuries* result in minimal pain and swelling and do not adversely affect one's performance. *Moderate athletic injuries* do result in some pain and swelling and have a limiting effect on one's performance. Furthermore, the affected area is tender to touch and discoloration may be present on the area where the injury occurred. *Severe athletic injuries* present with an increased level of pain and swelling and in addition to affecting one's athletic performance, the normal daily functioning is affected as well. Athletes with severe athletic injuries will be very tender to touch and also experience discoloration and deformity to the injured area (Walker, 2018).

### **Data on Intercollegiate Athletic Injuries**

There are several studies available that documented the prevalence of athletic injuries (Conn et al., 2003; Williams & Anderson, 2007), however, the majority of the research about collegiate student-athletes comes from the NCAA Injury Surveillance Program (NCAA-ISP), which was implemented in 1982 to determine the incidence and frequency of sports-related injuries and with an effort of informing health and safety efforts in collegiate student-athletes (Dalton et al., 2015; Eckard, Kerr, et al., 2017; Eckard, Padua, et al., 2017; Gans et al., 2018; Hassebrock et al., 2019; Kay et al., 2017; Kerbel et a., 2017; Kerr et al., 2015; Kopec et al.,

2017; Lievers et al., 2020; Mauntel et al., 2017; Rizzone et al., 2017; Roos et al., 2016).

Unfortunately, there is a dearth of literature focused on exploring injuries among women student-athletes. The NCAA-ISP used a convenience sample of NCAA teams in 25 sports and depended on voluntary reporting of athletic trainers to document details of student-athletes injuries including body site, diagnosis, activity, mechanism, event type, and time in season (Kopec et al., 2018; Lievers et al., 2020; Zupon et al., 2018). Furthermore, it is important to note that the number of NCAA programs providing data varied by sports and year (Kopec et al., 2017), hence the data we see is not all-inclusive, nor is it the most accurate representation of injury occurrence within all of the NCAA institutions, however, it is the only data available. The 25 NCAA sports included men's football, baseball, and wrestling; women's field hockey, gymnastics, softball, and volleyball; and men's and women's basketball, cross-country, ice hockey, lacrosse, soccer, swimming and diving, tennis, indoor and outdoor track and field (Kopec et al., 2017). As mentioned previously, Kerr et al. (2014) provided data indicating the amount of exposure student-athletes experience among 25 NCAA sports. The estimates indicate student-athletes had 28,860,299 practice exposures and 6,472,952 competition exposures per year. In a five-year longitudinal study, it was estimated that student-athletes suffered 1,053,370 injuries, which represents an average of 210,674 total injuries per year among which 63.8% occurred during practice (Kerr et al., 2014).

Several studies investigated the epidemiology of various injuries sustained by NCAA student-athletes between 2009-2010 and 2014-2015 academic years (Eckard, Padua, et al., 2017; Eckard, Kerr, et al. 2017; Kay et al., 2017; Kopec et al., 2017; Lievers et al., 2020; Zupon et al., 2018). These studies used several identical definitions. For instance, the injury was considered reportable if it occurred as a result of participation in NCAA sanctioned practice or competition

and it required attention from an athletic trainer or physician. The athlete exposure was defined as one student-athlete taking part in one NCAA sanctioned practice or competition in which they were exposed to the possibility of athletic injury. For consistency purposes, the injury rates in these studies were calculated as the number of injuries divided by the number of athlete-exposures, and the rates were then reported per 10,000 athlete-exposures overall.

**Quadriceps Injuries.** Eckard, Kerr, et al. (2017) investigated the occurrence of quadriceps strains. They stated how lower extremity muscle strains are common injuries and athletes with strains experience significant restriction time from participation in their sport mainly due to extensive rehabilitation and high risk for reoccurring injury. It is also important to emphasize that data from their study did not account for the injuries that did not result in time-loss from participation shorter than 24 hours. Eckard, Kerr, et al. (2017) reported that overall there were 517 quadriceps strains reported to NCAA-ISP. The sports with the highest overall quadriceps strain rates included women's soccer, men's soccer, women's indoor track and field, and women's softball. Furthermore, when comparing women's and men's sports, they discovered that women student-athletes had overall higher rates of quadriceps strains than men student-athletes. Another finding indicated that the majority ( $n=402$ , 77.8%) of quadriceps strains were sustained during practice, however, women student-athletes were found to have an overall higher number ( $n=336$ ) of quadriceps strain injury both in competition and practice when compared to men student-athletes ( $n=181$ ). Overall 7.5% ( $n=39$ ) of injuries were classified as recurrent with the highest incidence in women's basketball ( $n=24$ ), women's soccer ( $n=16$ ), and men's football ( $n=6$ ). Lastly, 113 injuries appeared to occur due to overuse.

**Hamstring Injuries.** Hamstring strains are very common injuries among athletes in general, especially among football players, soccer players, and athletes who engage in sprinting

(Dalton et al., 2015). Furthermore, researchers noted that hamstring strains present with persistent symptoms and require extended recovery time (Cross et al., 2010; Dalton et al., 2015). Dalton et al. (2015) investigated the epidemiology of hamstring strains among 25 sports within the NCAA based on NCAA-ISP data from 2009-2010 and 2013-2014 academic years. The authors reported a total of 1142 hamstring strains with 68.2% taking place during practice. Furthermore, men's football, and men's and women's soccer had the highest number of hamstring strain injuries, accounting for 35.3% of the total number of injuries, however, soccer, track and field, and football were sports reported to have the highest rates of injuries per 10,000 student-athlete exposures. Among all injuries, 12.6% were recurrent injuries. Dalton et al. (2015) noted how "sports that feature explosive or decelerating movements" have higher hamstring strain injury rates due to "long bouts of uninterrupted exercise or minimal rest periods, repeated sprints, and eccentric contractions" (p. 2677). Tokutake et al. (2018) examined risk factors of hamstring strain injury among 61 men track and field athletes with an age range between 18.5 and 20.7 years old. They discovered that 30% of observed athletes suffered the hamstring strain injury while sprinting and that a history of the previous injury was an important risk factor for hamstring strain injury.

**Hip and Groin Area Injuries.** Another study conducted by Eckard, Padua, et al. (2017) investigated the epidemiology of hip flexor and hip adductor strains among NCAA student-athletes. The hip flexor and hip adductor are two muscle groups that are vulnerable to a strain injury, and due to similarities in muscle actions and mechanisms of injury, they are found to be best studied together. The researchers wrote how the hip flexor muscles are most frequently injured when athletes are engaging in activities such as sprinting, kicking, and cutting. Their study found an overall of 770 hip flexor strains and an overall of 621 hip adductor strains with

the highest rates among men's soccer and men's ice hockey. Furthermore, the majority of injuries occurred during student-athletes practice, 72.7% for hip flexors and 72.9% for hip adductors. A total of 77 hip flexor strains and 69 hip adductor strains were recurrent injuries with the highest rates among men and women in ice hockey. However, the authors did not find any significant differences between men and women student-athletes. It is also important to highlight that 645 hip flexor strain injuries and 515 hip adductor strain injuries resulted in student-athletes being restricted from athletic participation for less than one week (Eckard, Padua, et al., 2017).

Similarly, Kerbel et al. (2018) explored the epidemiology of hip and groin injuries among NCAA student-athletes. Kerbel et al. (2018) wrote that hip and groin pain is a very common complaint among athletes and that the cause of that pain is often multifaceted including both soft and hard tissue abnormalities that can occur in acute and chronic overuse settings. Researchers pointed out one of the main issues regarding hip and groin pain is the difficulty to provide an accurate diagnosis specifically in an acute setting due to many overlapping signs and symptoms, which are often not specific enough and difficult to assess. As a result of hip and groin pain, lack of accurate diagnosis, and proper treatment, athletes can also develop a compensatory secondary function further complicating the clinical picture. Their analysis indicated a total of 1984 hip and groin injuries between 2009-2010 and 2013-2014, however, an interesting fact is that the annual incidence of these injuries has been on the rise every year. In the 2009-2010 season there were 315 injuries and in the last recorded season, 2013-2014, the total rose to 495. The hip and groin injuries that were most commonly reported included adductor and groin tear ( $n=486$ ), hip flexor tear ( $n=365$ ), iliopsoas, and sartorius tear ( $n=252$ ), internal rotator or groin tear ( $n=185$ ). Men's soccer, men's ice hockey, and women's ice hockey were sports with the highest rates of hip injuries reported respectively. The majority (66.8%) of hip injuries occurred during practice as



opposed to the competition (33.2%). Men track and field student-athletes were found to have the highest ratio of injuries in competition during their outdoor season, while during the indoor season the ratio was higher for injuries incurred in practice. Lastly, in sex-comparable sports, men student-athletes were found to be more affected than women student-athletes.

**Ankle and Foot Related Injuries.** Fundamental tasks for athletic performance include running, sprinting, jumping, cutting, pushing off, and kicking, and in order for athletes to perform these tasks, they ought to have healthy and functional feet. Lievers et al. (2020) investigated the epidemiology of foot injuries among NCAA student-athletes between the 2009-2010 and 2014-2015 seasons. Feet have complex anatomy and biomechanics and the diverse athletic demands athletes must perform present numerous opportunities for injury. Additionally, due to individual sports' emphasis on particular tasks which place specific biomechanical demands on one's feet, there are differences between sports regarding the overall rate of injuries as well as the type of foot injuries. Lievers et al. (2020) also drew attention to consider sex differences within particular sports. Women have been found to have higher risks of anterior ligament tears, greater ligament laxity, higher rates of ankle sprain and plantar fasciitis than men. Their analysis discovered a total of 1967 foot injuries from 23 teams among 15 unique sports. Men's football ( $n = 525$ ) was found to have the highest rate, followed by women's soccer ( $n = 171$ ), men's basketball ( $n = 165$ ), women's basketball ( $n = 126$ ), men's soccer ( $n = 125$ ), and women's track and field ( $n = 122$ ). Men's swimming and diving were found to have the lowest rate ( $n = 8$ ). The data also indicated the five most frequent injuries included foot or toe contusions, midfoot injuries, plantar fascia injuries, turf toe, and metatarsal fractures. There were a total of 430 foot or toe contusion injuries and 174 metatarsal fractures, however, the metatarsal fracture was more than 12 times more severe in terms of recovery and loss-time. Midfoot injuries

were found to be most common among men's football and basketball student-athletes, while plantar fascia was most common among women volleyball student-athletes. Furthermore, plantar fasciitis was found to be the most common injury in women student-athletes participating in basketball, track and field, and volleyball, while metatarsal fractures were most common among women student-athletes in basketball and track and field, and among men student-athletes in basketball and football (Lievers et al., 2020).

In addition to foot injuries, ankle sprains have been found as another one of the most common injuries among student-athletes. Broadly speaking ankle sprains include lateral ligament complex sprains, which are the most reported ankle injury; medial ligament complex sprains; and distal tibiofibular joint sprains, which are also known as high ankle sprains and often require longest recovery periods (Mauntel et al., 2017). Mauntel et al. (2017) explored the epidemiology of high ankle sprains among NCAA student-athletes and reported a total of 480 high ankle injuries between 2009-2010 and 2013-2014 academic years. They also reported 56.7% of the high ankle sprains occurred during the competition and men's football, wrestling, and ice hockey were sports with the highest rates reported. Furthermore, men student-athletes were found to experience high ankle sprains more frequently than women student-athletes. Almost 10% of high ankle sprains were found to be recurrent injuries. Mauntel et al. (2017) highlighted one of their major findings indicating that 1 in 6 (15.8%) high ankle sprain injuries caused student-athletes to miss more than 21 days of athletic participation, while about 47% missed more than 7 days of athletic participation. Women sports with the highest rates of high ankle injuries included soccer ( $n=22$ ), volleyball ( $n=11$ ), and basketball ( $n=9$ ). Roos et al. (2016) utilized the same data from NCAA-ISP and investigated the epidemiology of lateral ligament complex (LLC) ankle sprains. Their results yielded a total of 2429 LLC sprains between 2009-2010 and 2014-2015 academic

years, which accounts for 73.9% of all reported ankle sprains among all NCAA student-athletes. To signify the prevalence of LLC injuries Roos et al. (2016) reported how LCC sprain was the most common injury among 12 NCAA sports in addition to being in the top five injuries for another nine NCAA sports. The sports with the highest number of LLC sprains included men's football ( $n = 771$ ), men's basketball ( $n = 346$ ), women's basketball ( $n = 237$ ), and women's soccer ( $n = 225$ ). The majority (57.3%) of LLC sprains occurred in practice and no statistically significant differences were found between men and women student-athletes. Roos et al. (2016) wrote that for all running sports, except men's outdoor track and field, the main cause of LLC was surface contact. Furthermore, almost 12% of LLC sprains were recurrent injuries.

A study conducted by Kopec et al. (2017) explored the epidemiology of deltoid ligament sprains in NCAA student-athletes. The deltoid is the medial ligament of the ankle joint and its primary function is to limit eversion or movement that tilts the sole of the foot away from the midline of the body and help with restricting external rotation of the foot. In cases of forceful eversion, the deltoid ligament suffers sprain and causes pain, swelling, and limits the ankle's total range of motion. Additionally, other structures of the ankle may be damaged as well. Kopec et al. (2017) noted that deltoid ligament sprains rarely happen in isolation, although they are not as common as lateral and syndesmotic ankle sprains. Furthermore, deltoid ligament injuries result in significant time loss and disability among athletic populations. Their results yielded a total of 380 deltoid ligament sprains with the highest rates among men's football student-athletes. They also did not find any significant differences between men and women student-athletes. In addition to men's football ( $n = 157$ ), women's gymnastics ( $n = 13$ ), men's ( $n = 10$ ) and women's ( $n = 6$ ) ice hockey, men's ( $n = 33$ ) and women's ( $n = 43$ ) soccer, men's ( $n = 38$ ) and women's ( $n = 23$ ) basketball, and men's ( $n = 14$ ) and women's ( $n = 14$ ) lacrosse had the highest rates of deltoid

ligament sprain injuries. Kopec et al. (2017) wrote how the majority of the injuries occurred on soft surfaces including grass and floor mats. The occurrence was found to be higher in competition for men student-athletes, while for women the occurrence was higher in practice. It is also important to note that prior injuries have been identified as an increased risk factor for deltoid ligament injury and cause of further damage and instability. Kopec et al. (2017) warned that incomplete healing of this type of injury may lead to chronic ankle instability and may also require surgical correction.

Stress fracture injuries are more severe kinds of injuries as they are caused by cumulative and repetitive stress, which leads to abnormal bone remodeling. A stress fracture is defined as the microfracture of cortical bone tissue, and it has been found to affect thousands of athletes each year, in particular women athletes, runners, and gymnasts (Rizzone et al., 2017). Furthermore, it has been discussed that stress fracture injuries require at least several weeks of recovery and athletes are unable to take part in athletic activities during that time. Additionally, if stress fractures are unattended and left untreated, the injury may progress to a complete fracture of a bone and require a surgical procedure, requiring a much longer recovery time. It is important to highlight that various factors that contribute to stress fracture injuries also increase the risk of osteoporosis and may have significant long-term health consequences (Rizzone et al., 2017). In their study, Rizzone et al. (2017) explored the epidemiology of stress fractures among NCAA student-athletes during 10 years, from 2004-2005 through 2013-2014, by analyzing data from NCAA-ISP. Their analysis indicated that there was a total of 671 stress fractures with the most common locations on metatarsal bones ( $n = 254$ ), followed by tibia ( $n = 147$ ), and lower back/lumbar spine/pelvis ( $n = 81$ ). The sports where stress fractures were most common included women's cross country, gymnastics, and outdoor track and field. For men, the highest rates were

among men cross-country runners. Women student-athletes were found to have a higher rate of stress fracture injuries than men student-athletes. The majority (59.6%) of stress fracture injuries were recorded during the regular season, however, the rate of occurrence was higher for the preseason. When considering recovery period and time-loss from athletic participation, it was found that 46.8% of stress fracture injuries resulted in more than 21 days of participation restriction, 19.2% required participation restriction between 7 and 21 days, and 20.7% were season-ending stress fractures. Almost one-quarter of stress fractures were recurrent and sports with the highest rates of recurrent stress fracture injuries were women's field hockey, women's gymnastics, men's football, and women's outdoor track. The authors discussed how these types of injuries may be caused by high volumes of repetition and overuse of lower extremities. Rizzone et al. (2017) defined the women athlete triad as "low energy availability (inadequate caloric intake relative to energy expenditure)" as a cause that leads to "diversion of energy away from the hypothalamic-pituitary-gonadal axis in order to reserve energy for more vital processes" (p.971). As a result, women athletes can experience menstrual abnormalities, including oligomenorrhea (a condition of infrequent menstrual periods), and neuroendocrine changes, which all may have detrimental effects on bones (Rizzone et al., 2017).

**Back, Neck, and Spine Injuries.** Zupon et al. (2018) explored the epidemiology of back, neck, and spine injuries among NCAA men's and women's ice hockey student-athletes. They reported men's ice hockey student-athletes suffered a total of 226, while women suffered a total of 97 back, neck, and spine injuries between 2009-2010 and 2014-2015 seasons. For both men and women, most injuries occurred in the lower back and lumbar spine area. The women ice hockey student-athletes experienced a higher occurrence of neck and cervical spine injuries and overall back and thoracic spine injuries during competition, while lower back and lumbar spine

injury rates were higher during practice. Another study conducted by Hassebrock et al. (2019) explored lumbar spine injuries among NCAA student-athletes between 2009-2010 and 2013-2014 academic years based on NCAA-ISP data. They stated how lumbar spine injuries are fairly common among collegiate student-athletes and can occur from direct injury or muscle imbalance, which prevents optimal kinematics, and as a result, leads to disorders or injuries. The analysis presented a total of 1167 lumbar spine injuries. Among sex-comparable sports, it was discovered that women student-athletes suffer higher rates of lumbar spine injuries when compared to men student-athletes and that women's gymnastics and women's tennis were the sports with the highest rates. However, men's football was the sport with the highest number of injuries. The majority of the injuries were found to have occurred during practice and 40% were found to have a noncontact mechanism of injury, while 27% of injuries were caused by overuse. Among women's sports, overuse was the most common injury mechanism (45%). Regarding injury types, it was found that 45% were lower back strains, which were most common among both men and women, and unspecified pain being the second most common injury type accounting for 40% of overall injuries (Hassebrock et al., 2019). Furthermore, it was found that almost 21% of injuries were recurrent.

**Severe Injuries.** The epidemiology of severe injuries among NCAA student-athletes was explored by Kay et al. (2017). The authors accentuated the larger portions of time-loss, longer injury restrictions from athletic participation, and more serious ramifications for student-athlete's physical and mental health when they suffer a severe injury. For the purpose of their study, Kay et al. (2017) defined severe injury as an injury resulting in more than 21 days of time loss. Furthermore, severe injuries have been found to affect student-athletes not only physically, but also psychologically and financially and thus require better preventative methods. Their analysis

indicated there was a total of 3183 severe injuries among student-athletes between the 2009-2010 and 2014-2015 seasons. Men's football was found with the highest number of severe injuries ( $n=1094$ ), followed by men's ice hockey ( $n=381$ ), and women's soccer ( $n=236$ ). A significant finding also indicated that 30.6% ( $n=974$ ) of all severe injuries required student-athletes to undergo surgery, while 47.3% ( $n=1504$ ) were classified as season-ending injuries. They also discovered some differences in sex-comparable sports, for instance, the severe injury rate was higher among men ice hockey and lacrosse student-athletes, while the rate was higher among women student-athletes participating in outdoor track and field, cross-country, basketball, and soccer. The severe injury occurrence was fairly evenly distributed between practice (51%) and competition (49%), with 69.3% reported during the regular season, 27.3% during the preseason, and 3.4% during the postseason. The parts of the body that were found to account for the largest proportion of severe injuries included the knee (32.9%), lower leg, ankle, or foot (22.5%), and head, face, and neck (11.2%). Lastly, women student-athletes were found to have a higher proportion of severe injuries for the knee and lower leg, ankle, or foot. Overall, women student-athletes were found to have higher proportions of severe injuries for stress fractures and sprains when compared to men. Looking at severe injury mechanisms, women were found to have the highest proportion of severe injuries due to overuse. Kay et al. (2017) called for improvement in prevention strategies and inclusion of concurrent prevention strategies for multiple injuries as efforts to reduce the incidence of severe injuries among student-athletes. If student-athletes were to suffer less severe injuries, they would be able to continue to participate in their sport, which would improve their mental health and simultaneously lessen the financial burden on the institution and workload of medical staff responsible for student-athlete treatment (Kay et al., 2017).

### ***Women Track and Field Student-athletes***

In the following section data presented comes from a comprehensive overview of injuries among NCAA student-athletes between 2009-2010 and 2013-2014 academic years was provided by Kerr et al. (2015). Unfortunately, currently, there are no studies that specifically investigated women track and field athletes regarding injury occurrence and prevalence, hence we must depend on the data from comprehensive studies investigating all NCAA sports among men and women. When looking at women track and field student-athletes, Kerr et al. (2015) reported an average annual national estimate of injuries for the indoor season, which included an overall of 11,519 injuries out of which 994 occurred during competition and 10,524 occurred during practice. Comparatively, for the outdoor season, an overall of 6,167 injuries was reported with 1,541 occurring during competition and 4,626 occurring during practice. Furthermore, during indoor season roughly 35% of injuries that occurred during competition and 22% of injuries that occurred during practice required more than seven days of recovery time before student-athletes were able to return to full athletic participation. During the outdoor season, about 25% of injuries that occurred during competition and 32% of injuries that occurred during practice required more than seven days of recovery time. Following is the breakdown of more specific injuries.

**Quadriceps Injuries.** In Eckard, Kerr, et al. (2017) study findings indicated that women track and field student-athletes suffered an overall 35 quadriceps strain injuries during their indoor season and nine during the outdoor season. During the indoor season 30 out of 35 quadriceps strain injuries occurred during practice, while during the outdoor season seven out of nine occurred during practice, the remaining injuries occurred in competition. Furthermore, it is important to distinguish that 18 quadriceps strain injuries actually occurred during the pre-



indoor-season training and 17 occurred during the regular season. For comparison, two injuries occurred during the pre-outdoor season training and six during the regular season.

**Hamstring Injuries.** Dalton et al. (2015) examined hamstring strain injuries among NCAA sports and their analysis indicated that women track and field student-athletes suffered a total of 37 hamstring strains during the indoor season and 32 during the outdoor season. The majority of injuries occurred during practice for both indoor (78.4%) and outdoor (65.6%) seasons and while sprinting. Furthermore, 10.8% of injuries were recurrent during indoor and 6.3% during the outdoor season. Lastly, 21.6% and 3.1% of hamstring strains resulted in a 3-week time loss from athletic participation during indoor and outdoor seasons respectively. It is also important to note that Dalton et al. (2015) reported men track and field student-athletes suffered more injuries during both seasons in comparison to their women counterparts, however, the difference was not statistically significant. Opar et al.'s (2014) findings differ from Dalton et al.'s (2015) results. Opar et al. (2014) conducted a 3-year observational study at the Penn Relay Carnival. Penn Relay Carnival is one of the oldest and largest track and field competitions in the U.S. and is held annually. The researchers collected data between 2002 and 2004 and defined hamstring strain injury as an insult reported to the medical staff at Penn Relays Carnival, which caused an athlete an acute pain in the posterior thigh and resulted in immediate termination from participation. Opar et al. (2014) reported during the three years 48,473 athletes, out of which 23,241 were women, registered to participate and there was a total of 489 injuries reported to medical staff, with 118 (24.1%) being hamstring strain injuries. Women high school student-athletes were found to be at a lesser risk than their men counterparts, however, the researchers did not discover any significant differences between men and women collegiate student-athletes,

suggesting that more mature women athletes are just as likely to suffer hamstring strain injury as men are (Opar et al., 2014).

**Hip and Groin Area Injuries.** Eckard, Padua et al. (2017) in their study about hip flexor and hip adductor strains discovered that women track and field student-athletes suffered a total of 26 hip flexor strains and 24 hip adductor strains during both indoor and outdoor seasons. Furthermore, 17 hip flexor strains occurred during a practice in comparison to 9 during competition, while a total of 21 hip adductor strains occurred during a practice in comparison to 3 during competition. Additionally, women track and field student-athletes were found to have reoccurrence injury rates higher than 20%. Eckard, Padua, et al. (2017) noted how previous groin injuries are a significant risk factor for future groin and hip area injuries and these types of reinjuries have been found to have longer recovery times. Kerbel et al. (2018) explored hip and groin injuries and their results indicated that women track and field student-athletes suffered a total of 69 injuries during both indoor and outdoor seasons, with the majority of the injuries occurring during practice. Furthermore, Kerbel et al. (2018) pointed out that women's track and field (19.4%), men's wrestling (11.5%), and women's cross country (10.3%) were sports with the largest proportion of severe hip and groin injuries.

**Ankle and Foot Related Injuries.** In their study on the epidemiology of foot injuries, Lievers et al. (2020) found that women track and field student-athletes had a higher rate of foot injuries ( $n = 122$ ) than their men counterparts ( $n = 86$ ). Furthermore, they found that women cross-country (13.8%) and track and field (12.5%) student-athletes had the highest rate of foot injury occurrences per 10,000 athletic exposures. The most common foot injuries among women track and field student-athletes include plantar fascia injury, foot or toe contusion, metatarsal fracture, midfoot injury, forefoot extensor or flexor tear, and turf toe. Lievers et al. (2020)

highlighted the sex differences in injury rates specifically regarding anatomic and physiologic factors and called for attention in better targeting prevention efforts. In Mauntel et al.'s (2017) study, it was reported that NCAA women track and field student-athletes suffered a total of five high ankle sprain injuries, which is higher than men's track and field student-athletes ( $n=3$ ). The exact recovery time for women track and field student-athletes is unknown, however, the authors reported that 69% of high ankle sprain injuries among 25 NCAA sports resulted in a time loss from athletic participation (Mauntel et al., 2017). Roos et al. (2016) in their study reported that women track and field student-athletes suffered a total of 37 LLC sprains, however, 21.1% of those injuries were recurrent. Furthermore, LLC sprain was the second most common injury for women's outdoor track and field and the fifth for indoor track and field.

Kopec et al. (2017) in their study on the epidemiology of deltoid ligament sprains found that women track and field student-athletes suffered a total of seven injuries, with five occurring during practice and two during competition. Their overall results on NCAA women student-athletes indicated that roughly 45% of injured women student-athletes suffered less than 24 hours of loss time, roughly 25% suffered between one and six days of loss-time, about 15% suffered between seven and 21 days of loss-time, and about 5% resulted in more than 21 days of loss-time.

Stress fracture injuries are found to have short-term and long-term effects on one's health. Rizzone et al. (2017) explored the epidemiology of stress fractures among NCAA student-athletes during 10 years. The major finding was that women student-athletes experience stress fractures more frequently than men student-athletes across all sports. Women's track and field is one of the sports with the highest rate of stress fracture injuries. Furthermore, 37.5% of women cross-country runners and 36.8% of women track and field student-athletes, who suffered a stress

fracture had to end their seasons. Additionally, 26.3% of stress fracture injuries among women track and field student-athletes were recurrent, comparably to 34.6% in women's gymnastics, and 36.4% in women's field hockey. Experiencing a stress fracture injury causes any student-athletes to miss several weeks of athletic participation, causing an additional burden for them and the sports medicine professionals working with them. Rizzone et al. (2017) discussed how the higher rates among track and field, cross-country, and gymnastics student-athletes could be caused by the nature of their training regime, which exposes these athletes to high volumes of repetitive impact.

**Back, Neck, and Spine Injuries.** Hassebrock et al. (2019) explored lumbar spine injuries among NCAA student-athletes between 2009-2010 and 2013-2014 academic years based on NCAA-ISP data. They discovered that the most common cause of injuries among women was overuse and 35% of women track and field athletes suffered a recurrent lumbar spine injury. Furthermore, women track and field student-athletes reported pain as the most frequent injury type, followed by strain, degenerative, fracture, sciatica, pars, and disc injury. Furthermore, the majority of these injuries occurred during the regular season (Hassebrock et al., 2019).

**Severe Injuries.** A study about the epidemiology of severe injuries in NCAA student-athletes explored by Kay et al. (2017) indicated that severe injuries account for almost 10% of all injuries reported to NCAA-ISP. Women track and field student-athletes suffered a total of 128 severe injuries in both indoor ( $n = 71$ ) and outdoor ( $n = 57$ ) seasons with higher occurrence rates during practice. Women track and field student-athletes suffered higher rates of severe injuries during indoor preseason, however, regarding outdoor season the rate was higher during the regular season. Body parts that suffered severe injuries included lower leg, ankle, or foot; hip, groin, or upper leg; trunk and knee. Hamstring strains and hip-flexor strains were the two most

common severe injuries for women track and field student-athletes. These injuries included diagnoses such as strain, inflammatory condition, stress fracture, sprain, fracture, and contusion. Kay et al. (2017) stated how potential risk factors and their relationships among them ought to be further explored so better strategies may be developed to protect athletes from severe injuries, especially the ones caused by overuse and fatigue.

### **Impact of Athletic Injury on Mental Health**

Despite many benefits both physical and psychosocial of athletic participation, there is a possibility of getting injured, which caused researchers in the field to investigate and explore the complex nature of the experience of athletic injury and its impact on the psychological, emotional, and social wellbeing of student-athletes. Tracey (2003) pointed out that when one experiences an injury, the focus is logically on the physical aspect of it, which can inadvertently result in ignoring the psychological and cognitive effects one experiences as a result of being injured. The following sections will present literature addressing emotional, psychological, and social responses to injury, however, the studies reviewed include mostly men student-athlete participants or a combination of men and women athlete participants. This inadvertently strengthens the need for this study as women track and field student-athletes have not been investigated independently and in-depth.

### **Psychological Effects of Athletic Injury**

The American College of Sports Medicine (ACSM, 2006, 2007) has on several occasions accentuated the impact of psychological factors on injury recovery and noted the lack of evidence-based methods that can be utilized to assess an athlete's readiness to return to athletic participation. DeGaetano et al. (2016) wrote that from a psychological perspective injury is associated with significant distress levels and student-athletes who return to active participation

before they are psychologically ready are predisposed to experience additional psychological (i.e. depression and anxiety) and physical (i.e. reinjury) challenges. The process of getting injured or dealing with pain during athletic participation is a complex process, which may result in rehabilitation, hence student-athletes inadvertently face the influence of various psychological factors as a result of the injury and pain experience (Roiger et al., 2015, Tracey, 2003). Appaneal et al. (2009) pointed out how student-athletes may have adaptive or mixed responses to injury, however negative postinjury reactions appear to be the most common. Managing an experience of athletic injury or deciding to continue participating in a sport-related activity while in pain, on the psychological level may involve cognitive, behavioral, and emotional challenges (Albinson & Petrie, 2003; Bejar & Butryn, 2016; Madrigal & Gill, 2014).

When athletes in general, which includes collegiate student-athletes, face and experience an injury they are subjected to various psychological detriments such as lowered self-esteem (Smith et al., 1990; Tracey, 2003), mood disturbances (DeGaetano et al., 2016; Roiger et al., 2015; Turner et al., 2017), feelings of helplessness (Bejar & Butryn, 2016; Carson & Polman, 2008), social isolation (Madrigal & Gill, 2014), fear of recurrent injuries (Madrigal & Gill, 2014), and loss of their athletic identity (Granito, 2001; Madrigal & Gill, 2014). As counselors work with the student-athlete population in an intercollegiate setting, they must understand the psychological components of injury to assist student-athletes through the rehabilitation process and prepare them for returning to active athletic participation.

### ***Depressive and Anxious Symptoms***

An early study conducted by Chan and Grossman (1988) examined the psychological and emotional effects of running loss. Their sample included 60 runners, 32 women, and 28 men, and they compared continuing runners, healthy individuals, with prevented runners, individuals who

suffered an injury that prevented them from running. The comparative analyses indicated that injured runners reported significantly greater psychological distress and mood disturbance. The injured runners presented with significant tension, anxiety, depression, confusion, anger, and hostility. In suffering a musculoskeletal injury, Turner et al. (2017) emphasized how health care providers focus their attentions on the physical aspects of the injury often time neglecting the potential presence of psychological symptoms, which among the student-athlete population may adversely affect one's quality of life (Wiese-Bjornstal, 2010) and academic performance (Judge et al., 2018; Rubin & Moses, 2017).

Turner et al. (2017) evaluated and compared psychological responses among student-athletes who suffered a concussion with student-athletes who suffered a musculoskeletal injury and both had similar time-loss from athletic participation. Their study involved a total of 30 Division I student-athletes with 15 participants in concussion and 15 in the musculoskeletal injury group. Although the authors did not discuss findings based on gender, there were seven women participants in the concussion group and six in the musculoskeletal injury group. The main finding was that 73.3% of all participants exceeded the threshold for state anxiety during the first 72 hours after injury and many presented with unresolved anxiety when returning to play. For both concussed student-athletes and the ones with musculoskeletal injury mood disturbance and anxiety resolved during several weeks post-injury without significant differences between the groups. However, the time lost from athletic participation was found to be a contributing factor to increased mood disturbance.

**Types of Depression.** There is a lack of research exploring depressive symptomatology resulting from pain and injury among women student-athletes, however, Roiger et al. (2015), Appaneal et al. (2009), and Yang et al. (2007) have all explored the phenomenon with collegiate

student-athletes drawing conclusions based on a sample including both men and women. Furthermore, no researchers have looked into how women track and field student-athlete respond to injuries and how they experience depressive symptomatology. Appaneal et al. (2009) had clarified the use of the term depression by differentiating between negative affect such as depressed mood, which they described as "a transient state of feeling sad or down", and major depression in the form of psychiatric disturbance (p.61). Turner et al. (2017) on the other hand mentioned the term subclinical depression among student-athletes, which is defined as depression that does not meet the diagnostic criteria for a clinical disorder, however, it was found to contribute to decreased quality of life. Furthermore, they argued that subclinical depression may be a secondary emotional response resulting from restriction or removal from participation in athletic-related competitive activities (Turner et al., 2017).

Roiger et al. (2015) wrote that depressive symptoms and emotional disturbances present themselves irrespective of the nature of injury student-athletes may experience. Additional studies indicated an increase in emotional disturbances and depressive symptoms among athletes who suffer chronic and serious injuries (Appaneal et al., 2009; Chan & Grossman, 1988; McDonald & Hardy, 1990). Roiger et al. (2015) had a total of 106 men and women student-athlete participants from Division I university who participated in basketball, football, wrestling, soccer, and volleyball. The researchers compared student-athletes who suffered a concussion with those who suffered another type of injury and discovered that there were no differences between the two groups and that both experienced significantly elevated depressive symptoms post-injury. Unfortunately, the researchers did not discuss any differences in their results based on gender. Furthermore, student-athletes who did not suffer a concussion presented a continuation in a decrease of depressive symptoms for a period of 1 to 3 months post-injury



(Roiger et al., 2015). Appaneal et al. (2009) had a total of 164 participants with 108 men and 56 women student-athletes. The majority of the sample (85%) were Division I and II, while the remaining 15% were high school student-athletes. The participants took part in football (46%), basketball (17%), volleyball (9%), baseball (6%), gymnastics (4%), track and field (3%), and wrestling (1%). The main finding of their study as they compared post-injury depressive symptoms between healthy and injured student-athletes indicated that depressive symptoms among all injured student-athletes, regardless of their gender, were immediately elevated after sustaining the injury and remained elevated for up to one-month postinjury. Additionally, women student-athletes were found to experience greater post-injury depression than men. Furthermore, about 9.6% of the sample was found to meet clinical criteria for a major depressive disorder at one month post-injury and 4.4% at three months post-injury.

Similar findings were presented by Yang et al. (2007), who examined risk factors associated with depression among collegiate student-athletes. They had a total of 257 student-athletes, 167 men and 90 women, from Division I who participated in 13 intercollegiate sports during the 2005-2006 academic year. Only 1.6% of the sample were women track and field student-athletes, with football (21.8%), baseball (14%), and wrestling (12.4%) student-athletes comprising the majority of the sample. Yang et al. (2007) found that 30.3% of their sample reported symptoms of depression, furthermore, student-athletes who have previously been diagnosed with clinical depression in addition to student-athletes who reported experiencing pain were both found to report statistically significant more symptoms of depression. Additionally, Yang et al. (2007) found gender and collegiate class as significant factors associated with depression symptoms, with women and freshmen student-athletes being at a significantly higher risk of experiencing symptoms of depression and women student-athletes experiencing

significantly higher levels of depression when compared to their men counterparts.

Unfortunately, Yang et al. (2007) did not discuss any differences based on the sport.

### ***Qualitative Look on Psychological Effects of Athletic Injury***

Qualitative research exploring psychological effects among women student-athletes, and more specifically women track and field student-athletes is extremely sparse, however, Bejar and Butryn (2016) have conducted a qualitative study with 11 student-athletes out of which nine were men and two were women and explored their experiences of coping with injuries. The student-athletes in the study participated in football, gymnastics, tennis, and soccer and suffered various injuries to the shoulder, hand/wrist, foot/ankle, hip/upper leg, and knee. The researchers used semi-structured interviews. Their analysis produced four major themes including reactions to injury, problem-focused coping, emotion-focused coping, and avoidance coping. In addition to each major theme, there were 12 additional higher order themes. Reactions to injury included confusion, catastrophization, frustration, and sadness. Problem-focused coping included a comparison to past experiences and perseverance, while emotion-focused coping included emotional support, positive reframing, and the use of religion. Lastly, avoidance coping included isolation, mental distraction, and playing through pain. In their analysis, Bejar and Butryn (2016) focused on catastrophizing, comparison to past experiences, perseverance, and positive reframing as those themes were found as most relevant to socioeconomic status (SES), which affects how student-athletes respond to injuries on a cognitive, emotional, and behavioral level. Student-athletes from lower SES were found to have initial negative reactions to their injury, which also caused them to feel helpless. Furthermore, the participants were found to use their past life experiences to help them cope with the stress they experienced as a result of the injury. Additionally, as a result of feeling depressed, sad, and frustrated some participants reported using

perseverance and positive reframing as the most common coping skills during the rehabilitation period.

### **Emotional Effects of Athletic Injury**

The psychological and emotional responses to injury are often time interrelated and affect one another by contributing to or intensifying particular factors. The emotional responses to injury and the rehabilitation process are multifaceted and can be highly unique to each individual student-athlete, which underlines the oscillations in emotions student-athletes often portray, such as feelings of loss, decreased self-esteem, frustration, and anger (DeGaetano et al., 2016; Tracey, 2003). These changes and differences have not been thoroughly and specifically examined among women student-athlete populations, however, several studies currently available explored student-athletes in general and provided some insight into emotional effects of injury, without specifically discussing gender differences.

Affective responses of severely injured athletes have been investigated by McDonald and Hardy (1990). Their study had five subjects from Division I university and three were women student-athletes. The results showed that injured student-athletes experience a progression from negative towards more positive emotional reactions during the rehabilitation process, although gender differences were not discussed by the researchers. McDonald and Hardy (1990) wrote how student-athletes go through the process of adapting to their athletic injury which involves a series of tasks such as accepting the reality of the injury, experiencing and expressing the emotions they have, and reinvesting the emotional energy into the rehabilitation process. In their study, student-athletes reported experiencing a state of shock, anger, confusion, being disturbed, feeling fatigued, and tense.

**Feelings of loss.** The study conducted by Madrigal and Gill (2014) supported previous findings of other researchers indicating that injured student-athletes experience more negative emotions, including feelings of loss as they face injury and work through the rehabilitation period. Granito (2001) did not differentiate between men and women student-athletes, however, the results of his study indicated feelings of frustration, anger, fear, confusion, boredom, and isolation as associated with the experience of injury. Frustration was the feeling reported by 100% of the participants in his study (Granito, 2001). McDonald and Hardy (1990) reported in their study that emotional reactions of participants stem from student-athlete experiencing "a loss of some aspect of the self" (p.271). They further elaborated on the feelings of loss stating that student-athletes may experience loss in their status, playing time, decrease in attention received from coaches and teammates, and loss in media attention. Furthermore, they reported student-athletes perceive these losses as traumatic, even though they are not permanent.

**Injury as a Source of Stress.** Many athletes perceive an injury as a source of stress. Furthermore, a student-athlete may perceive an injury as threatening, which subsequently affects one's emotional, behavioral, and psychological responses (Madrigal & Gill, 2014). Madrigal and Gill (2014) conducted a case study with four women Division I student-athletes, who got injured and participated in either soccer or softball. The analysis indicated that the major sources of stress reported by participants included letting the team down, lack of control, and uncertainty of playing. Albinson and Petrie (2003) examined the connection between student-athletes primary and secondary appraisals of injuries and how they used coping strategies. In the study with 84 men Division I football players, findings indicated how negative life events contributed to mood disturbance post-injury occurrence, and was actually found to be the greatest predictor of mood disturbance after controlling for duration of injury and preinjury mood. Furthermore, student-

athletes who had a more difficult time coping with their injury were found to perceive greater levels of stress.

### ***Qualitative Look on Emotional Effects of Athletic Injury***

A study conducted by Tracey (2003) explored the emotional responses of men and women collegiate student-athletes who were recovering from moderate to severe injuries. Tracey (2003) conducted a qualitative study with 10 men and women student-athletes, who participated in baseball, lacrosse, rugby, soccer, track, and field, and volleyball. Tracey (2003) reported that participants experienced a "rollercoaster of emotions" as they faced and attempted to deal with their injury (p.283). The emotions discussed by participants included anger, depression, fear, confusion, frustration, as well as feelings of worry and "being down" (p.283). Some participants also reported lower self-esteem and loss of independence. Furthermore, participants in the study reported their fear originated in missing practice, losing fitness, having to catch up, worrying about how long they may not be able to take part in athletic activity, losing a spot on the team, and asking for help. In analyzing the results, Tracey (2003) did not differentiate between men and women student-athletes nor were there differences discussed based on participant's sport.

### **Social and Sociocultural Effects of Athletic Injury**

As mentioned so far, psychological and emotional factors in addition to physical, physiological, and environmental factors play an important role in injury, re-injury, and recovery process. However, social support is one of the most important forms of psychosocial influence student-athletes experience during their injury experience.

### ***Social Support***

Fernandes et al. (2014) distinguished between two principal explanations for the role that social support plays. One is the "buffering hypothesis", which suggests that individuals

experience the benefits and advantages of social support primarily through reduction of stress, which allows injured individuals to reassess their injury in a less threatening way (p.445). The other explanation is through the "main-effects hypothesis", which is opposite of the "buffering hypothesis", and suggests that social support "exerts a direct effect on the athlete's psychological response" (p.445). It is important to emphasize that social support is a multidimensional construct composed of three interdependent components. The first component is the structural aspect, which refers to "who" is available to support an athlete and can include family members, friends, teammates, coaches, and other significant persons from the athlete's life. The second component is the functional characteristics of social support, which addresses "how" social support is experienced. The functional characteristics of social support can include tangible, informational, emotional, and esteem kind of social support. The final component is a perceptual feature, which defines the athlete's appraisal of the amount and quality of the social support that is available to them (Fernandes et al., 2014).

**The Needs and Patterns of Social Support.** When an injury occurs or a student-athlete is in a frequent state of pain, that represents a significant source of stress because their normal routine is disrupted. Student-athletes experience disruption in their training and competition, which has been found to lead to isolation, feelings of loss of self, and separation from teammates and coaches (ACSM, 2006; Fernandes et al., 2014). Robbins and Rosenfeld (2001) have found that social support is most beneficial when the support that is provided matches the needs of injured student-athlete, furthermore, the type and amount of support one may need depends on personal, situational, and temporal characteristics (Fernandes et al., 2014; Wiese-Bjornstal, 2010). Johnson and Carroll (1998) noted based on their study results that athletes prefer different forms of social support depending on the phase of their recovery. For instance, injured athletes

reported a higher need for emotional support immediately after injury and during the beginning phase of their recovery, while their need shifted towards informational support from medical staff, athletic trainers, and coaches at the final phases of their recovery. Furthermore, research has indicated that student-athletes would appreciate more social support from their coaches during all phases of their injury recovery (Albinson & Petrie, 2003; Robbins & Rosenfeld, 2001).

**Providers of Social Support.** As we discuss social support and who may provide it, we ought to also take into consideration student-athletes preferences as they are found to contribute to the satisfaction level and overall well-being of the injured student-athlete (Fernandes et al., 2014). In Albinson and Petrie's (2003) study with men Division I football players, participants identified family members and friends as primary providers of emotional support, while coaches and athletic trainers were found to provide technical support. Robbins and Rosenfeld (2001) found their injured athlete participants to be more satisfied with social support from athletic trainers than their coaches, as athletic trainers provided support with a focus on well-being and recovery. Albinson and Petrie (2003) highlighted that that student-athletes should receive more support from their coaches and medical personnel regarding psychological distress because they spend a significant amount of time with them and find them as significant figures in their lives. Tracey (2003) indicated that men and women student-athletes in her study reported it was helpful for them to talk about their emotions with friends, family members, and teammates, or other injured athletes.

Bianco and Eklund (2001) noted that even though relationships of social support are generally well-intentioned, they may unintentionally result in adverse consequences for injured student-athletes. Hence, the negative aspects of social support relationships ought to be taken into consideration within context as they may be an additional cause of stress and mood

disturbance for injured student-athletes. Robbins and Rosenfeld (2001) reported some athletes perceived their coaches to provide inappropriate and insufficient social support during their injury experience and recovery period.

**Student-athletes Perceptions and Satisfaction with Social Support.** Madrigal and Gill (2014) conducted a case study with four women student-athletes from Division I university, who participated in soccer and softball and suffered an injury. Throughout their study, they observed the concept of playing through injury among all participants. Furthermore, their results indicated women student-athletes experience isolation and the authors emphasized how critical support is for one's recovery. In this study, women student-athletes indicated they received support from family, friends, coaches, athletic trainers, and their teammates, however only the support received from family members, friends, and athletic trainers were found to have positive effects on student-athletes emotional states. The social support stemming from a relationship with the coaches caused student-athletes to experience negative emotions.

Corbillon et al. (2008) evaluated the contribution of coaches and teammates in providing social support to student-athletes. Their study had 72 student-athletes, 26 women and 46 men, and they found that overall student-athletes were more satisfied when coaches provided them with task challenge support, although coaches were not as available as teammates. The findings also indicated that teammates were a greater source of emotional support and reality confirmation support than coaches. Although no differences in findings were discussed based on gender, student-athletes who identified as starters reported receiving significantly more support from both teammates and coaches than non-starters. Additionally, student-athletes who experienced more injuries reported receiving significantly less support from both coaches and teammates (Corbillon et al., 2008). Lastly, McDonald and Hardy (1990) noted that social support



provides student-athlete an opportunity to vent their feelings, receive reassurance, and improve communication skills in addition to reducing uncertainty they experience during the time of stress caused by the injury. Social support also provides student-athletes with resources and a sense of companionship and helps with overall mental and physical recovery (McDonald & Hardy, 1990).

### **Playing Through Pain and Injury**

In order to understand the public health nature of the problems associated with athletic injuries requires consensus on a definition and documentation. Current literature presents significant variability in defining athletic injury and some of the most common elements noted so far include the fact that injury must have occurred during practice or competition in athlete's respective sport, an athlete had sought medical care, and an athlete suffered time loss from athletic-related activities. Wiese-Bjornstal (2010) advocates for a broader and more inclusive definition, which includes "transient" injuries that do not necessarily involve time-loss from athletic participation (p.103). Transient injuries may not "result in a time loss because of the normative culture of sport that expects athletes to 'carry on' and train and compete even when injured", additionally athletes may not report certain injuries because they fear athletic trainers or coaches may deny them the opportunity to train or compete, and sometimes the injuries may not be intrusive enough to prevent an athlete from participation, however, they still have undesirable consequences to one's health, performance, and future injury vulnerability (Wiese-Bjornstal, 2010, p.103).

### **The “Culture of Risk”**

Tolerance of pain and injury in sport has gone through social processes that normalize the pain and injury in sport and Safai (2003) summarized how the dominant sport structures maintain

"significance as an arena of gender verification", however, the sports culture is constantly changing, especially with women adopting the forms and ideologies of sport that were traditionally and historically preserved primarily by men (p.128). Safai (2003) wrote about the "culture of risk" as encouragement athletes adapt to as they accept the risk-taking attitude in sport and downplay the consequences of injuries. The culture of risk unintentionally teaches both men and women to ignore the pain, but at the same time does not protect them from the physical, psychological, emotional, social, and economically debilitating consequences. Previously addressed magnitude of injury occurrence is also followed by a significant increase in microtrauma and overuse, which logically steers us in direction to conclude how some injuries would not have been sustained if athletes were not "trained or pressured, often to excess, by someone such as parent or coach" (Wiese-Bjornstal, 2010, p.104). Athletes believe that it is their decision when determining whether to play through pain or injury, however, some studies indicate that such decisions are embedded in a set of social and structural contexts and conditions, which is also known as the sport-specific environment (Mayer & Thiel, 2018; Nixon, 1992; Roderick et al., 2000; Schneider et al., 2019). Weinberg et al. (2013) emphasized that the context of competitive sports, such as intercollegiate sports, provides a culture that encourages athletes to develop and strengthen the attitudes, beliefs, and values to continue participation in their sport despite the presence of pain and injury. The power and team dynamics in addition to sport ethic contribute to athletes putting themselves at significant risk for musculoskeletal macrotrauma and brain injuries (Schneider et al., 2019). Wiese-Bjornstal (2010) underscores that many of these injuries are byproducts of both psychological and sociocultural processes that are embedded within "normative sport culture of ignoring pain and injury in quest from impression management" such as appearing tough or earning respect, and performance success such as

adopting the "whatever it takes" attitude (p.104). Weinberg et al. (2013) also wrote about sports culture as it minimizes the significance of injuries and encourages the idea of playing through pain and injury. Adherence to this normative socioculture carries a wealth of consequences to one's health over the course of their lifespan, including not only short-term psychosocial implications such as anxiety, lowered confidence, and impact on interpersonal relationships during the intercollegiate career, but post-career lifespan implications include one's quality of life and functional autonomy (Wiese-Bjornstal, 2010).

In a study conducted by Madrigal and Gill (2014) women student-athletes communicated how they adopted "a play-through-anything mentality" (p.293). Some of the reasons behind participants' decisions to continue participating in athletic activities despite being injured included, low pain level, a small number of teammates on the team, denial about the extent of the injury, belief in athletes not being "too hurt to play", the influence of coaches and parents to "suck it up and push through" (p.293). In Granito's (2001) focus group study approach with seven men and women student-athletes from Division II university, the findings indicated a presence of subculture within teams and sports. Granito (2001) discussed the possibility of norms presence within different sports as a factor contributing to student-athletes decision to compete while injured or view the injury itself as a weakness. Each team and sport adapt a similar set of beliefs and values, which affect the members' perceptions of events related to the sport and performance. Granito (2001) pointed out how 71.4% of the participants in his study spoke about the use of painkillers as means to continue athletic participation despite feeling pain or being hurt.

## **Sport Ethic**

Schneider et al. (2019) described sport ethic as an assembly of sporting, competitive sports, discipline, and team-specific norms. Over conformity to athletic and team-specific norms, which are internalized by the athletes over time, are a major risk factor for playing through pain and injury (Jessiman- Perreault & Godley, 2016; Schneider et al., 2019). Weinberg et al. (2013) stated that sport ethic includes the idea that participating in one's sport is a priority that should be held above everything else. Furthermore, they indicated that athletes who adopt the sport ethic are expected to play through their injuries and do so without showing any negative effects of the injury (Weinberg et al., 2013). Madrigal et al. (2015) pointed out that according to the sport ethic, athletes are supposed to accept the risk of injury when participating in sports-related activities and therefore by accepting that risk they ought to opt to play through pain as well.

The commitment to sport ethic was clearly delineated in Shaffer's (1997) study, where men high school wrestlers were interviewed and asked to elaborate on why they play through pain and injury. More than half of the interviewed athletes disclosed that achieving their goal and being successful meant that playing through injury was a consequence they were willing to face in order to participate in their sport and pursue their goals (Shaffer, 1997). Also, Nixon (1996) conducted a quantitative study where men and women collegiate student-athletes were asked to complete a survey and the results yielded that 94% of student-athletes disclosed they had played through a sports injury at some point in their collegiate career.

Schneider et al.'s (2019) study with 182 basketball players indicated that older athletes have a higher willingness for self-exploitation and self-endangerment due to their willingness to play through pain and injury. They proceeded to explain how this phenomenon can be extenuated by sport-specific socialization, where pain and physical complaints are internalized

and over time become perceived as being "part of the game" (p.48). The results of Schneider et al. (2019) study suggest that socialization agents such as trainers and club physicians from within the athletic environment appear to encourage athletes to play when in pain or injured, while socialization agents such as parents or a primary care physician, from outside of the athletic environment, are more likely to recommend to the athlete not to partake in the training or game. Additionally, Schneider et al. (2019) have also found that structural context plays a significant role in the decision-making process to play through pain or injury. An example is an athletic program, where athletes spend a significant amount of time with other athletes, in a way that further facilitates playing through injury the most.

### **Attitudes Towards Pain and Athletic Participation**

"No pain, no gain" is a common attitude among many athletes despite the level of their performance or their age and is adopted even when athletes injure themselves (Druckman & Rothschild, 2018, p.1). Druckman and Rothschild (2018) conducted a study exploring how social class affects student-athletes pain experience and impacts pain reporting. A total of 1,615 student-athletes from Division I universities within the Big Ten Athletic conference completed at least a portion of their survey. Their sample included 45% women participants, 9% identified as Black, and 53% reported having at least a partial athletic scholarship. One of the main findings indicated that 82% of all participants stated they would report the pain, however, the average score for how much they would report it was 2.32, where 2 was a value indicating "under-report a little" and 3 was a value indicating accurate reporting (p.2). Furthermore, lower SES was found to lead to expectations of greater pain from an injury, and women student-athletes were found to have significantly greater expectations of initial pain and pain during their recovery. Student-athletes from lower SES and those on athletic scholarship were both significantly less likely to

report pain from an injury and when they did report it, the pain level was under-reported. Lastly, student-athletes from lower SES and those on athletic scholarship were both found to have a stronger athletic identity and considered sports as significantly more important, which often caused a greater desire to return to play despite injury and higher anxiety levels. However, lower SES student-athletes felt their family and friends would be disappointed if they were unable to play, while student-athletes with athletic scholarships feared in addition to family and friends, their coaches would also be disappointed (Druckman & Rothschild, 2018).

Schneider et al. (2019) conducted a study with 182 junior competitive athletes from 46 highest youth team leagues in Germany. About 71% of the sample were men athletes. The findings indicated that 76.9% of the participants suffered from an injury on at least one day during the previous six months. Furthermore, 39% of all participants reported they would play even if they were in pain or felt ill, 36% reported they would play if they had to take painkillers, and 34% reported willingness to play despite experiencing acute joint pain. Additionally, 21% reported they would still participate in the competition if they were suffering from acute fever and 6% reported they would play even if they were banned by their doctor from doing so.

Granito (2001) discovered that 100% of men and women student-athletes and 87.5% of student trainers in his study talked about pain, with student-athletes sharing their opinions regarding pain experienced while sustaining the injury, immediately following surgery, and pain experienced during the rehabilitation process. Furthermore, Granito (2001) found that 71.4% of men and women student-athletes commented on the use of painkillers to help them cope with pain and continue participation in their sport, while 62.5% of student trainers discussed student-athletes use of cortisone shots as a means to numb the injured area.

### **Qualitative Look at the Phenomenon of Playing Through Pain and Injury**

Recent research has investigated the experience of playing with pain, however, it was mainly done with men and professional athletes (Roderick et al., 2000; Waddington, 2000; Howe, 2001). Thing (2006) noted that pain and injuries are not new phenomena in women's sports and women are increasingly engaging in high-risk activities like their men counterparts. Thing (2006) conducted an ethnographic study with 17 Danish women non-professional handball players, who were between 19 and 33 years old and have suffered a serious anterior cruciate ligament (ACL) injury. The analysis indicated that all women in the study expressed feelings of doubt and uncertainty as the sport has been a central part of their life and the experience of the injury and bodily change was reported to be experienced as existential. Participants have reported feeling irritated, frustrated, tired, and afraid due to the uncertainty of their future. Three main themes identified included uncertainty about one's future, one's body ability, and the effects of stigma. Participants also shared about their fear of reinjury and perceived an injured body as useless and a failure (Thing, 2006). These perceptions tie into the sociocultural and specific sport contexts.

Madrigal et al. (2015) conducted a qualitative study with men and women collegiate rugby players and explored reasons for playing through pain and injury. Their analysis produced two major themes: the passion for sport and sport ethic. The student-athletes love for the game and the meaning of participation were major factors that contributed to student-athletes willingness to play despite being in pain or injured. Furthermore, both men and women players discussed the importance of helping their team as another reason to play through pain and injury. Participants were found to minimize or downplay the severity of their injuries, with some participants even noting how a minimization is a form of hopeful measure. Furthermore, they

also noted how teammates and coaches tend to reinforce the culture of playing despite pain and injuries, by sharing their experiences with similar injuries or coaches discussing the difference between being injured and being hurt, thus emphasizing that athletes ought to play through if they are "just hurt" (Madrigal et al., 2015, p.314).

### **Athletic Identity**

One's athletic identity is defined as the degree to which one defines oneself in the role of an athlete (Brewer et al., 1993). In the incidence of an athletic injury, the role of one's athletic identity may present itself as problematic because according to the literature, athletes who identify more with their athletic identity tend to have more negative responses to injury as opposed to athletes who have a lower athletic identity (Brewer, 1994; Brewer et al., 1993; Evans & Hardy, 1995). Wiechman and Williams (1997) explored athletic identity with 389 high school student-athletes. The sample included 168 men and 218 women high school student-athletes who participated in basketball, soccer, and wrestling. Wiechman and Williams (1997) found that men high school student-athletes had a stronger athletic identity than their women counterparts. Furthermore, the student-athletes who expected to play in college and the ones who had more years of athletic experience both had a significantly stronger identification with their athletic identity. The researchers argued that athletes who had more experience were more likely to make stronger commitments to their sport and athletic participation and were less likely to explore and develop other interests (Wiechman and Williams, 1997).

Weinberg et al. (2013) pointed out that individuals who identify highly with their athletic identity primarily describe themselves in terms of their athletic status and emphasize their success or failure in the athletic arena. Safai (2003) wrote that playing with pain and while injured has become routine among many athletes, who adopted the idea of never backing down



from a challenge because standing up to the challenge showcases moral courage. This ideology is closely tied with identity construction and presentation among both men and women student-athletes, especially when tolerance of pain is perceived as a strong character component, which then implies that those who choose not to tolerate and put up with pain have weak character (Safai, 2003).

There are a few studies that have explored a potential connection between one's athletic identity and decision to play through pain and injury (Gard & Meyenn, 2000; Roderick et al., 2000; Thomas & Rintala, 1989; Weinberg et al., 2013). Weinberg et al. (2013) conducted a study with 130 recreational basketball players who attended college, with the primary purpose of examining the connection between athletic identity and athletes' attitudes and behaviors toward playing through pain and injury. They also explored gender as a variable that may have an impact on athletic identity and attitude towards playing through pain and injury. The results indicated that athletes who identified both highly and moderately with their athletic identity had positive attitudes and behavioral intentions to play through pain and injury. Despite the sample being recreational college basketball players, the athletic identity was a strong predictor of those athletes playing despite being hurt and injured. The sample did include 68 men and 62 women participants; however, gender was not found to be a significant predictor in attitudes and behaviors related to playing through pain and injury, indicating that women are socialized into a sport in a way much like their men counterparts, hence they both held similar attitudes toward playing with pain and injury (Weinberg et al., 2013).

Madrigal and Gill (2014) wrote how in their study women student-athletes experienced a loss of identity combined with not being able to actively take part in athletic activities with their teammates as a result of their injuries. Another study conducted by Madrigal et al. (2015) also

reported that women rugby players discussed the deeper meaning sport has to their identity, which was described as a "strong inclination to stay involved" despite being hurt or injured (p.313). Similarly, Roiger et al. (2015) reported that student-athletes inability to participate in their sport may lead them to a sense of identity loss, which is closely related to depression after an injury occurrence. Also, greater identity loss has been found to lead to higher levels of depression.

### **Impact of Injury on Athletic Identity**

Often time injuries require some form of the rehabilitation process and the length and the extent of rehabilitation depend on severity and type of injury. Student-athletes understand the value and need for rehabilitation; however, the athletic identity has been found as a factor that influences rehabilitation overadherence or premature return to athletic participation after an injury. Podlog et al. (2013) conducted two cross-sectional studies, one with injured high school student-athletes and the other with injured collegiate student-athletes, examining the association between self-presentation and athletic identity with rehabilitation overadherence and premature return to athletic participation. In the first study with 118 injured high-school student-athletes, 52% men and 48% women, the results indicated adolescent student-athletes have a relatively high level of athletic identity and moderate levels of returning to athletic participation prematurely. Furthermore, athletic identity was found as a positive predictor for the rushed rehabilitation process and ignoring recommendations made by athletic trainers. The second study included 105 injured collegiate student-athletes, 59% men and 41% women, and yielded very similar results to study with adolescent student-athletes. The findings indicated that collegiate student-athletes with high athletic identity were more likely to engage in risky rehabilitation behavior by overadhering or returning prematurely (Podlog et al., 2013). These results also

provided support for associations between athletic identity and debilitating psychological consequences one suffers as a result of injury (Podlog et al., 2013).

The relationship between athletic identity and one's beliefs about rehabilitation adherence has also been explored by Hilliard et al. (2017). They conducted a mixed methods study with 80 collegiate student-athletes, out of which 51 were men and 29 women. Student-athletes took part in 12 different sports, and although the results did not include and significant differences based on the sport, 10% of the sample were track and field athletes. Hilliard et al. (2017) found athletic identity to be related to negative sport-related outcomes, such as psychological disturbances, playing through pain, and conformity to masculine norms, as a result of injury. Another finding was that athletes who have higher athletic identity want to return to athletic participation as quickly as possible, which can cause them to over adhere to the rehabilitation process. Furthermore, the participants discussed athletic participation as a means to stress relief, which when they are unable to partake in due to injury was found to cause negative affective states. The qualitative data provided a higher order theme, sports participation, with subthemes of enjoyment of playing the sport, competition, and winning. Although the researchers noted these themes do not directly fit within athletic identity, they represent an active component of athletic participation, which is affected when the student-athlete is injured (Hilliard et al., 2017).

In a conceptual article with emphasis on practical implications, Lockhart (2010) wrote about how student-athletes perceive a loss of identity due to their injuries. The more one identifies with athletic identity and their athletic performance the more it impacts the stability of their individual identity and affects self-esteem. Hence, when a student-athlete faces an injury the identity becomes prone to variability, and because the athletic performance has been interrupted one perceives the loss of identity due to inability to perform.

### **Qualitative Look at Injury and Athletic Identity**

A few studies have qualitatively investigated athletic identity among student-athletes and how it is impacted by an experience of injury. Caron et al. (2017) through narrative methodology co-constructed a women volleyball student-athlete's experience with a concussion injury. The analysis indicated how the women student-athlete experienced isolation, which was intensified by her roommates' lack of understanding and awareness of the internal identity struggles the participant was experiencing. Caron et al. (2017) discussed how individuals use narrative coherence to create meaning in their lives, and the women volleyball student-athlete in their study experienced multifaceted changes to her identity due to her injury. The participant shared how the injury itself shaped her identity, how she lost the identity of who she was becoming, of who she was as a collegiate athlete, and as a person who others identified as an athlete.

In another qualitative study, Hawkins et al. (2014) used semi-structured interviews to obtain in-depth descriptions of athletic identity among eight participants who suffered a spinal cord injury. Two of the participants were women and six were men and they were all members of the wheelchair badminton club. As a result of thematic analysis two themes emerged, one is the adjustment to chronic illness and the other is the role and value of athletic identity. The participants expressed feelings of shock, disbelief, and helplessness and also reported experiencing anger, frustration, and loss of patience as emotional reactions following the injury. Although participants shared that some aspects of their identity have been lost and they were unable to regain them, a part of the athletic identity was retained, which was supported by the sport-related social network as it provided them with a sense of partial athletic identity presence (Hawkins et al., 2014).

## **Sport Counseling vs. Sport Psychology**

The research on athletes' perceptions of mental health and sport psychology services is on the rise and despite the extensive acknowledgment that mental factors play an important role in athletic performance outcomes, the current research indicates there is still a degree of resistance athletes feel towards seeking mental health and sport psychology services (Ong & Harwood, 2018). Ravizza (2001) suggested a vague estimate regarding athlete attitudes toward sports psychology consulting, indicating that only one-third of athletes are interested, one-third are not receptive, and one-third of athletes are indifferent. Similarly, Green et al. (2012) found in their study with elite rugby players that they considered sport psychology important; however, many of them were unwilling to seek sport psychology services for the fear of being judged by their coaches and teammates.

Ong and Harwood (2018) conducted a study where they compared the attitudes of Western and Eastern athletes toward sports psychology. Their results indicated that Eastern athletes preferred working with consultants of the same culture and were less open toward sports psychology consulting. They did, however, report greater stigma toward sports psychology consulting when compared to Western athletes. Western athletes were found to be more open toward sports psychology consulting. Also, Ong and Harwood (2018) did not find any significant effects regarding gender or type of sport. Similarly, Lopez and Levy (2013) explored the barriers to seeking mental health treatment as identified by student-athletes. Their study included 165 Division I student-athletes, where 111 (67.3%) were women and the most represented sports included track and field (19%), lacrosse (13%), cross-country (9%), rowing (9%), and soccer (8%) student-athletes. The student-athletes reported that major barriers to seeking mental health services include lack of time to seek the service, social stigma mainly related to concerns about

others' perceptions of them if they were to seek mental health services, counselors' expertise with sport, and counselor's age. Participants reported they preferred to seek help from a counselor who in particular had experience with collegiate sports participation due to a belief that otherwise, a counselor would not be able to understand them. Lastly, although participants reported no preference regarding counselor's age, when endorsing particular age categories, the results indicated that participants preferred counselors who were closer to them in age, choosing 26 to 30 as most proffered age group, followed by 31 to 35 age group (Lopez & Levy, 2013).

In another study, Barnard (2016) explored student-athletes perceptions of mental illness and their attitudes toward seeking help. Barnard (2016) recruited student-athletes and students from the general population from 3 different schools, two were from Division I and one was from Division III. There was a total of 77 student-athletes, 32 men and 45 women, and 50 students from the general population, 13 men and 37 women. The results indicated that gender was a significant predictor and that women student-athletes were more likely to seek help than men student-athletes. Additionally, students from the general population were found to have more stigmatizing attitudes towards mental illness than student-athletes did (Barnard, 2016).

In Madrigal and Gill (2014) qualitative study one of the participants reported utilizing sport psychology services and she stated that the sport psychologist she worked with was one of the strongest support systems and that she benefited from the therapeutic relationship and opportunity to communicate about her injury experience, however, not all institutions have integrated sport psychology service within athletic departments. As counselors in the field working with student-athletes, we ought to prepare ourselves and become knowledgeable of both the psychological strengths and deficiencies of student-athletes we work with in order to be able to provide them with assistance and determine the best approach to increase their motivation,

while simultaneously monitoring their overall mental state throughout the injury rehabilitation process (Madrigal & Gill, 2014).

Roiger et al. (2015) recommended that clinicians working with student-athletes routinely integrate patient-centered outcome measures into their treatment care plan after injury, as that provides additional perspective to the level of disability associated with the injury that student-athletes is facing. The psychological assessment post-injury takes into consideration the potential risks related to depression and may focus on other emotional disturbances. Additionally, it is recommended to utilize the assessment in a long-term fashion to ensure the highest level of care in both the physical and psychological realms (Roiger et al., 2015).

Collegiate student-athletes need assistance with negotiating the identity development process, even more so when they experience an injury. Counselors can help student-athletes discover new identities or parts of a new identity through integrating the topic into education, employment, and family system by addressing modifications and adjustments needed for student-athletes to be successful after injury and in their transitions if the injury is career-ending (Caron et al., 2017).

### **Summary**

With the purpose of this study being to explore lived experiences of former women track and field collegiate student-athletes who trained and competed through pain and injury, chapter two starts by discussing the current sports culture in the United States and the culture of intercollegiate athletics and NCAA governorship. The impact and the role media play in further developing and encouraging the sports culture where it is desirable to play through injury is also addressed. The briefly mentioned Integrated model will be used as a theoretical framework after the data collection and analysis is completed in order to further integrate the study findings into a

larger context of current knowledge and available literature. This chapter also reviewed the prevalence of athletic injuries within the NCAA and specifically among women track and field student-athletes. The impact of an athletic injury on mental health was explored within psychological, emotional, social, and sociocultural domains. Playing through pain and injury within the risk culture has been explored as well as the impact and significance of the sport ethic. Sport ethic as an assembly of sporting, competitive sports, discipline, and team-specific norms, further clarified how sports culture plays a role in the attitudes among student-athletes that justify the phenomenon of training and competing through pain and injury. The role of athletic identity is addressed and how the identity is impacted by the injury and throughout the rehabilitation process. Lastly, the attitudes and perceptions toward seeking psychological services are discussed.



## CHAPTER III: METHODOLOGY

### **Subjectivity Statement**

As a former Division I student-athlete competing in Track and Field, I have personally experienced many injuries throughout my athletic career ranging from small nagging transient injuries that now, in retrospect, seem like they have been constantly present to more acute injuries like, strained and ruptured hamstring, inflamed Achilles tendons, and several stress fractures in both feet. After my collegiate career as a student-athlete, I continued to train for the 2012 Olympics, where I continued to battle with pains and injuries and experienced my worst injury by breaking a bone in my ankle during practice. That injury required surgery, and although I did return to the sport afterward, I only competed for a couple more seasons before retiring from competitive athletics. As a result of my injuries, regardless of their severity, I have often time experienced pressure, pressure to come back, the pressure that I am missing important training, fear that I am not going to meet my target times, frustration with my coaches, and sometimes myself, fear that all sacrifices will be in vain, worry and anxiety regarding my scholarship status, and fear that I will not make an Olympic team. Not only have I experienced physical consequences of injuries on my body, but also psychological ones.

Professionally, I now work as a licensed professional counselor with an emphasis on sport and performance counseling. My clients are mainly a part of athletic populations, including collegiate student-athletes who are dealing with or recovering from injuries among many other things. So, as a member of the intercollegiate student-athlete population, both on a personal and professional level, I feel duty-bound to contribute to the advancement of our field. Sustaining an injury may be one of the most stressful experiences a student-athlete will face in their athletic career, if not their life. We know from the current research that sports injuries are prevalent

within NCAA student-athletes and that the sports culture has an enormous impact on the normalization of playing through pain and injuries. We as counselors must gain further insight into athletes' own experiences so that we can provide them with appropriate services. To address this issue and maintain objectivity, methods will be used during the data collection and analysis process to bring a critical eye to the data.

### **Research Question**

The overarching research question that guided this study was: What are the lived experiences of former women track and field student-athletes who trained and competed through pain and injury during their intercollegiate career at NCAA institutions?

### **Research Framework**

#### **Phenomenological Analysis: A Brief Overview**

Phenomenological research is used to describe a common meaning among multiple individuals and their lived experiences of a phenomenon (Vagle, 2018). This study's purpose is in alignment with a phenomenological study as it will explore multiple former women track and field student-athletes lived experiences as they trained and competed through pain and injury during their intercollegiate careers. In a phenomenological study, the focus is on what all participants have in common as they experience the phenomenon. The researcher's role is to describe their subjective experiences and reduce those individual experiences with a phenomenon to an objective description of the universal essence for all those who share those lived experiences of the phenomenon (Moustakas, 1994). Moustakas (1994) wrote that from the phenomenological research standpoint, the researcher generally seeks answers to two general questions. One is, what has the participant experienced in terms of the phenomenon; and the other is, what context or situations have typically influenced or affected the participant's

experiences of the phenomenon. My role as a researcher, who has identified her positionality is then salient to the discussion of the experiences revealed in the phenomenological study. The researcher brackets and bridles personal experiences with the phenomenon by attempting to set them aside in order to increase awareness and focus on the experiences of the participants as well as create a fresh perspective and understanding gained through the eyes of the participants (Vagle, 2018). Hence, a phenomenological study is a good fit for this study with the purpose of understanding the experiences of former women track and field student-athletes who have trained and competed through pain and injury during their four years of eligibility at an NCAA institution.

## **Methods**

### **Participants**

In a phenomenological study, the goal is to explore the phenomenon with a group of individuals who have all experienced the phenomenon in question. Vagle (2018) argued there is no “magic number” of phenomenological research participants and encouraged researchers to explore the current literature (p.82). Previously mentioned phenomenological studies in the literature review section included between 4 and 15 participants. However, Vagle (2018) emphasized that the phenomenon itself calls for how it ought to be studied and the researcher must practice openness throughout the study duration. Vagle (2018) noted one ought to consider the amount of time spent with participants over an extended period of time and the kind of phenomenological material that is being gathered. Furthermore, he mentioned phenomenological studies that had two participants as well as those that had 25 participants (Vagle, 2018). Thus, the group of individuals participating in a study may vary in size. With these numbers in mind, the researcher tentatively planned and then interviewed 10 participants. After eight participant

interviews were completed, it appeared that saturation was reached, however the researcher proceeded to interview an additional two participants to ensure no new information and themes were discussed. The participants in this study were former women track and field student-athletes who meet the inclusion criteria of being a student-athlete who: (a) participated in track and field sport at an NCAA university or college, (b) are citizens of the United States, (c) have graduated from an NCAA institution, and (d) self-report as training and competing through pain and injury at some point during their intercollegiate career.

### **Sampling and Recruitment**

A purposeful convenience sampling method was used to invite participants who could provide detailed in-depth descriptions of their lived experiences of training and competing through pain and injury while attending college. In phenomenological studies, the convenience sampling method is often used with the intent to identify participants who have experienced the phenomenon in question and who would be able to provide descriptions of their experiences of the phenomenon (Creswell, 2017). The purposeful sampling method is used in qualitative research because the researcher has the ability to select individuals and sites for the study and because they can purposefully inform an understanding of the phenomenon studied (Creswell, 2017).

Furthermore, the snowball sampling method was also employed to reach the final two participants. By utilizing the snowball sampling method, participants who were identified through the purposeful convenience sample were asked to identify additional potential participants of interest, who they are aware of, and who are information rich in regards to the phenomenon of interest (Creswell, 2017). The potential participants then reached out to the researcher indicating they would like to take part in the study. Qualitative research has a general

guideline regarding the sample size, which emphasizes not only to investigate several individuals but to collect extensive detail about each participant in the study. The main purpose of qualitative investigations is not to generalize the findings but to illuminate and clarify the specific information, which in this particular study would be to clarify the phenomenon of training and competing through pain and injury. An indication that an appropriate number of participants has been reached is when the data has reached saturation, which means that no new themes or concepts are coming up from the data (Creswell, 2017), which in this study has been achieved.

### **Data Collection Procedures**

Following the approval from the Institutional Review Board at the University of North Carolina at Charlotte, the researcher developed a list containing names and contact information of former teammates and training partners who once were student-athletes at an NCAA university or college. Next, the researcher contacted the prospective participants by phone first to invite them to participate in the study. Simultaneously, the researcher also sent out an email containing information about the study alongside the study's informed consent. Participants who agreed to participate in the study were asked to provide their availability to schedule a semi-structured interview via Zoom. Once the participants provided their availability, the researcher emailed them the Zoom link information for the scheduled date and time. In the same email was a Survey Share link for the participants to complete the demographic questionnaire.

Prior to the beginning of each interview, the researcher reviewed the informed consent which clearly stated the purpose of the study, voluntary participation and freedom to withdraw from the study at any time, confidential and anonymous participation, inclusion criteria, procedures regarding data collection, and storage of information and interview recordings, risks and benefits of participation, and verification procedures with each of the participants. The

participants were prompted to review and sign the informed consent before completing a brief demographic questionnaire via Survey Share before the semi-structured interview. Once the informed consent has been signed, each participant completed the demographic questionnaire (see Appendix B) and then participated in a semi-structured interview (see Appendix C) via teleconference call performed via Zoom. The semi-structured interviews lasted approximately 45-60 minutes.

The researcher conducted the interviews during a six-week time period.

### **Instrumentation**

All of the proposed recruitment and data collection began after obtaining proper approval from the Institutional Review Board at the University of North Carolina at Charlotte. Details regarding particular measures are to follow.

#### ***Demographic questionnaires***

Prior to starting the semi-structured interviews, participants were asked to complete the demographic questionnaire and answer questions regarding the following areas: age, gender, race/ethnicity, current occupation, sport they played in college, their competitive playing status, division of their school they attended, state of the school attended, estimation of a number of injury occurrences, severity of their injuries, and type of their injuries. Time invested in the completion of the demographic questionnaire was between 5 and 10 minutes.

#### ***Semi-Structured Interviews***

A semi-structured interview protocol was used to explore the overarching question guiding this study: What are the lived experiences of former women track and field student-athletes who trained and competed through pain and injury during their intercollegiate career at NCAA institutions? Moustakas (1994) suggests the use of semi-structured interview protocols

because they have the ability to facilitate richer and thicker descriptions of participants' lived experiences with the phenomenon of interest, in this case, training and competing through pain and injury. During the study, the interview recordings and demographic questionnaire responses were stored on a separate and encrypted flash drive, which was locked in a file cabinet to ensure the confidentiality of participants. The audio recordings were deleted as soon as the interviews were fully transcribed, which took two to three days after the interview was completed. Furthermore, any and all remaining identifiable materials were deleted and destroyed at the conclusion of the study. Any email communication initiated by the participants was immediately deleted upon receipt and response. Each interview was transcribed verbatim and a pseudonym in the form of a four-digit number identified by the participant was used. The participant was asked for the same four-digit number when completing the demographic questionnaire. Upon completion of the interviews, de-identified transcripts were emailed to three participants who agreed to ensure the accuracy of their experiences.

Phenomenological studies often time involve the use of in-depth interviews, hence the use of sub-questions can help with establishing the components of the "essence of the study." Furthermore, in phenomenological interviews, the researcher's task is to ask appropriate questions and then rely on participants to discuss the meaning of their lived experiences (Moustakas, 1994). Therefore, the interviews in this study were facilitated by a carefully developed semi-structured interview protocol, which allowed for rapport building, addressing the lived experiences of training and competing through pain and injury, and a conclusion.

### **Data Analysis**

Methods consistent with qualitative phenomenological research design were used to analyze the data in this study and identify the essence of participants' experiences of training and

competing through pain and injury. Moustakas (1994) defined specific and structured methods for the analysis of phenomenological inquiry. The researcher first fully described personal experiences with the phenomenon that was being studied as an attempt to set aside personal experiences. In addition, the researcher kept a journal log for the duration of the study, took notes, and ensured the focus was directed to the participants and their experiences. The researcher transcribed the interviews verbatim and then read the fully transcribed interviews in their entirety twice in order to fully immerse herself in the data and gain a general sense of the content and overall experience before commencing the coding process. The researcher kept a reflective journal log and documented thoughts and feelings as they occurred during reading the transcripts. The reflective journal was used throughout the entire data analysis process. The researcher read the four richest transcripts several more times and developed codes. The remainder of the transcripts were then added and read while using the code list and constantly revising it as needed. The researcher also engaged in the process of horizontalization, which Moustakas (1994) described as listing every expression that is relevant to the experience. Following horizontalization, the researcher reviewed each statement to determine the invariant constituents by ensuring abstraction and labeling, and that each moment of the experience is necessary and sufficient for understanding (Moustakas, 1994). The researcher then clustered the invariant constituents into core themes of the experience. Next, the relevant invariant constituents were used to construct individual textural descriptions of the experience, for which the researcher included verbatim examples of participants describing what the participants in the study experienced in regards to the phenomenon further discussed in chapter four. The individual structural descriptions were formed based on individual textural descriptions and present how the



particular experience happened (Moustakas, 1994). Lastly, the researcher synthesized the textural and structural descriptions to depict the meaning and essence of participant's experiences.

### **Verification Procedures**

Qualitative research approaches are often criticized because in comparison to the quantitative research approaches they do not produce data that is deemed accurate and trustworthy (Creswell, 2017; Westbrook, 2018). In qualitative research, a number of validation and verification procedures are available that can be employed to increase the accuracy and trustworthiness. The researcher used several validation and verification methods in this study. First, clarifying researcher bias from the beginning of the study by bracketing the researcher's personal past experiences of training and competing through pain and injury during collegiate athletic career helps readers understand the researcher's standpoint, biases, and any assumptions that may impact the study and data analysis. The researcher engaged in bridling and kept a reflective journal for the duration of the entire study to record personal reactions to the interviews, the data, and any other thoughts that occurred throughout the process. Secondly, the researcher asked participants for their email addresses during the interview process and explained to them the purpose and benefits of member checking. Member checking is critical in qualitative studies as it increases the accuracy and credibility of the study (Moustakas, 1994; Vagle, 2018). Participants were provided with one last opportunity to provide feedback and clarify if their experiences have been captured correctly as well as provide revisions to their interview transcripts. Three out of ten participants agreed to member checking and did not provide any corrections to their transcripts. Thirdly, the researcher used triangulation of the data by corroborating data from the transcriptions with the researcher's reflective journal entries and notes. By completing this process, the researcher was able to reflect on the data, continue to

examine the data critically against the participants' transcripts in honest efforts to conduct an objective analysis of the participants' experiences, as well as provide validity to the findings. Lastly, the researcher used a peer reviewer who is an expert in the field for debriefing purposes and as an external check of the data analysis process. The researcher met weekly for an hour with the peer reviewer to ensure continuous contact throughout the study, so that the peer reviewer can keep the researcher accountable, honest, ask difficult questions about methods, meanings, and interpretations.

The theoretical framework has not been used during the data analysis process itself, including horizontalization, coding, and clustering of the codes into larger themes. The researcher immersed herself into literature about the integrated model once the data analysis has been completed and it was time to interpret the findings that organically emerged from the data. During the interpretation process, the researcher used a reflective journal, interview notes, findings from the data to construct, and an integrated model to draw out meaning. The integrated model was utilized to provide additional context to current findings. However, the research also utilized the findings to potentially expand upon the integrated model.

### **Risks, Benefits, and Ethical Considerations**

Although this study did not pose a risk to the participants, it was important to consider the power dynamics between the researcher and the participants. The consideration was given to the fact that the researcher may personally know or have had a previous relationship with study participants since the purposeful convenience sampling method was utilized. Although the interview questions were personal and may have been sensitive in nature, there appeared to be no significant risk or impact on one's mental health since all of the participants have finished their collegiate athletic careers. Regardless of the very low risk, participants were provided with a list

of counseling and mental health support resources. Furthermore, in order to ensure participants' identity was protected all names were replaced with numbers, and interview recordings were destroyed as soon as the interviews were transcribed verbatim. Lastly, although there were no direct benefits for the participants of this study, they may have felt a sense of contribution and feeling of pride for sharing their story as their contribution may inspire or suggest a systematic change in the future, from which current and future student-athletes may benefit from.

### **Summary**

Chapter three provides a detailed description of the methodology implemented in this phenomenological study. This research study is trying to fill the gap and contribute to the current literature by providing insight from former women track and field student-athletes, who now do not have to fear “losing face” or losing scholarships, about their experiences of training and competing through pain and injury. Participants were former women student-athletes, who participated in track and field at an NCAA institution. Participants who meet the criteria were invited to participate in a 45-60-minute interview via Zoom. Participants were asked to complete a brief demographic questionnaire, which was followed by a semi-structured interview protocol. In data analysis, methods consistent with qualitative phenomenological research design were used including bracketing and bridling of researcher’s experiences, development of significant statements, horizontalization, development of meaning units or themes, summarizing textural and structural descriptions, and then providing a synthesis. Several validation and verification procedures were employed to increase the accuracy and trustworthiness of the data.

## CHAPTER IV: FINDINGS

### **Introduction**

The purpose of this phenomenological study was to explore the lived experiences of former women track and field student-athletes who trained and competed through pain and injury during their intercollegiate careers at NCAA institutions. As previously mentioned, this topic and population have not been investigated in-depth and warrants further exploration. This study provides insight into how women track and field student-athletes deal with and face pain and injury as well as how their experiences affect them on a psychological level. Furthermore, since the counseling field places great value on multicultural development and competencies, this study also provides insight into a population that has not been discussed in the counseling field at great length. However, it is not uncommon for some counselors and counselor educators to encounter student-athletes as students and as clients in their line of work. A phenomenological approach appeared to be the most suitable one for this study as it allowed for in-depth insight and understanding of participants' lived experiences related to training through pain and injury.

### **Summary of Participants**

The majority (8) of the participants in the study were found through a purposeful sampling method, while the remaining two were the result of a snowball sampling method. All of the participants met the inclusion criteria, completed the brief demographic questionnaire, and participated in the semi-structured interview via Zoom. The interviews lasted between 45 and 60 minutes.

Participants' age range was between 27-34 and the mean age was 30.6 years old. Four (40%) of the participants identified as white and the remaining six (60%) identified as black/African American. Furthermore, all 10 (100%) of the participants identified as female, and

U. S. citizens at the time they attended a university that was part of Division I NCAA intercollegiate athletics. In addition, they all reported training and competing through pain and injuries and graduated between 2009 and 2015. The participants specialized in various events: one was a hurdler, two were sprinters, one was a heptathlete, two were high jumpers, and four were long and triple jumpers. In this study the participants reported experiencing the following injuries: shin splints, patella tendinitis, torn ACL, plantar fasciitis, strained back muscles, foot bursitis, foot stress fractures, herniated disc, dislocated shoulder, stress fracture in the hip, pulled hamstring, turf toe, and pinched nerves. Table 1 presents the demographic information of the study participants.

**Table 1**

*Participants Demographic Information*

Participant name	Age	Race/Ethnicity	Frequency of pain/injury	Type of injuries experienced
1	31	White	Weekly pain several times during the season	Shin splints, heel pain, sore joints, sore/rolled ankles
2	29	White	50% of the time	Patella tendinitis, low back pain, shin splints
3	32	White	A couple of months a year 1 serious injury per year.	Torn ACL, plantar fasciitis, strained back muscles, shin splints
4	32	Black/ African American		
5	32	Black/ African American	Often, 1 injury per season that lingered	Bursitis in metatarsal bone, stress reaction/herniated disc in back
6	29	White	Medical redshirt for a year, on and off the pain for 2 seasons.	A dislocated shoulder that required surgery, stress fracture in the foot.

Participant name	Age	Race/Ethnicity	Frequency of pain/injury	Type of injuries experienced
7	32	Black/ African American	About 30% of time spent training/competing	Shin splints, stress fracture in the hip, perpetually tight/sore hamstring, knee inflammation
8	28	Black/ African American	Daily for two years	Sesamoid Fracture in foot
9	34	Black/ African American	6months	Turf toe
10	27	Black/ African American	Constant pain for three years	Pulled hamstring, pinched nerve in the ankle, and a degenerative disk in the lower back

### ***Participant One***

Participant one was a 31-year-old, white participant. She first became involved with the track in middle school but did not really like it. It was in high school that she developed a passion for track and field sport and started to enjoy it. She also competed in different events at the time. Participant one did not perceive herself as a successful or great athlete at the time and was surprised when colleges started to express interest and offering her scholarships. At the university, she attended she was offered a track scholarship in addition to an academic scholarship which resulted in her education being fully covered. During her collegiate career, she participated in vertical jumps and reported overall enjoying her student-athlete experience in college. However, she noted that her experience differs from that of her peers.

“They remember college super, super fondly and I do, to some extent, but I also remember all of the stresses and pressures and anxiety, you know I can get like butterflies thinking back to college because of so many things that caused anxiety for me that I think were due in part to try to be a student-athlete at that that high level.”

Going into college she did not aspire of becoming a professional athlete. She knew that her involvement with athletics would be over once she graduated college. She did not experience any severe injuries in college but did report dealing with weekly aches and pains.

### ***Participant Two***

Participant two was a 29-year-old white participant. She started participating in Track and Field in middle school along with other sports. As a youth athlete, she participated in various events, however in college she specialized in vertical jumps. She was offered a partial athletic scholarship and had some academic scholarships that she had applied for on her own at the university she attended. She loved her experience as a student-athlete and thought those were the best years of her life. Her goal in high school and going into college was to perform well enough to be able to attend a Division I school and participate in intercollegiate athletics in any sport. Track and Field ended up being the sport that provided her with that opportunity. She also reported not having any significant or serious injuries; she classified her injuries as "maintenance injuries", although they caused her pain half of the time.

### ***Participant Three***

Participant three was a 32-year-old white participant that started participating in track at an early age in elementary school. She started as a sprinter but later on focused on hurdles. She always wanted to compete in intercollegiate athletics and was offered a partial track scholarship in the beginning in combination with some academic scholarship. It was not until her senior year that she earned a full scholarship. She described her student-athlete experience as great even though she experienced numerous minor injuries along with a serious injury that required surgery. This participant reported having one serious injury per year that caused her issues for

several months at a time. Her goal at a very young age had always been to run in college and compete in the Big XII conference.

#### ***Participant Four***

Participant four was a 32-year-old African American participant that was always very active from a young age. She had an older brother who was also into athletics. This participant became involved with Track and Field in elementary school and enjoyed the competitive spirit. As a young athlete, she tried various events, but in college, she focused mainly on horizontal jumps. When selecting a university to attend a good athletic program and strong academic program were important factors she considered. She was offered a full athletic scholarship and described her overall experience as a student-athlete as a positive. However, she did share that she encountered some challenges during her intercollegiate career. When she initially enrolled in college, she knew that she would not "run and jump forever", and as a result desired a quality education. This participant had experiences with a serious injury that required surgery and some smaller injuries and pains during her intercollegiate career.

#### ***Participant Five***

Participant five was a 32-year-old African American participant and an avid dancer. She tried running track in middle school as her sibling was also involved with the track. This participant experienced some injuries in high school due to dance and this forced her to take a break from dancing. At this point in her life, she began to focus more on track and started to enjoy it more as well as improve her performances. Her initial goal beginning college was to become a professional dancer, however, she was offered a partial athletic scholarship as a track and field athlete. Due to her good performances in college, she was able to increase her athletic scholarship. However, she experienced some serious injuries and herniated disc in her back



resulted in her ending her collegiate career her sophomore year. She received a medical scholarship that fully covered her expenses until graduation. She reported to this day she has pains due to her collegiate injury.

### ***Participant Six***

Participant six was a 29-year-old white participant that was always involved in various sports. In middle school, she tried running and discovered that she did not like long-distance running. She then tried some field events and found a specialization she enjoyed. This participant worked hard and made significant progress over the years of training. She was offered scholarships at some smaller Division I schools, however, the school she wanted to attend did not provide her with any offer. Participant six always had a goal of attending a particular university because she "saw the school is this like shiny place to go" and wanting to be a part of their track and field team. The school was also in close proximity to her family. Even though that university was not offering her any kind of scholarship. She was able to earn a full-ride her junior year after performing very well, however, she had to redshirt her freshman year due to a serious injury that required surgery. She also suffered a stress fracture later on in her collegiate career. She reported having a very good college experience as a student-athlete, however, she admitted that there certainly were pressures associated with being a student-athlete.

### ***Participant Seven***

Participant seven was a 32-year-old African American participant that was always interested in running that began in elementary school. She has an older sibling that was also involved in sports. This participant ran track for three years, felt burned out, and stopped during middle school; she participated in basketball and volleyball. She returned to track in high school with encouragement from her parents because they shared with her that if she performed well

there was a possibility that she could earn a track scholarship. She was recruited by two universities and offered a full scholarship by both. Her freshman year in college presented challenges due to her injuries that significantly impacted her performance. She also did not feel supported by the coaching staff and this contributed to her decision to transfer. She transferred her sophomore year to another Division I university. However, this time she was not offered the full scholarship. Later on, she was able to earn a full scholarship. Her goal was to help her parents financially regarding college tuition; she had other siblings and was aware of the financial burden required from her parents to support them all. She perceived herself as an exceptional athlete yet never had the desire to run at a professional level.

### ***Participant Eight***

Participant eight was a 28-year-old African American participant that started running track in middle school and it was a natural fit for her. She attended a small Division I school and competed for three and a half seasons. She graduated with her Bachelor's degree and because she redshirted one season due to her injury, she had one year of eligibility remaining. This participant enrolled in a master's program at a large Division I university and competed for one season. She had a unique experience of training and competing for two different schools in Division I. She shared that initially, she chose a school that gave her the best scholarship because she also wanted to help her parents financially. She did not have any specific athletic achievement goals, but was open-minded and "just wanted to see what happens". Participant eight also provided a perspective of two different coaches at two different institutions. She experienced some minor and serious injuries during her collegiate career. The injuries also affected her daily for nearly two years.

***Participant Nine***

Participant nine was a 34-year-old African American participant that began running at a young age and realized she was "pretty quick". After taking track and field more seriously in middle and high school, she started to receive recruitment letters. Her goal was to become "really, really good" and make an Olympic team. When choosing a university, it was really important that she attended a school with a history of excellence and a coach with experience and knowledge of training successful athletes that would help her reach that next level. She was also offered a full scholarship at her university of choice. When reflecting on her experience as a student-athlete, she said that it was very important for her to balance athletic and academic responsibilities. She further communicated that at one point she made a conscious decision to focus more on athletics because she had high athletic goals she wanted to achieve. She reported not experiencing any serious injuries, but she did experience pain and injury which affected her for about six months. Although she never stopped training and competing, she described it as extremely painful. She additionally shared about the use of recovery resources even when not experiencing pain and injury for preventative reasons.

***Participant Ten***

Participant ten was a 27-year-old African American participant, who became involved with track and field in high school. She tried out various events and knew then that she wanted to continue running in college and potentially professionally after college. When considering schools, she wanted to attend a university that had a competitive program and coaches that could potentially take her to the next level. When she was being recruited, she was initially offered a partial scholarship and later on earned a full scholarship. She described her experience as a student-athlete as a "lot of fun". During her collegiate career, she experienced several serious

injuries and reported being in constant pain for three years. Even so, she indicated that she enjoyed being a part of a larger community of student-athletes.

### **Major Findings**

After introducing the participant summaries and providing some context, this next section will introduce the five major themes that resulted from the data analysis process outlined in chapter three. The purpose of the study was to explore the lived experiences of former women track and field student-athletes who trained and competed through pain and injury. The five major themes that will be discussed in further detail include 1) perception of pain and injury, 2) identity, 3) student-athlete-coach relationship, 4) support system, and 5) psychological impact. Each theme had several subthemes. It is important to emphasize that all major themes and their respective subthemes were related to one another and often interacted in a cyclic way. These themes capture and provide an understanding of the essence of the participants' experiences.

#### **Perception of Pain and Injury**

One of the main themes that arose from the data was the perception of pain and injury former women student-athletes held. It is important to note that the participants spoke of their experiences based on their respective contexts. Many similarities were also revealed from all of the participants when it came to perception and introspection regarding their experience of training through pain and injury. This theme includes several subthemes: how the participant perceived their pain and injury, the self-reported pain level, impact of pain on one's performance, training with pain, and training workload.

All of the major themes are interconnected and at times affect or reinforce each other, which will be further discussed later on in this chapter. Before further addressing the perception of pain and injury, it is important to provide additional contextual information about the

participants. All of the participants in this study as they reflected on their overall experience as a student-athlete in college, reported that they had a positive and fun experience. One of the participants said, "I loved it, I thought it was like the best four and a half years of my life". Another participant stated "it was a great experience. I enjoyed all of it". Despite the overall positive experience, 60% of the participants pointed out that there were some challenging and stressful times that they encountered. The stressful times included balancing their responsibilities as a student-athlete and a desire to have a social life outside of athletics to attain the "full college experience". One of the participants even stated, "there are definitely pressures and stuff that not most college kids don't understand".

Being a student-athlete in college comes with significant responsibilities and sometimes these individuals may not know what exactly to anticipate. One of the participants even stated, "I don't think I knew I was signing up for when I signed up for it". One of the major points that is important to address here is that eight out of 10 participants in this sample did not have desires, aspirations, or goals to compete professionally or pursue an Olympic dream. The majority (90%) of the sample explicitly stated they participated in sport because it allowed them to alleviate the financial burden from their parents or because they desired to be a part of an intercollegiate team at a Division I university.

### ***Minimization, Normalization, and Justification of Pain***

The idea of being a student-athlete internalized by participants as their primary job had a direct impact on their perception of pain and injury. The manner in which they perceived pain and injuries in this study was more often than not **minimized, normalized, justified,** and diminished. Mentally minimizing the pain may have been coping mechanism participants chose to cope with the physical pain they were experiencing at the time. As one of the participants

who suffered shin splints, heel pain, and rolled ankles, reflected on her experience she stated, “So overall, I was really lucky I didn't have any significant injuries, it could have been much worse, it was just you know sort of the consistent, every day seasonal pains”. Another participant who dealt with patella tendinitis, low back pain, and shin splints shared “I felt very fortunate I didn't have any serious injuries, while I was competing they were more or less like maintenance...”. The same participant further commented how her experiences with pain and injury never kept her away from competing. When both of these participants were asked how they would rate the pain they experienced at the time on a scale between zero and ten, with zero meaning there was no pain and ten meaning unbearable pain, they both rated their pain at level six. In their mind, the level of pain experienced was not sufficient to stop the training or performance. Another participant remembered “any time like I put pressure on it for long jump or for high jump to be kind of I don’t want to say excruciating pain, but it would be extremely painful.”, yet she also rated her pain at level six. Another participant who was dealing with plantar fasciitis for over six months described her pain as “absolutely painful”. She even shared how her everyday life was affected, as she was unable to walk or stand and would do whatever it took to preserve her energy throughout the day so she could go to practice. Despite rating her pain level at nine she stated “I am still going to do this [train] like it is absolutely so painful but I'm still going to do this. I would say, if it was a 10, I can't practice at all, you know. So I don't think I ever got to the point where I didn't practice at all’.

Another participant normalized her pain by stating “So pain was just something I knew I was going to have to deal with. Since mine was maintenance, essentially, and it was something that I knew it wasn't going to go away, unless I were to stop doing what I was doing so it was just kind of like. This nagging thing like well I’m just going to have to deal with it”. Majority of

the participants embraced pain as part of their "job", which contributed to the normalization of the experience and often silenced the alarm and willingness to share that with their coach or athletic trainer. One participant consequently shared "this is what I'm gonna have to deal with, you know, it's not comfortable to be, you know, at the highest level of competition, so I just need to be uncomfortable and know that this is kind of what it takes". The desire to perform at the highest level and understanding of the competitiveness of their conference and intercollegiate athletics overall contributed to participants embracing the pain caused by their injuries and normalizing it in terms of having to be uncomfortable in order to succeed.

This normalization approach often had negative consequences for the participants. Due to the normalization of pain and lack of conversation about what one was experiencing, several participants became further injured. One of the participants described how she was not even aware of how her turf toe injury became a stress fracture.

"I think I completed the first year with like turf toe, which I thought was hurt, but I didn't find out, I think I found out after freshman year. I went to the doctor, because it was like still bothering me, and it was bursitis... And then, they said I had previously had like it showed signs of like a stress fracture. But I was like never knew I had a stress fracture so I had that and that's why it was like hard me like bending my foot, it was giving me pain, so I know I went through that season and I'm sure I probably just took like you know ibuprofen or whatever to just like help with... You know this, like the pain, or whatever, and then that summer I went to the doctor and he put me in a boot for like six weeks".

Two additional participants also worsened their injuries because they continued to train and push through the pain. One participant initially complained about hip pain over the course of an entire semester, only to later find out she had a hip stress fracture. The other participant injured her

hamstring and then kept reinjuring it because as she said “I don't think I understood the magnitude of a hamstring injury.”

The majority of the participants justified their need to train through the pain so they could improve. They also justified the pain as something that is normal and part of being a Division I student-athlete. This justification and embracement of pain contributed to minimization of its severity, which in three (30%) cases led to more severe injuries, that actually did keep them out of practice for several weeks, sometimes even several months.

### **Identity**

The second major theme is identity and it includes three subthemes: athletic identity, gender identity, and racial identity. It is difficult to present an identity as a fixed concept because the data indicates that one's identity and its development is a fluid and continuous process. In this section, the author will focus on the identity theme, however other major themes, and external contextual factors that contributed to the identity challenges and transitions in a cyclical manner throughout the participants' intercollegiate experience. This was also affected by their experience of training and competing through pain and injuries.

The participants were asked a very open-ended question during the semi-structured interview process to share about the most important parts of who they were or who they wanted to become at the time when they were experiencing training through pain and injury. Half (50%) of the participants answered the question by sharing their personal qualities and characteristics such as being very determined, successful and goal-oriented, mentally tough, outspoken, optimistic, hopeful, and being a leader. They even shared how being an intercollegiate athlete strengthened their skills and qualities by helping them overcome adversity and persevere through challenges.



All of the participants identified with athletic identity to a certain extent, with some identifying with it more strongly than others. However, the presence of athletic identity was pervasive throughout the interview process. Furthermore, as participants shared about their experiences, they made remarks such as “I just, it was just important to me to be a great athlete”.

There are several factors closely related to the strength of one's athletic identity that includes coaches, a network of people student-athletes associate with, and winning itself, as it brings recognition. One of the participants shared "I'll be honest and say that, like you know when you're a student-athlete like everyone looks up to you. You're like, oh my God you run the school, you run track here, are you good, and things like that, so I really enjoyed that aspect of being a student-athlete". Another participant shared she strongly identified with wanting to be successful regardless of the cost and she was willing to do whatever it took to reach her athletic goals. Being in an environment where there is constant evaluation and praise given when improvement is achieved caused a majority of the participants to further identify with their athletic identity even if that was not their primary desire. One of the participants spoke about that transition in a sad tone:

That was just one component of me, and all of a sudden, I felt like this thing that I knew it was going to be a lot of work in college and that that was going to be a part of college, but I don't think I realized that kind of being a student-athlete will become my identity, my complete identity in college in the way that it did.

Athletics in many aspects became an embedded part of their overall identity. As one of the participants reflected she highlighted "You are the track girl. It is a part of who you are and what you know. And it really helped me navigate myself and I didn't know myself without track at that point."

It is interesting to note that four (40%) participants identified as student-athletes; however, throughout the interview, they all emphasized more importance on the athletic part of their identity, desire for success, and winning. One participant even noted how she built her identity around her track success. As student-athletes have many responsibilities and are in an environment where they are constantly being referred to as a "student-athlete" it may be that they automatically begin to adopt and identify with the term. However, the subconscious mind is aware of one's internal desires and outspoken goals; hence, the individuals may truly not be aware of how much they identify with their athletic identity until someone else points that out to them or until they are probed about it. Additionally, two other participants identified as student-athletes; however, they emphasized how it was extremely important to them to balance the life of an athlete with that of a student. Three participants had deeper insight and discussed how athletic identity was more important to them and how they consciously decided at some point to focus more on athletics. Only one participant identified as a student who went to school.

***"This is my job"***

Participants often felt internal pressures to improve performance and continue their winning efforts despite how their bodies felt. Furthermore, this mindset caused them to lose some of their passion for their respective sport and perceive their role as a student-athlete as a job. Seven (70%) participants referred to their experience as a student-athlete as though that was their job. When participants were injured that "job" was much more difficult to complete. One participant shared "It just seems so much more like a job and like just a pressure, something that you had to do because it was part of your scholarship and part of the reason that you were there at school, but on bad days... It just took all the fun away from it." Another participant stated "I did push through pain probably way more than I maybe should have, just because it was like this

is my job like I have to compete. I want to compete.", which indicates that participants made a conscious decision to compete and push through despite pain and injury because they felt a sense of obligation to the school, their coaches, and sometimes even themselves because in their mind they were compensated for their "service" which was their performance, through payment in the form of a scholarship.

### **Identity Transition and Change**

The experiences of training and competing through pain and injury were found to have an effect on one's identity and cause some level of disturbance amongst some of the participants. Four (40%) of them clearly spoke about how challenging it was for them identity-wise to figure out who they were as they were in pain and injured. It is not that the experience of training through pain or injury had a direct impact on the identity, but rather the pain and injury had a direct impact on the quality of one's performance.

One of the participants who initially identified as a student-athlete stated "when I wasn't performing well, I'd feel like my identity was disappearing right in front of me. Like that was horrible. I felt like umm.. yeah I very strongly identified as a successful track athlete, like up until that point I didn't expect anything less". So, in light of her injury and competing injured, she became aware of how much her identity was tied to her athletic success. Another participant emphasized how the experience of her injury caused her to become "hyper-sensitive" to her big athletic goals and it impacted her identity because her focus shifted from how to reach the goals to how she was getting further away from them.

### **Gender and Race Identities**

In light of the intersectionality of identities and holistic approach that some counselors utilize, the researcher wanted to inquire about how being a woman or how racial and ethnic

identity might have played a role in interpreting one's experience of training and competing through pain and injuries. None of the participants spoke about their gender or race during the interview process. Only when they were prompted with a question did very few of the participants have some insights on the matter. Furthermore, all participants seemed to be surprised by both questions and the majority of them rather quickly responded with a definite "No!" as in they did not feel their gender or race somehow impacted their experience of training and competing through pain and injury.

One of the participants indicated that even though she did not feel being a woman impacted her experience, she commented on the perception of the stigma attached to female athletes stating "I think there's a stigma around there were women may get like...we're more dainty, and we may get hurt. Things like that, and it could be expected that the woman gets hurt like 'Oh, you know like we're not as strong as men' and that may be more of a stereotype."

Another participant shared somewhat similar views, discussing assumptions attributed to women athletes when they speak up about their pain or potential injuries and the idea that they are not taken seriously. Both of these participants were African American women. The participant shared how others perceive a woman when she speaks up about the pain she may be experiencing "it's not a big deal, or she's exaggerating, and she's being emotional, or she's being hysterical or whatever. Because she's a woman..". It appears that two (20%) participants felt women are given less grace when it comes to injuries and the idea of women being a weaker gender may also impact how seriously they are treated during recovery when they speak up about their experience of pain and injury.

Only one participant reported feeling as though her sex but not gender identity had an impact on her experience of training and competing through pain and injury. This participant

suffered a stress fracture in her foot, which is one of the most common injuries among women who do not have regular menstrual cycles. The participant shared:

...biologically being a female had an impact on this specific injury. And then I think we just, we go through a little bit more. Like on top of being hurt we do have to deal with the monthly PMS things that can make things worse, can make us more emotional, make us more in our heads...

This participant may have had this view because her injury was specific and closely related to the biological functioning of the female sex.

With regards to racial and gender identity, the majority of the participants seemed surprised and confused when presented with the question and provided a very short and definite "No!" or "I never even thought about that". The majority (80%) of the participants stated they did not feel as if their racial identity impacted their experience at all; however, four (40%) of the participants remarked that their track and field team was pretty diverse. Three of those participants were African American women who noted that they have never been a minority on their team, while one remaining white participant pointed out she was the racial minority on her team.

Two African American participants did provide a more elaborate answer to the race identity probe as it related to their experience of pain and injury, and more so specifically to how they were treated by the supporting staff and athletic trainers when they were training through pain and injury. One of the participants shared:

I mean you don't want to believe that but yeah! You know what I'm saying. I absolutely do. I think it's utterly ridiculous that it took me having to go home for someone to take the time to do the MRI ... so you can't help but think that you're just another person,

another black athlete rolling through like ‘eehh here's what it is’ you know, and I don't know, you hate to think that...

The participant felt due to her race she was not taken seriously, despite her being vocal about the level of pain she was experiencing. Furthermore, this participant believed that she needed to seek help outside of the University’s athletic department. After seeking this help, she had surgery on her knee in her hometown after it was confirmed that she had a tear on her meniscus. The other African American participant spoke about the assumptions she grew up hearing that pertained to black people in general, which contributed to her answer that race identity did have an impact on her experience.

I’ve grown up hearing that black people are like kind of naturally supposed to be better at sports. Or like in track, especially sprints, you're more so in sprint, you will see more black people in sprints. And I think that honestly, this is more, I think it more comes around racism or just like these stigmas, is people think that black people don’t experience pain at the same rate as other races... for some reason they don't think that we deal with pain the same way, they think that we kind of just have a higher threshold for pain, and so that kind of played into my mindset of ‘Okay, this is expected of me, we're supposed to be stronger’ or you know deal with the pain in a better manner, and so I can't sit up here and be crying about my toe all the time.

The assumptions, stigmas, and the culture appear to have had an impact on this participant’s decision whether or not she should disclose and talk about her experiences with pain and injury, which then also caused her to minimize the pain she was experiencing and adopt the mindset of having to push through the pain. Due to her decisions to not disclose the severity of pain, and continuation of training, her injury over the course of two semesters became a stress fracture.

This ultimately forced her to stop competing, rehabilitate the injury for several months, and lose one semester of athletic eligibility.

It could also be argued that for the participants that did not notice any impact on their experience based on race, it may have been related to them belonging to the majority group. Individuals from majority groups do not experience oppression that individuals from minority groups experience and may not be aware of microaggressions that may occur within the team and the athletic departments. Microaggressions have been defined as the brief and common verbal, behavioral and environmental indignities, which may be intentional or unintentional, and are used to convey intimidating, insulting, or otherwise negative gender, racial, religious, and sexual orientation insults to the targeted individual or group (Sue, Capodilupo, et al., 2008). Additionally, self-awareness, introspection, and reflection are also needed for one to notice subtle differences.

### **Student-athlete-Coach Relationship**

The relationship between a student-athlete and their coach is one of the most significant relationships student-athletes have during their intercollegiate athletic experience. The coach is typically the first person of contact with the athlete during the recruiting experience to express the program and their institution's interest. They are also in the circle of people that student-athletes interact with the most in college. However, in this study, only three (30%) participants considered their relationship with their coach to be a significant relationship. One participant described:

And then my coach that I had when I first got there, he was my coach for the first two years and he actually was what landed me now at [university] through connections,

because he was coaching at [university] so he was another you know close relationship, you know big part of my life and in terms of like putting me where I am.

Intercollegiate sports particularly in track and field, are somewhat like academia from a specialization perspective. Coaches specialize in certain events (i.e. are sprint coaches, distance coaches, jumping coaches, throwing coaches), and the breakdown depends on each individual university. At major universities, there are usually six to eight full-time coaches and some volunteer coaches. The volunteer coaches are often recent student-athlete graduates who desire to gain some experience coaching. On the other hand, the full-time coaches have worked diligently to secure their positions. When student-athletes join an intercollegiate track and field team, they are assigned to the coach based upon their specialization. The student-athlete is not given an option to choose their coach and it is imperative that student-athletes have a good working and trusting relationship with their coaches. If the relationship between student-athletes and their coaches is not based on trust and honesty, student-athletes tend to often suffer in silence. They do not have options or power to change their coach which may also make them feel as though they do not have a voice. Having to train and compete for someone in such an authority position, who is in charge of student-athlete's scholarship, adds to the fear and pressure student-athletes face on a daily basis for a prolonged period of time, and forces them to adopt the "push through the pain" mentality, whether they are aware of it or not.

Although NCAA rules prohibit student-athletes from spending more than 20 hours a week on their athletic-related activities (NCAA, 2020), two of the participants in this study noted they invested close to 40 hours a week on training, weight lifting, team meetings, and recovery. The researcher herself can also attest, based on her personal experiences that the time engagement in athletic-related activities in college was an average of five hours per day,



including weekends, hence bypassing the 20 hours per week 'limit'. Consequently, a lot of that time is spent in direct contact with the coach and other coaching staff, including volunteer coaches.

A relationship with the coach begins to form at the initial recruiting contact and further develops over the course of four or five years that student-athlete is in college. Eight (80%) participants shared early during the interview process that having a good connection with a coach was very important and they wanted to be coached by someone who had a history of training successful athletes. Four of those eight participants emphasized that one of the main reasons they chose the school they attended was because of the particular coach who would be coaching them. It appears that the participants evaluated their future coaches based on how successful their current or past student-athletes were and used this analysis as a predictor for their own performance and improvement if they were to work with a particular coach. During their intercollegiate experience, the majority (80%) of the participants reported having an overall positive and respectful relationship with their coaches; however, the data analysis indicated that participants described those relationships as a “love-hate relationship”, a “tough love kind of coach”, and as one participant shared “ it almost felt like you were trying to like outsmart your coach or feel like there was just like this mind game going on.”

Two participants transferred schools during their intercollegiate careers. One of those participants decided to transfer due to the treatment she received from her coach. She reported her coach's non-supportive attitude and behaviors when she would share with him that she was in pain. This student-athlete shared, "I had my hip pain and no one was listening to me, I was like there's something wrong with my hip". Unfortunately, her pain progressed and it was later established she suffered a hip stress fracture and was unable to train for six weeks because she

was on crutches. The participant decided to transfer to another school, leaving her full scholarship for only a fraction of an athletic scholarship offered by the transferring school. The participant also noted her reason for the transfer was because she did not feel cared for, valued, and was uncomfortable around a coach who did not listen to her feedback about how her body was feeling.

### ***Perception of Coach***

Although participants reported an overall positive relationship with their coaches, the perceptions varied. The majority of student-athletes in a sense depend on their coach not only for coaching but for guidance on many other matters, including what to do when they are experiencing pain. Student-athletes look up to their coaches to tell them how much they should or should not push, however as will be discussed in the next section, having good communication is a needed prerequisite.

The fact that half (50%) of the participants spoke about not wanting to disappoint their coach and wanting to make them proud, indicates that they respected their coaches, looked up to them, and valued how the coaches perceived them. It could be argued that how the coach viewed a student-athlete impacted student-athlete's identity as well because student-athletes held their coaches in such high regard. One of the participants stated, "I was so afraid to disappoint him, like I would almost rather disappoint my parents than coach Mark". Among four participants, the underlying fear of disappointing their coach created additional pressure. It appears that student-athletes focus shifted from their individual performance to focusing on pleasing coaches and meeting their expectations. One participant stated "I just I wanted to impress him and like make him proud", while another participant stated "he's definitely one of those coaches, where it's like

if you are performing well, you are his best friend, if not, he's kind of like, takes a step back. So it was an interesting dynamic that I wasn't used to".

The data indicated that six (60%) participants noted coaches' moodiness, tendencies to "pick favorites" and the rollercoaster of emotions impacted their performances as well as contributed to the acceptance of the attitude to "push through the pain." One participant stated "I think like coach John is one of those people, where I think he will pick favorites. You know what I mean, like who's competing well right now, like 'I like this person right now'". Another participant provided a brief summary of how she perceived her coach, which highlights also how she was impacted mentally as a result of it:

I really felt like yeah when things are good, the highs were highs, and when the lows were bad, the lows were lows. And that meant like there'd be times like, you know, he wouldn't even look me in my eye, when I was talking about something, because he was frustrated or disappointed in the performance or that I couldn't complete whatever practice or wanted to sit out, it was like well... You almost felt, like, instead of like that's actually what's going to help me get better and perform for you, it was like 'well, who's next' or let me spend my time and attention elsewhere if this person can't be great, and I think that's taxing on people.

Former women track and field student-athletes in this study appeared to be greatly affected by their coaches' behaviors, actions, and sometimes even words at times made them feel abandoned and not supported.

Lastly, four (40%) participants noted how their coach appeared to be fixated on the weight and body image of women student-athletes, which was stressful for some of them. Two of the participants specifically recalled their coach constantly "coming around pinching you in

the side and like making comments about your weight". Although they noted that did not affect them personally, one of the participants said she would even joke back about it. However, three of the participants shared how they noticed other women student-athletes on their team having a difficult time dealing with the issue. Although the majority of participants appeared to not be affected by this, they all rationalized the intentions of the coach's behavior and did not verbally say anything. This behavior on the coach's behalf contributed to the pressure of not only having to perform well but also having to look well. As one of the participants, clearly frustrated after many years since her graduation, stated "it was like never-ending pressure...trying to make sure that I maintained a certain weight and body image to wear my stupid uniform...".

### ***Talking about Pain***

Open and honest communication with the coach is important at all stages, especially when a student-athlete is in pain or injured. The data analysis indicated that communication about one's experience of training and competing through pain and injury presented as a challenge and contributed to the negative psychological impact on the student-athletes. One participant, transferred institutions after her freshman year and severe injury noted:

I've never really felt like I could talk to my [university name] coach I just felt like you know, this is the performance expectation... there's other people we can bring in, it's not just you. You know, I just felt like I was replaceable and here we go, we gave you a scholarship, this is what we expect. I never felt like I could actually come to him...

Overall, the majority (80%) of the participants said they never talked with their coach about their pains and aches, nor did the coach ask about it. One of the participants reflected "...in my experience I had Johnny [coach], I didn't have coaches that said, 'But how are you?'". Another participant noted that from her point of view she felt as though her coach was aware of the pain

she was experiencing, although she never openly spoke about it. Yet another participant shared about the moment when she got hurt at practice “I was like bawling, everybody in the indoor track could hear me. And like my coach is like casually walks over and he's like 'you just scared yourself, you're fine". The dynamics between coaches and student-athletes contributed to the overall pain and injury experience. Student-athletes clearly did not feel comfortable talking to their coaches about pain and it appears that the care was a factor. The unspoken pressures and perception of their role as a student-athlete being a "job" might have also been a contributing factor in communication. Student-athletes who perceive their role as a "job" might have felt as though their job truly is to perform at all costs, because if they do not perform, they may lose their scholarship. However, the participants at the time appeared not to have the true insight and self-awareness that if they continue to train and compete despite the pain and injury, their condition may worsen and negatively impact their performance. BECAUSE OF THE PRESSURE TO PERFORM--They made the decision not to voice their pains and aches communicated with coaches, adjust the training workload, and spend more time on recovery to allow the body to fully heal and ultimately hope to avoid severe injuries. Unfortunately, six (60%) participants in this study that continued to train and compete despite being in pain and some even being diagnosed with an injury, ended up with more severe injuries, and two required surgery.

### **Support System**

The support system theme is comprised of several subthemes including athletic trainers, teammates, friends and family, significant others, and recovery resources. As has been previously discussed in chapter two, university athletics is a large system, where student-athletes are cared for and provided support on many different levels in multiple areas in order for them to

attain maximum success. Many Division I universities have a medical center within the athletic department; however, how advanced and what kind of resources are available depends on the university's budget. All of the participants attended a Division I university that had what they described as "great resources" to help them with rehabilitation and recovery.

### *Athletic Trainers*

All 10 (100%) participants reported taking advantage of the medical training room and getting physical therapy when deemed necessary and nine spoke about their athletic trainers. Student-athletes are generally able to take advantage of the benefits in the medical training room. The athletic trainers and other medical staff are there to support them and provide them with the services such as ice, steam treatment, ultrasound, taping, massage, hot and cold whirlpools, and other needed treatments which was the case with participants in this study. Although participants did not directly discuss their relationships with athletic trainers, they did convey their perceptions of them especially when they were experiencing pain and injuries during training and competitions. Table 2 represents how women student-athletes in this study perceived their athletic trainers and what the outcome was.

Two (20%) participants perceived their athletic trainers as great, very helpful, and supportive. One of the participants even emphasized how she was in the training room every day for what she called "prehab." She was the only participant who utilized the resources to help her prevent injuries and attend to the muscles that were not recovering as fast. Five (50%) participants perceived their athletic trainers as willing to help. However, two felt that their athletic trainer was lazy. Additionally, two (20%) participants felt they were not taken seriously, with one perceiving her athletic trainer as getting annoyed when she would come in the training room seeking help. Lastly, one participant did not discuss her athletic trainers and only

mentioned a doctor who diagnosed her stress fracture, after she finally sought help after two years of training and competing through pain. However, she attended a small Division I school that did not have resources like the rest of the participants who attended a fairly large Division I university.

**Table 2**

*Participants Perception of Athletic Trainers*

Participant	Great	Willing to help	Lazy	Other	Misdiagnosed the injury/pain	Had to seek help outside of University Athletics
1	X					
2		X				
3		X	X		X	
4		X			X	X
5		X			X	
6		X				
7			X	Annoyed, wasn't taken seriously	X	X
8	-	-	-	-	-	-
9	X					
10				Wasn't taken seriously	X	X

Lastly, five (50%) participants were misdiagnosed. Their injuries were diagnosed as less severe than what they actually were or they were told that there is nothing wrong with them. One of the participants described "I felt like I was trying to explain what was going on, and I was

being looked at like I was crazy or like that I was fine". Three (30%) participants decided to seek help in their hometowns on their own apart from university athletics because they felt they were not taken seriously. They truly believed that something was wrong and that the pain they felt at the time was not just a passing pain, but rather an indication of something more serious. One of those three participants had to resort to surgery due to her injury, another was on crutches for six weeks due to the severity of her injury, and the third received physical therapy from an athletic trainer of her choice in her hometown, and was able to heal during the summer break.

Overall, when reviewing the table, only four (40%) of the participants had positive experiences with their athletic trainers.

### *Teammates*

Overall, all participants spoke about their teammates as part of their support system. They referred to them as a "larger community" and emphasized how important those friendships were with "like-minded people" who were able to understand their experiences and frustrations when they were in pain or injured at practice, or just the overall pressure of being a student-athlete.

Five (50%) participants spoke about how their experience with pain and injury impacted them, as one of the participants stated "you know, you can't help your team anymore in relays, and you can't be there for your team, and you can't be there for yourself and you're just... (sigh)".

Another participant noted "And the reason why I kept pushing myself through that pain I just wanted to, I mean, again, like contribute to the team. I wanted to like score high."

The sense of being a part of a larger community fostered a sense of closeness and camaraderie among teammates, who all had the same goal. Even though track and field is an individual sport, in intercollegiate athletics it becomes a team sport because student-athletes are competing for conference and national championships as a team. Therefore, the importance of



scoring points comes into question and can even contribute to the pressures one experiences. The participants' experiences indicate that the pressure relates to scoring and helping the team, scoring is a part of student-athlete's "job", for which they are "paid" via scholarship, therefore they must adopt the "push through the pain" mindset.

### ***Family and Friends***

Family and friends were another very important component of the participants' support system. Eight (80%) participants spoke about how supportive their family members were and how they at times depended on them for the emotional support they were not receiving from coaches during those experiences of training through pain or injury. One participant shared "I think I called my mom darn near every day. Sometimes it'd be tears of like I don't know what's wrong, I'm trying my best like I'm not jumping very far, I don't feel great, something is wrong so having her listen [was helpful]".

Family as a support system plays a crucial role because it appears that the lack of communication about pain and injury experiences between student-athletes and their coaches had an extremely stressful effect. Lack of conversation about pain, in general, might have additionally conditioned student-athletes to hold on to their pain, to minimize it, normalize it, and justify training through it. Without question, family members were perceived as an outlet to whom student-athletes may vent without fear of judgment, or questioning the validity of their pain, and who would be supportive of student-athletes regardless of how successful they were on the track or field.

### **Psychological Impact**

The fifth and final theme that arose from the data analysis is the psychological impact and it includes subthemes of cognitive impact, emotional impact, and coping. The experiences of

training and competing through pain and injury were found to have a negative impact on participants' mental health and wellbeing. The experiences of training and competing through pain and injury cannot be interpreted in a vacuum without taking into consideration the aforementioned themes, as all of the themes together contribute to the level and direction of psychological impact. This section will present the findings pertaining to how former women track and field student-athletes perceived themselves to be impacted on the cognitive and emotional level, and how they coped with their experiences.

### *Cognitive Impact*

When participants spoke about their perceptions about their experience of training and competing through pain and injury, three main trains of thought seem to be apparent from the data. First, all (100%) participants adopted the “push through the pain” mindset. The participants used different reasoning to justify adopting that mindset. Some used a form of self-talk to minimize the severity of their injury in their mind (30%) and as one of the participants reflected on her experience of training through lower back injury she justified pushing through by stating:

...it wasn't like I twist my ankle and I can't walk and I'm limping, like you can run like I could do things to where like it looks like I was doing it correctly, so just because I was experiencing a little pain, wasn't like a reason for me to not compete or to not whatever, like it was just like okay yeah you just like get through it.

This participant was also forced to end her career once it was diagnosed she had a stress reaction and a herniated disc in her lower back. Some (40%) engaged in the decision-making process about whether or not to continue. One participant reflected “And so cognitively was always just, I just felt like I was always trying to figure out okay, should I push myself or, should I pull back,

should I rest, should I not...umm..”. Many (90%) experienced external, internal, or both types of pressure. One participant summarized how her coach spoke to her before the competition:

...there would be specific statements told to you about the [scoring] points that we're going to need to finish high as a team. Or you know, 'I'm counting on you to.. you're coming in, as you know, a favorite' or you know, 'you've got the fourth best jump in this, in whatever, like we anticipate you scoring here or there'. So, like the slick comments like that that weren't I would say overt, they definitely weren't like in your face 'We want you to do this', but 'we're counting on you' type of things, I'm like 'okay well, I don't feel well.'. 'Well we're counting on you to...' It wasn't like 'I'm expecting' right 'here's my expectation', or 'you will do this..' it didn't feel that strong, by any means. But I definitely did feel pressure.

Lastly, some participants (20%) and were extremely competitive individuals and did not want their hard work to go to "waste".

The second train of thought was regarding the impact of their injury on future performance or their ability to function normally. Although all of the participants adopted the "push through the pain" mindset, four (40%) of them engaged in a process of self-wondering whether or not they should push, how much they should push, if they push what might happen, and how their life may look like after college. Despite wondering about those things, the participants still proceeded to train and compete despite the injury.

Lastly, four (40%) participants discussed blocking out their thoughts about pain to focus on the task at hand, pretend like it does not hurt, and essentially continue training at the same level. One participant shared how she blocked her thoughts, "I just had to try harder, like try twice as hard block out more receptors, maybe when I was completely like shut out different

voices in my head. Ignore different voices in my head. And just focus on the task at hand, which was trying to jump as high as possible...".

Many participants spoke about cognitive impact when they were asked about the emotional impact and vice versa. From the psychological standpoint and several counseling theories, such as Cognitive Behavioral Theory and Rational Emotive Behavioral Theory (Corey, 2013), the foundational belief is that cognitive thoughts affect behavior and that emotions affect cognitions, which then affect behavior. Both of those theories could be used to explain the psychological impact of the participants' experiences of training and competing through pain and injury. However, it could also be argued that participants of this study, who at the time were in their very early 20's or younger, had not yet developed a critical way of self-introspection and self-awareness necessary to recognize their deeper emotional reactions, their causes, and how those might have impacted their thoughts.

### ***Emotional Impact***

Emotional impact and reactions are another component of one's overall psychological wellbeing. How student-athletes perceive and emotionally react to pain and injury can have an impact on their psychological recovery post-injury causing them to doubt and question their ability to train as they did before the injury, fear reinjury, and negatively impact their confidence, which was the case with three (30%) of the participants in this study. One participant stated:

Emotionally I was like 'I'm scared' like you know if I do this.. I don't want to get hurt again, I'm going to be put back to square one, oh my gosh I always.. I kind of like walked on eggshells around certain things from lifting in the gym to certain workout things, like jumping. I was 'okay, I'm gonna hurt myself if I go too far', and it's like, no I mean you're not going to get better if you continue to be like what if, what if, what if...

Sometimes, the perceptions and emotional reactions may additionally have a debilitating impact on the speed of physical recovery as well. Additionally, the data analysis indicated that two of the most commonly experienced emotions were a disappointment (60%) and frustration (50%).

As one participant described:

I literally was like trying my hardest. It wasn't just being disappointed because I like was not doing good. It was like being disappointed because, like I was doing. I was doing great like, why is this not showing up. Like, why is my body.. like I'm at the top shape of my life. I'm all lean, and I feel like a little machine and stuff, and then why is my ability declining kind of thing so...

The disappointment appears to be related to one's declining quality of performance, coaches' expectations, and one's perception of one's own body failure. Similarly, the participants appeared to be frustrated for the same reasons that caused the disappointment. One of the participants shared "I'm just frustrated, I was just so frustrated like just not knowing. Like what's like why, what's going on, like why am I feeling like this."

It was extremely interesting to hear participants speak about their emotions in the present tense at times and sometimes shift between present and past tense, as can be noticed with the previous quote. Other participants also utilized the present tense during the interview.

Participants' use of present tense may contribute to the interpretation that those memories are still very vivid and fairly easy to recall for the participants because they directly impacted their athletic identity and the emotion experienced may have been so strong that even to this day, they may experience it as if it was happening right now.

Furthermore, three (30%) participants stated they are not emotional or as one participant stated "I have like no emotions." However, during the interview, they proceeded to talk about

how frustrated they were due to training and competing and their performance being impacted by continuous pain and injuries. It appears that those participants might not have recognized their frustration as an emotional impact but rather cognitive and viewed frustration as something that was created in their mind and intensified by their thoughts. One additional participant admitted she never thought about the emotional impact of her experience and that frankly, she was not self-aware enough at the time to recognize how and what she felt as a result of the pain and injury she was dealing with.

### *Coping*

As all participants experienced some sort of disturbance from a cognitive and emotional perspective. The data analysis indicated that seven (70%) participants coped with their pain and injuries by taking some kind of painkillers such as Aleve, Advil, Ibuprofen, or Tylenol on a daily basis for a prolonged period of time. Sometimes the continuous use of daily painkillers lasted six months at a time. The use of painkillers reflects the need to numb the level of pain so that the participants could practice and compete to the best of their ability. It appears that for the majority (70%) of participants, the painkillers were a necessity so they could perform their "job". Four (40%) participants utilized a form of self-talk that helped them mentally minimize and rationalize the pain they were experiencing, by talking themselves through that pain as a part of the process and that what they were feeling "is not that bad".

Lastly, only one participant (10%) reported seeking counseling specifically due to her experience of training and competing through pain and injury and she shared:

I had like a really bad experience, so I was also like switching through ADHD medication. And a part of that is like that also makes you like depressed like on its own um and I had like a really bad experience one day. It was like after practice I was just so

frustrated, I wasn't paying attention, I just walked right into traffic. And I was like 'well damn, like I need help', like, I was just so lost in the pain and frustration of everything that I was not even aware of what I was doing...

One (10%) participant utilized a counselor at the university counseling center, apart from the athletics department; however, she reported "other personal issues" as a reason for seeking counseling and she never spoke to her counselor about athletics or her experience with pain and injuries. Two participants (20%) reported using a sport psychologist in their athletics department for "one or two sessions." However, those sessions were focused on addressing pressure and performance specifically, and those student-athletes did not speak about their pain and injury to the professional either. Two (20%) participants stated they were aware of the mental health support services and indicated they did not use them. Lastly, five (50%) participants reported not knowing or not being aware of any kind of mental health support being made available to student-athletes at the time at their respective institutions. One of those five participants transferred institutions and was recommended to see a counselor by her new coach after having a conversation about how she was feeling mentally. She also shared she felt like her new coach cared stating: "The fact that they even brought that up and they were concerned about that, just like 'Oh well, you know your mental health can affect your performance'.. was eye-opening...". This participant's experience reflects the positive impact coaches can have on student-athletes mental health simply by showing care, communicating concern, and openly discussing the importance of one's mental health wellbeing.

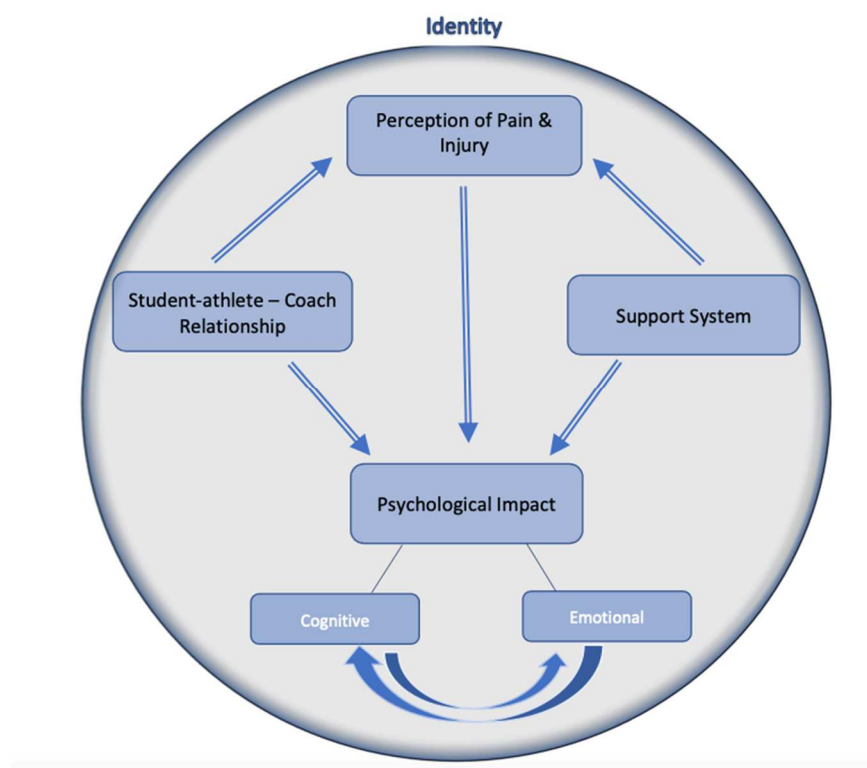
### **Summary of Findings**

The identity, perception of pain and injury, a student-athlete – coach relationship, the support system, and psychological impact constitute the essence of former women track and field

student-athlete experience of training and competing through pain and injury during their intercollegiate careers. As previously mentioned these themes interact and reinforce each other. Figure 2 is a visual representation of how the major themes constitute the overall experience.

**Figure 2**

*Visual Representation of Findings*



As presented in the figure, identity is at the core of the experience, because all of the student-athletes identified with the athletic identity despite their long-term goals and aspirations that were not related to athletics. Due to their athletic identity, all participants viewed their role as a student-athlete as a job, which contributed to the "push through the pain" mindset. The experience of training through pain and injury was affected by one's perception of pain and injury, the level of pain they perceived they were experiencing, the impact that the pain and



injury had on performance, and how one chose to proceed despite the pain - all this impacted psychological wellbeing.

One had to engage in cognitive processes that suggested student-athletes ought to adopt the "push through the pain" mindset. The Student-athlete-Coach relationship had an impact on the cognitive processes because there was a sense of pressure and expectations from the coach that the student-athlete had to meet. However, poor relationship quality, reflected in student-athletes not feeling as though their coaches cared about them or their pain and lack of open and honest communication contributed to feelings of frustration and disappointment. Prolonged negative emotional reactions contributed to challenges student-athletes experienced regarding their identity as they started to perceive themselves as a failure because they were not competing the way they used to, wanted to, or thought their coaches expected them to. The way student-athletes were treated by the supporting system also contributed to their perceptions of pain and injuries. To the degree, they were not believed by their athletic trainers or their experiences were minimized and misdiagnosed, student-athletes continued to train and compete despite the pain they were experiencing, which consequently contributed to disappointment, sadness, and frustration. The relationship with the coach, perception of pain, and support system all had an impact on cognitive and emotional functioning, and all five had an impact on student-athlete's identity. This cycle is further reinforced by the system of intercollegiate athletics within which student-athletes operate.

## CHAPTER V: DISCUSSION

### **Introduction**

The purpose of this phenomenological study was to explore the lived experiences of former women track and field student-athletes that trained and competed through pain and injury during their intercollegiate careers. The researcher utilized semi-structured interviews with 10 participants that volunteered to share their in-depth experiences. Five major themes arose from the data analysis process that included 1) perception of pain and injury, 2) identity, 3) student-athlete – coach relationship, 4) support system, and 5) psychological impact. The findings will be discussed through the lenses of the Integrated model developed by Wiese- Bjornstal et al. (1995). This chapter includes a discussion of the findings, implications for counselors and counselor educators based on the findings, limitations of this study, future research recommendations, and the conclusion.

### **Discussion**

As previously stated in chapters two and three, the role of the theoretical framework in chapter five will be to further the interpretation of the findings and provide additional context in understanding how this study's findings contribute to the existing literature. The researcher opted to utilize the theoretical framework after the data analysis process to minimize personal and professional biases which would then allow codes and themes to emerge organically throughout the data analysis process.

The integrated model was proposed in 1995 by Weise-Bjornstal et al. and further developed in 1998 into a comprehensive way of examining psychological responses to injury and the rehabilitation process. The focus of this study was specifically on the experience of training and competing through pain and injury, which can be a continuous process. The data indicated

how some of the participants engaged in this process for as long as two years before starting their rehabilitation process. The integrated model was developed in such a way as to provide an understanding of injured athletes' experiences from a psychological, physical, and social viewpoint, which occur in cyclic nature (Weise-Bjornstal et al., 1998). The cultural context of sport and sport ethic have a major influence on cognitive appraisals and emotional responses of athletes, and as the findings indicated on the participants in this study as well. Furthermore, based on the integrated model, once the sports injury occurs, the psychological effects of the injury include cognitive, emotional, and behavioral responses (Wiese-Bjornstal et al., 2008).

### **Psychological Impact**

According to the integrated model the psychological responses of the recovery process, cognitive appraisal, and emotional response are essential components of this process. Athletes' cognitive appraisals were previously found to be affected by perceptions about the injury, recovery process, and availability of social support responses (Wiese-Bjornstal et al., 1998). This study's findings contribute to the current literature by extending the perception of pain, drawing attention to the role of identity, and the relationship between the student-athlete and the coach as contributing factors to the cognitive appraisal and emotional responses in a cyclic manner.

From the psychological perspective when athletes, in general, suffer an injury they are subjected to different cognitive and emotional reactions such as lowered self-esteem (Smith et al., 1990; Tracey, 2003), mood disturbances (DeGaetano et al., 2016; Roiger et al., 2015; Turner et al., 2017), feelings of helplessness (Bejar & Butryn, 2016; Carson & Polman, 2008), social isolation (Madrigal & Gill, 2014), fear of recurrent injuries (Madrigal & Gill, 2014), and loss of their athletic identity (Granito, 2001; Madrigal & Gill, 2014). More specifically, DeGaetano et al. (2016) found student-athletes that return to active participation before they are

psychologically ready as being more likely to experience additional psychological (i.e. depression and anxiety) and physical (i.e. reinjury) challenges. Furthermore, Appaneal et al. (2009) discovered student-athletes most commonly experience negative reactions following their injury along with some adaptive and mixed responses.

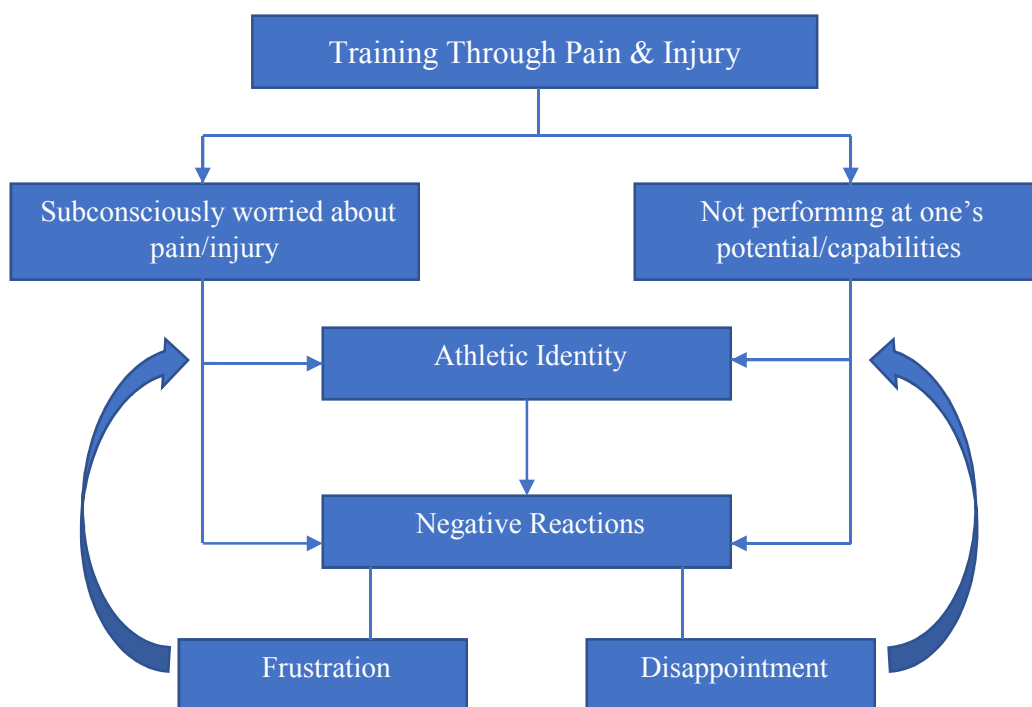
None of these studies were specifically conducted with women student-athletes or with track and field student-athletes. Hence, this study contributes to the current literature by exclusively exploring women track and field student-athletes who opted and continued to train and compete despite pain and injury. The dominating emotional reactions among participants were frustration and disappointment with some participants suffering more severe injuries due to the continuance of their athletic participation and minimizing the physiological signals that indicated something was wrong. The participants in this study were at no point in time psychologically assessed on how the experience of training and competing through pain and injury impacted them.

The psychological and emotional responses are interconnected, and one's emotional response to training through pain and injury can be highly unique. The emotional responses of training through pain and injury have not been thoroughly explored with women student-athletes. However, some studies did explore the emotional effects of injury but without specifically addressing gender differences. For example, McDonald and Hardy (1990) found injured student-athletes to experience a progression from negative towards more positive emotional reactions during the rehabilitation process. Madrigal and Gill (2014) discovered that injured student-athletes experienced more negative emotions, including feelings of loss. Additionally, feelings of frustration, anger, fear, confusion, boredom, and isolation were associated with the experience of injury (Granito, 2001).

The researcher notes that this study had a slightly different focus and as a result, the findings are somewhat different as well. McDonald and Hardy (1990), Madrigal and Gill (2014), and Granito (2001) explored the experience of the injury itself and this study specifically focused on the phenomenon of training and competing through pain and injury. This study does not support McDonald and Hardy's (1990) transition from negative to positive emotional reactions. However, there is some similarity in experiencing negative emotions and frustration reflected in research by Madrigal and Gill (2014) and Granito (2001).

### Figure 3

*A possible interpretation of prolonged exposure to pain and injury*



One interpretation as shown in figure 3 could be that due to prolonged exposure to continuous pain and its impact on one's performance quality and success, participants were

unable to experience any positive reactions because, for them, positive emotions stem from good performances. This lack of athletic success and deterioration in performance results also directly impacted participants' perception of self and their identity, which then contributed back to experiencing negative emotions.

Some literature has specifically explored depressive symptomatology among student-athletes pertaining specifically to the injury experiences (Appaneal et al., 2009; Chan & Grossman, 1988; McDonald & Hardy, 1990; Roiger et al., 2015; Turner et al., 2017; Yang et al., 2007). However, only two participants in this study mentioned sadness and depression regarding their experience of training and competing through pain and injury. It is plausible to assume that participants at times may have lacked emotional reactions due to the lack of emotional awareness. Participants also appeared to engage in superior cognitive functions to purposefully block out pain and utilized self-talk to streamline a focus on minimizing and justifying their experience, so they could continue with athletic activity. One possible interpretation could be that women track and field student-athletes that strongly identify with their athletic identity are able to keep in mind their individual desires as well as their team needs and by adopting sport ethic, continuously push through pain and injury for prolonged periods of time.

### **Perception of Pain and Injury**

One of the major themes in this study was participants' perception of pain and injury. Participants were found to perceive their student-athlete role as a job and felt they were paid for through athletic scholarships. This was found to contribute to their cognitive appraisal. The integrated model postulates how athletes continuously appraise their ability to cope with the injury and their cognitions, such as self-perceptions, are essential because they affect how one

responds emotionally and behaviorally to the injury (Wiese-Bjornstal et al., 1998). This outcome was found to be in this study as well.

In a qualitative study with nine male and two female student-athletes Bejar and Butryn (2016) explored experiences of coping with injuries and found participants to engage in catastrophizing their experience. Contrary to those findings, participants in this study mainly engaged in minimization of their pain and injury experience. Considering that Bejar and Butryn's (2016) participants were mostly males, perhaps it could be argued that there is a difference between men and women student-athletes and how they process their experiences. Also, it should not be ignored that different sports have different sport ethic that contributes to student-athletes reactions and interpretations.

An important point that warrants discussion is Wiese-Bjornstal's (2010) advocacy for a broader definition of injury to include "transient" injuries. Transient injuries do not necessarily involve time-loss "because of the normative culture of sport that expects athletes to 'carry on' and train and compete even when injured" (p.103). Additionally, as supported by findings in this study, student-athletes may choose not to report certain injuries because they do not want athletic trainers or coaches to deny them the opportunity to train or compete (Wiese-Bjornstal, 2010). Wiese-Bjornstal (2010) further noted that despite low levels of intrusion, some injuries may cause undesirable consequences to one's health, performance, and potential for future injury. It was interesting to hear participants in this study describing their injuries as "minor" or "maintenance injuries", which could arguably fall in this category of a transient injury. However, it was their perception of the nature of pain and injury along with the pain level that contributed to such classification. Furthermore, it needs to be emphasized that some participants that described their injuries as "maintenance", also rated their pain level fairly high, yet never high

enough to cause them to stop competing. Although participants did engage in questioning about how much they could push the level of pain they could tolerate, they did not appear to be consciously aware of the undesirable consequences their “maintenance injuries” had on their psychological wellbeing because on the cognitive level their focus was on the physical aspect of pain and intentional focus on blocking and minimizing the pain experience.

Participants in this study demonstrated a great desire to perform at the highest level. They also had an in-depth understanding of the competitive nature of intercollegiate athletics, which supports the argument made by Weiss (1971) that sport is about the pursuit of embodied excellence. The participants were found embracing the pain by normalizing, justifying, or diminishing the reality and the severity. This attitude and acceptance of the "push through the pain" mindset contributed to prolonged injury exposure, more severe injuries, and ending the college career as experienced by one of the participants. DeGaetano et al. (2016) emphasized that from the psychological standpoint, injury has been associated with significant distress; however, the athletes who return to training and competing before they are psychologically ready are exposed to greater risk for not only psychological but also physical difficulties. This study supports DeGaetano et al. (2016) findings and expands them by indicating how women track and field student-athletes that continue to train through pain and injury are further exposed to greater psychological impact, greater physical impact, and identity changes.

In a qualitative study with intercollegiate student-athletes and athletic trainers, Granito (2001) found participants to experience pain, physical deconditioning, use of painkillers, and surgery as a result of their injury. The current study supports previous findings regarding the use of painkillers and presents its prevalent and continuous use without regard for the potential negative consequences of its prolonged use.



## Identity

Another major finding was the impact experience of training and competing through pain and injury had on participants' identity. The identity theme, supports the assumption that winning student-athletes are perceived more favorably by coaches to some extent. The participants were found to question and experience challenges related to their athletic identity when they were not performing at their expected level due to their experience of training and competing through pain and injury. Although the participants were aware they were in pain and injured, they continually engaged in minimization or denial of the experience. In addition, they coped by using painkillers and cognitively rationalized their thoughts about pain in order to continue to train and compete as though they were not in pain and injured. Previous research indicated that a conditioning process that began in high school, creates a mindset for college student-athletes to accept this mentality to fit in and survive within the system (Adler & Adler, 1988; Beyer & Hannah, 2000).

Although the Integrated model does not directly discuss identity, this study findings presented identity as a relevant concept. However, Wiese-Bjornstal et al. (1998) wrote that self-perception, the view one has of oneself, encompasses self-worth, self-esteem, self-confidence, and self-efficacy all are impacted, to some degree when athletes become injured. The findings support this Integrated model premise and further contribute by drawing attention to the role of one's athletic identity and intersectionality of identities.

A few studies explored the connection between athletic identity and the phenomenon of playing through pain and injury (Gard & Meyenn, 2000; Roderick et al., 2000; Thomas & Rintala, 1989; Weinberg et al., 2013). A study with recreational basketball players found that athletes who highly and moderately identified with athletic identity had positive attitudes and

behavioral intentions to play through pain and injury and there were no gender differences found, signifying that men and women are socialized into the sport in a very similar way (Weinberg et al., 2013). Although the current study did not focus on the degree of athletic identity identification, it was implied by all participants that they identified with athletic identity and as a result of it their experiences of training and competing through pain and injury, they suffered identity challenges and transitions. More specifically, Madrigal and Gill (2014) found that women student-athletes experience a loss of identity because of their inability to actively train and compete with their teammates due to their injuries, which was also found in this study. McDonald and Hardy (1990) discovered negative emotional reactions due to student-athletes experiencing “a loss of some aspect of the self” (p.271). Furthermore, Roiger et al. (2015) found that a sense of identity loss was associated with depression after an injury occurrence among student-athletes and this was a finding not supported in this study. The researcher would argue that participants in this study became frustrated due to their limited ability to perform and that lack of high-quality performance caused intensity challenges for the participants. Furthermore, the participants grew in frustration and disappointment when they were not performing and questioning themselves when high-level performances did not occur, which indicated that they strongly identified with their athletic identity.

### **Student-athlete-Coach Relationship**

Many factors impact one's athletic identity and social support and athletic coaches are some of them. Considering that student-athletes spend a lot of time in direct contact with their coaches, the relationship between student-athletes and coaches was one of the major themes. Although coaches can be considered a part of the student-athletes support system, the participants indicated that this relationship can be complicated and have a significant impact on

student-athletes, their overall psychological functioning, their identity, and ultimately on the experience of training and competing through pain and injury.

From a larger scope, examining social support provided by one's support network is most effective when it matches the needs of injured student-athlete (Robbins & Rosenfeld, 2001), and depends on personal, situational, and temporal characteristics (Fernandes et al., 2014; Wiese-Bjornstal, 2010) as well as the phase of student-athlete's recovery (Johnson & Carroll, 1998). The findings of this study revealed that women track and field student-athletes utilized friends, teammates, family members, and significant others for emotional support, which they did not receive from athletic trainers and coaches. This partially supports Tracey's (2003) findings which indicated that men and women student-athletes found the conversation about emotions related to their experience with friends, family members, and teammates as relieving. Unfortunately, the findings also indicated that participants often did not feel comfortable disclosing their pain and injuries to their coaches nor did the coaches ever initiate the conversation about their injuries. Furthermore, this study's findings partially support previous findings from Albinson and Petrie (2003) and Robbins and Rosenfeld (2001); the authors found that student-athletes indicated they would appreciate more social support from their coaches during all phases of their injury recovery.

According to the literature, it could be argued that there are two explanations for the role of social support (Fernandes et al., 2014). One is following the "buffering hypothesis", which suggests that individuals experience the benefits and advantages of social support largely through reduction of stress and allow individuals to reassess their injury in a less threatening way. The second explanation aligns with the "main-effects hypothesis", which contrastingly suggests that social support "exerts a direct effect on the athlete's psychological response" (p.445). The results

from this inquiry appear to support the main-effect hypothesis because women track and field student-athletes discussed their relationship with coaches as contributors to their overall frustration. This study expands on the current literature by indicating that when women track and field student-athletes decide to train and compete through pain and injury they do not possess a high quality and supporting relationship with their coaches. There is also a lack of understanding about their needs which involves simple communication surrounding their training experience and competing through pain and injury. There are several possible explanations worthy of discussion. For example, one interpretation may be associated with gender because all of the participant's coaches were male and the women track and field student-athletes may not have felt comfortable sharing personal and emotional remarks with their coaches. Another possible interpretation may be that once participants attempted to communicate with their coach and had their feelings and experiences regarding pain dismissed, they interpreted that as a message to avoid discussing their emotional experiences with coaches. They may have internalized that coaches only expect them to perform. The participants also may have placed high expectations on themselves and projected the expectation on their coaches. The idea of internal or external high expectations created pressure for the participants. Furthermore, due to participant's perception of their role as a student-athlete being their compensated job, they might have internalized the responsibility to train and compete through pain and injury as completion of their duties.

### **Social Support System**

The support system was another major theme that appeared from the data. According to the integrated model, the perception of social support contributes to the psychological responses in the recovery process (Wiese-Bjornstal et al., 1998). The findings in this study indicated that

perception of social support system and student-athletes support network had an impact on their psychological well-being. Half of the participants perceived their athletic trainers, who were part of the student-athletes support system, as willing to help. However, two participants felt that their athletic trainer was lazy. In addition, five participants were misdiagnosed, and this contributed to the frustration they experienced daily. Furthermore, three participants did not feel they received the support they needed to the degree that they took matters into their own hands and sought medical assistance in their hometowns apart from the university athletics medical department. This lack of support from one of the major support system contributors added additional strain and distress to participants' psychological well-being. In a qualitative study conducted by Hatteberg's (2020) findings revealed that student-athletes perceived several barriers that prevent them from seeking and receiving help and one of them including the student-athletes perception of institutional staff as unable or unwilling to provide emotional support. Although Hatteberg (2020) did not differentiate between male and female participants, this study provides some understanding of women track and field student-athletes and their perceptions of athletic trainers.

When taken into consideration different contributors to student-athletes support system, it is important to consider student-athletes help-seeking attitudes when it comes to mental health support. The literature has supported findings that demonstrate training and competing with pain and injury contributes to disruption in the student-athletes natural course of training. In a study conducted by Barnard (2016) examining student-athlete attitudes toward mental health and help-seeking behaviors, it was discovered that women student-athletes were more likely to seek help compared to men student-athletes and students from the general population. Contradicting, Watson's (2005) findings presented students from the general population as more likely to seek

help. Although the results from the current study cannot be used to make generalized assumptions, it may be helpful to note that half of the participants indicated that they did not seek or were aware of any kind of mental help support for student-athletes. This raises a great concern since Wolverton (2008) and Huml et al. (2014) identified academic centers within university athletic departments as the "crown jewel" of athletic facilities designed to provide well-rounded support to student-athletes. However, women student-athletes in this inquiry that participated at fairly large Division I universities were not aware of any kind of mental health support at their respective universities.

### **Discussion Summary**

In the modern sports era, especially in the United States, there is an emphasis on competitiveness, equality for the participation, bureaucratization to govern the sport, specialized roles, rationalization of rules and training, quantification of results, and a quest for records (Beyer & Hannah, 2000; Guttmann, 1994; Zingg, 1986). All of these components impact all of the themes that evolved from this qualitative analysis. Although student-athletes do not necessarily actively think about each and every one of those components, they are embedded in a sport culture that is specific to each sport. The findings of this study indicated that women track and field student-athletes were all well aware of the competitiveness of intercollegiate athletics, the importance of the quantification of results, and the pursuit for improvement of personal records. This was presented in the minimization and justification of training and competing through pain and injury, the way participants identified with their athletic identity, and how that identity was challenged and impacted by the experience with pain and injury contributing to the experience of negative emotional reactions. Additionally, participants' relationship with coaches and support system further contributed to identity challenges and frustration. The pressures

participants imposed on themselves as well as the pressures they perceived were imposed on them by their coaches and other outside factors had an overall impact on the psychological functioning of all participants.

Research investigating the phenomenon of training and competing through pain and injury has mainly been conducted with male and professional athletes (Howe, 2001; Roderick et al., 2000; Waddington, 2000). However, this is not a new phenomenon in women's sports because women, similar to men have engaged in high-risk activities (Thing, 2006). This study contributes to the existing literature by exploring in-depth experiences of a very specific population of women track and field student-athletes, which has not been previously investigated.

### **Implications of Findings**

The implications derived from the findings of this study are twofold as they can be used to inform counselors and other mental health professionals and counselor educators of the unique experiences and challenges that women track and field student-athletes face when training and competing through pain and injury. Counselors serve many diverse populations in a variety of settings and they are not exempt from providing services to student-athletes. Counselor Educators are tasked to prepare generations of upcoming counselors and they too need to know about this population in order to effectively prepare counselors in training.

### ***Implications for Counselors***

The findings of this study offer several implications for mental health counselors who work with women student-athletes. One of the first and foremost recommendations for counselors working with the student-athlete population is to conduct a thorough biopsychosocial assessment and inquire about various aspects of one's life, including athletics. As few

participants in this study noted, when they interacted with a sport psychologist, the professional did not inquire about their injuries and pains, and the service was specific to performance.

Approaching student-athletes from a holistic standpoint is of utmost importance because some tend to place certain professionals in "boxes" because of previous preconceptions. They may lack understanding about how a mental health counselor may be able to help them overall which includes issues related to their athletic performance. Therefore, mental health counselors and therapists who encounter student-athletes ought to benefit from starting the therapeutic relationship by first explaining the nature of the relationship, their services, and potential benefits for the student-athletes. Additionally, counselors and other mental health professionals ought to engage in continuous and frequent assessments when working with student-athletes because of the high workload and demanding schedules student-athletes face. Frequent assessments may help with recognizing mental health strains and other concerns that arise in student-athletes lives, including traumatic experiences related to performance or lack thereof.

Furthermore, since the participants in this study supported previous findings regarding student-athletes preferences to see a mental health counselor who has personal experiences of being an intercollegiate student-athlete (Lopez & Levy, 2013), it would be helpful for the counselor to self-disclose early on about any athletic experiences they might have had to foster and communicate relatability to the student-athlete and thus establishing strong therapeutic alliance early on. Mental health counselors are encouraged to be knowledgeable of different sports and how student-athletes may manifest collectivism or individualism in accordance with their sport ethic and their personal cultural backgrounds.

In regards to identity, it is important to address it as a part of growth and development, which all participants experienced during their intercollegiate careers and beyond. Although



among student-athletes the athletic identity is salient, counselors, therapists, or mentors can not only provide guidance in the development of self-awareness and engage student-athletes in critical reflection of self (Wiese-Bjornstal, 2009), but they can also help student-athletes explore the intersectionality of their identities. Furthermore, counselors can provide support and encourage student-athletes to work on the development of other parts of their identity, which will be especially helpful when student-athletes reach points in their lives where they have to transition into different roles.

By considering that a student-athlete's readiness to seek mental health support depends on their individual and unique needs, mental health counselors could collaborate with athletic trainers, coaches, athletic advisors, and parents. They could offer workshops and webinars in order to raise awareness and provide education about the intricacies of student-athletes responsibilities, challenges, and impact on identities. Similarly, workshops and webinars could be provided to student-athletes and teams by addressing self-care, anxiety, pressure, and other topics with emphasis on portraying the connection between various areas of life on athletic performance or even describing the process of physical injury and psychological recovery from it.

Lastly, considering that student-athletes utilize a concerning amount of painkillers as a form of coping with pain and this leads to concern for potential abuse or dependence, addictions counselors or counselors with specialization in substance abuse ought to be prepared to work with this population. Both addictions counselors and counselors with substance abuse specialties ought to be aware of the unhealthy coping skills that may lead to more serious substance abuse issues. Additionally, all mental health professionals working with student-athletes should screen

for frequency and amount of painkiller use, and either address those issues or make appropriate referrals.

### *Implications for Counselor Educators*

There may be some overlap between counselors and counselor educators, however, it is important to provide implications for both. Before addressing specific implications for either, the researcher feels it is important to discuss the resources available on a systemic level. As a counseling professional it is important to note that despite the American Counseling Association (ACA) offering 18 chartered divisions, there is no division for Sports Counseling. The American Psychological Association (APA) has among its 54 divisions, a Division 47 - Society for Sport, Exercise, and Performance Psychology. The ACA does offer a Sports Counseling Interest Network, but without structured leadership that majority of divisions have. This supports the researcher's call to advocate and advance the counseling profession and counselors' skills and abilities to serve athletic populations. As it relates to the current study, the American College of Sports Medicine (ACSM, 2006, 2007) has on several occasions noted the lack of evidence-based methods that can be utilized to assess an athlete's psychological readiness to return to athletic participation.

Although the ACSM is a separate field from counseling and psychology, it is alarming that many student-athletes suffer from injuries that impact psychological functioning, and we do not yet have evidence-based methods to help facilitate psychological readiness for student-athletes to return to athletic participation. Therefore, one of the first implications for counselor educators is to become involved in more research with athletic and student-athlete populations. This type of involvement may help advance the field by developing evidence-based practices and methods to provide appropriate support.

Another implication for counselor educators is to create a separate course for Sport and Exercise Counseling, which could be offered as an elective. However, in an attempt to provide a more comprehensive approach to student-athlete issues, this course could offer more detail about all athletic populations and unique set of challenges they face, as well as provide counselors in training with appropriate skills, tools, and theoretical foundation necessary to provide quality care. Additionally, although a controversial thought, which may evoke rejection from some scholars, the researcher believes that athletic populations deserve to be addressed in multicultural classes. Expanding multicultural textbooks by including a chapter in athletic population as a diverse population with a unique set of challenges may present itself as an expensive task, however one that is necessary for counselors in training to become aware of, in order to provide culturally competent services. Considering that changing textbooks used in multicultural classes would be a lengthy and strenuous process, counselor educators could include a class or at least part of a class during the course in which they address the athletic population and provide counseling students with additional resources, such as journal articles to read to get familiar with the topic and population. Counselors in training end up working in various settings and even though their interest may not be to work with athletic populations, they do not have full control over who the clients are who walk into their offices nor what kind of athletic activities they engage in. Furthermore, in order to address the thought that multicultural textbooks are meant to teach about marginalized populations, it is important to keep in mind that student-athletes may be and often are a part of other populations that are considered marginalized (i.e. race, ethnicity, gender identity, sexuality, etc.) and they experience intersectionality of their identities.

Lastly, counselor educators may also use their advocacy and social justice skills to address inequalities between men and women sports within the NCAA, the way women student-

athletes are treated in comparison to men student-athletes, and to advocate for increased mental health support among all student-athletes at the collegiate level.

### **Limitations of the Study**

Several limitations ought to be discussed pertaining to this study. First, one of the major limitations of this study was its small sample size. Although qualitative research provides in-depth descriptions of participants' experiences, it is important to emphasize that it does not aim to generalize the findings. Participants in this study were all women track and field athletes with the majority of the participants attending the same Division I university, however, these findings should be interpreted within its context. The second limitation is in regards to the diversity of the sample. Although there was some diversity in regards to race, the sample of neither Caucasian nor African American participants was not large enough to make meaningful differentiation between the two races. Future research may focus on exploring other racial minorities to produce a more inclusive account of the training and competing through pain and injury experience. Third, the use of a purposeful convenience sample in this study may not encapsulate the experiences of other women track and field student-athletes from either larger or smaller Division I universities nor from universities that belong to Division II or III. Fourth, previous relationships between the majority of participants and the researcher may be considered as a limitation that may have contributed to some participants withholding or oversharing about their experiences of training and competing with injury. Additionally, the researcher's race (white) might have been a limitation as well. Particularly in interviews with African American participants, as this has been an observation from another study researcher was involved with and by taking into consideration participants' sparse talk about the impact of race on their experiences. Lastly, the researcher's personal experiences of training and competing through pain

and injury as a Division I track and field student-athlete could be considered a limitation, although the researcher implemented several verification methods to ensure the credibility and trustworthiness of the data.

### **Recommendations for Future Research**

Based on this study's findings, the researcher offers several suggestions for future research. The first recommendation is to further explore the relationship between women track and field student-athletes and their coaches and investigate factors that support or hinder trusting and collaborative working relationships between student-athletes and coaches. Although the student-athlete-coach relationship was one of the major themes in this study, it was not explored in depth. However, it appears as one of the most influential and hindering factors that contribute to one's experience of training and competing through pain and injury.

A second recommendation calls for an exploration of the fluidity of student-athlete identity. In this study, the findings indicated how participants experienced challenges and transitions regarding their identity as it appeared to be caused by the experience of training and competing through pain and injury. Although the participants were asked about their gender and race identities and no in-depth account arose, the intersectionality of identities among student-athletes may be a focus of independent future research.

Another suggestion involves exploring the experiences of women student-athletes who train and compete through pain and injury but participate in different sports. As previously discussed, sport ethic may be unique to each sport and may impact one's overall experiences of training and competing through pain and injury. Furthermore, different sports may have additional components that impact or define the overall experience.

Participants in this study reported the use of painkillers consistently for prolonged periods of time. It would be interesting to explore how the use of painkillers impacts one's mental health long term, whether or not it leads to dependence, the potential use of other illicit substances, or even doping among student-athletes. Furthermore, a future inquiry could explore painkillers and the impact they have on student-athletes' healthy coping skill development.

Lastly, future research could also focus on investigating counseling professionals' needs when working with student-athlete populations. Since athletic populations are not broadly discussed in the counseling textbooks, it would be worthy of a study to explore what counselors feel like they need to help them be more competent when working with this particular population.

## **Conclusion**

The findings of this study yielded five major themes: 1) perception of pain and injury, 2) identity, 3) student-athlete – coach relationship, 4) support system, and 5) psychological impact. This research indicated that these major themes are interconnected and they all have an impact on psychological wellbeing. The integrated model contributes to understanding the data based on previously available knowledge, however, the current results also contribute to the literature by providing an in-depth description of training through pain and injury phenomenon as opposed to the injury rehabilitation process that is widely addressed in the literature. The findings further indicate that women track and field student-athletes that decided to train and compete through pain and injuries encountered identity challenges. These challenges are further impacted by the student-athlete-coach relationship, one's support system, and acceptance of the "push through the pain" mindset. This mindset was also found to be facilitated by the underlying belief that the student-athlete role is a job for which participants have been compensated. Counselors and

counselor educators are in positions to advocate for, research, and develop evidence-based practices to help women track and field student-athletes. Evidence-based practices that are more efficient and effective in navigating challenges associated with being a student-athlete, but also challenges associated with inevitable experiences with pain and injury.

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## APPENDIX A: INFORMED CONSENT



Department of Counseling  
9201 University City Boulevard, Charlotte, NC 28223-0001

### **Consent to Participate in a Research Study**

Title of the Project: Exploring Lived Experiences of Former Women Track and Field Student-athletes who Played Thorough Pain and Injury

Principal Investigator: Arna Erega, MA, LPC, CH, the University of North Carolina at Charlotte.

Faculty Advisor: Hank Harris, PhD, LPC, the University of North Carolina at Charlotte

You are invited to participate in a research study with an IRB approval number 21-0159. Participation in this research study is voluntary. The information provided is to help you decide whether or not you would like to participate. If you have any questions, please ask.

### **Important Information You Need to Know**

- The purpose of this study is to explore lived experiences of former women Track and Field college student-athletes who played through pain and injury.
- We are seeking former women Track and Field student-athletes who graduated from an NCAA institution, are citizens of the United States, have experience of playing through pain and injury and participated in Division I, II, or III Intercollegiate athletics.
- You will be asked to complete 10 question demographic questionnaire and participate in a semi-structured interview which would last between 45-60 minutes.
- During the interview process you would be asked to share some background about your athletic journey, your experience as student-athlete, your experience/s of playing through pain and injury at practice and in competition, the resources that were available to you at the time, and share some reflective thoughts you may have now looking back at your experiences.
- The interviews will be audio recorded only and after they are transcribed the recordings will be deleted.
- At the end of the interview you will be asked if you wish to review the interview transcript once completed to ensure the accuracy of your responses. You will be asked how you would like to be contacted to email you the transcript. We estimate the review of transcript may take about 30

minutes and if you wish you can provide us with the feedback regarding the accuracy of your transcribed responses. You do not need to agree to this step if you do not wish to do so.

- These questions are personal and sensitive and you might experience some mild emotional discomfort. You may choose to skip a question you do not want to answer or withdraw from the study at any time.
- Our study results may help us better understand factors that play a role in student-athletes' decision-making process to continue to play through pain and injury, factors that may play a role in student-athletes' lack of honest feedback to coaches and trainers about the level of pain they experience, and how that mentality affects student-athletes off the field.
- Please read this form and ask any questions you may have before you decide whether to participate in this research study.

### **Why are we doing this study?**

The purpose of this study is to explore lived experiences of former women Track and Field college student-athletes who played through pain and injury. The Research question guiding this study is: What are the lived experiences of former women Track and Field student-athletes who played through pain and injury during their intercollegiate career at NCAA institutions?

### **Why are you being asked to be in this research study.**

You are being asked to be in this study because you were a Track and Field student-athlete at a Division I, II, or III university, you self-report to have played through pain and/or injury during your intercollegiate career at the NCAA institution, and you identify as a women.

### **What will happen if I take part in this study?**

If you choose to participate you will complete an online survey of 10 questions and sign up for a virtual face-to-face interview which will last between 45-60 minutes. If you wish you may participate in member checking process by reviewing your interview transcript to provide feedback, this may take additional 30 minutes.

Your total time commitment if you participate in this study will approximately be about 75-105 minutes.

### **What benefits might I experience?**

There is no direct benefit for you as a result of your participation in this study, however you will have an opportunity to share your story and your experiences, which will yield data we will use to make conclusions that may contribute to changes in services offered to current student-athlete.

### **What risks might I experience?**

The questions we'll ask you are personal and may be sensitive. You might experience some mild emotional discomfort when answering these questions. We do not expect this risk to be common and you may choose to skip questions you do not want to answer.

### **How will my information be protected?**

**You will receive an email with description of the study and the link to the study's demographic questionnaire. Once you click on the link you will be prompted to read about the study purpose, potential risks and benefits, and other pertinent information. If you choose to proceed and participate in the study you will click on the button saying "I agree",**

**if you choose not to participate you can simply exit by closing the tab or your browser. To protect your privacy (identity), we will not ask for any identifiable information and you will be able to choose a pseudonym of your choice. You will be able to choose a time convenient for you to schedule the virtual interview. The virtual interviews will be audio recorded and transcribed verbatim. Any and all identifiable information will be replaced by pseudonym of your choice. After transcription, the recordings will be deleted and transcripts along with questionnaire data will be stored in a password-protected data base that can be accessed by the primary researcher. Only the researcher and the faculty advisor will have routine access to the study data. Other people with approval from the Investigator, may need to see the information we collect about you. Including people who work for UNC Charlotte and other agencies as required by law or allowed by federal regulations.**

**How will my information be used after the study is over?**

After this study is complete, study data may be shared with other researchers for use in other studies or as may be needed as part of publishing our results. The data we share will NOT include information that could identify you.

**Will I be paid for taking part in this study?**

There will be no compensation for participating in this study.

**What other choices do I have if I don't take part in this study?**

There may be other studies you may decide to participate at a later time that may address similar topic as we are.

**What are my rights if I take part in this study?**

It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer.

If you experience or present any psychological distress, you should seek counseling services. Psychology Today is a website that provides an array of resources and has a nationwide listing of counseling providers (<https://www.psychologytoday.com/us>).

**Who can answer my questions about this study and my rights as a participant?**

For questions about this research, you may contact the principal investigator Arna Erega at [aerega@uncc.edu](mailto:aerega@uncc.edu) or (803)220-6861 and/or faculty advisor Dr. Hank Harris at [hharris2@uncc.edu](mailto:hharris2@uncc.edu) or (704) 687-8971.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Office of Research Protections and Integrity at 704-687-1871 or [uncc-irb@uncc.edu](mailto:uncc-irb@uncc.edu).

**Consent to Participate**

By clicking on the “I agree” button below, you are agreeing to participate in this study. Make sure you understand what the study is about before you click the “I agree” button. You will

receive a copy of this document attached in the recruitment email for your records. If you have any questions about the study, you can contact the study team using the information provided above.

I understand what the study is about and my questions so far have been answered. I agree to take part in this study. By clicking the “I agree” button I am agreeing to take the survey.

**APPENDIX B: DEMOGRAPHIC QUESTIONNAIRE**

Exploring Lived Experiences of Former Women Track and Field Student-athletes who Played  
Thorough Pain and Injury

**DEMOGRAPHIC QUESTIONS**

1. What is your age? \_\_\_\_\_ (fill in the blank)
2. Ethnicity (or Race): How do you describe yourself? (Please select all that apply)
  - a. American Indian
  - b. Asian
  - c. Black/ African American
  - d. Hispanic/ Latinx
  - e. Native Hawaiian/ Pacific Islander
  - f. Nonresident Alien
  - g. White
  - h. 2 or more races
  - i. Other
3. How do you identify regarding your gender?
  - a. Female
  - b. Male
  - c. Trans female
  - d. Trans male
  - e. Nonbinary
  - f. Other \_\_\_\_\_ (fill in the blank)
4. In what year did you graduate from an NCAA institution? \_\_\_\_\_ (fill in the blank)
5. Your institution was part of which division:
  - a. Division I
  - b. Division II
  - c. Division III
6. In what state was your school located? \_\_\_\_\_ (fill in the blank)
7. Have you trained or competed while in pain at any point during your intercollegiate career?
  - a. Yes
  - b. No
8. Have you trained or competed while injured at any point during your intercollegiate career?
  - a. Yes
  - b. No
9. Can you recall and list some of your injuries? \_\_\_\_\_ (fill in the blank)

10. How frequently were you in pain at practice or in competition? \_\_\_\_\_ (fill in the blank)
11. How frequently were you experiencing injuries during your intercollegiate career at the NCAA institution? \_\_\_\_\_ (fill in the blank)
12. What were your main events that you trained for and competed in? \_\_\_\_\_
13. Please list the last four digits of your phone number, as that will be used by the researcher to pair you demographic data with the interview which will be completed later. \_\_\_\_\_

## APPENDIX C: SEMI-STRUCTURED INTERVIEW PROTOCOL

### EXPLORING LIVED EXPERIENCES OF FORMER WOMEN TRACK AND FIELD STUDENT-ATHLETES WHO PLAYED THROUGH PAIN AND INJURY

#### Introductory Protocol

*To facilitate my note-taking, I would like to audio record our conversations today. Before proceeding I want to make sure you have signed the consent form, if you have not I would kindly ask you to do so right now. For your information, only researchers on the project will know of the recordings, which will be destroyed after they are transcribed. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm. Thank you for your time and willingness to participate. I have planned this interview to last no longer than one hour. During this time, I have several open-ended questions that I would like us to cover.*

#### Introduction

My name is Arna Erega and I am a doctoral candidate in Counselor Education and Supervision program at the University of North Carolina at Charlotte. I am also a former student-athlete who ran hurdles at a D I school. I am very passionate about athletes so I am working on this study to help me learn more about what happens and how student-athletes are affected when they continue to actively train and compete despite experiencing pain and/or injury. You meet the criteria for this study because: a) you are a former a Track and Field student-athlete, b) you are female, c) you self-report to have played through pain and injury, and d) you have participated in NCAA intercollegiate athletics at a Division I, II, or III university. **This research project is focused on learning about lived experiences of former women Track and Field student-athletes, who played through pain and injury.** My study does not aim to evaluate your experiences. Rather, I am trying to learn more about how women student-athletes are affected and hopefully I will be able to draw some conclusions about how counselors can assist student-athletes during those times and provide appropriate support.

What are the last four digits of your phone number: \_\_\_\_\_

#### I. Interviewee Background

Warm up questions:

Tell me about your athletic journey.

Probe: How did you get involved with track and field?

What events did you participate in?

How did you choose a school you attended?

What was important to you when choosing a school?

Were you offered a scholarship or you walked on?

#### II. Student-athlete Experience

Tell me about your experience as a student-athlete in college.



Probe: Can you share about the most significant relationships you had as a student-athlete.

Was your experience as a student-athlete the way you imagined it would be?

What was important to you as a student-athlete?

Can you share about your support system?

### III. **Pain and Injury Experience in Training and Competition**

Tell me about your experience/s of training/competing through pain.

Probe: Tell me about the nature of the pain you were experiencing.

What was the pain like? Can you describe it?

On a scale of 0-10 (0=no pain, 10=unbearable) where would you rate your pain level?

What did you do or how did you cope with pain?

How were you treated at practice / in competition when you were in pain?

Tell me about your experience/s of training/ competing while injured?

Probe: Tell me about the nature of your injury.

What kind of injury was it?

Was it your first time being injured?

Who made the diagnosis of your injury and its severity?

What kind of support have you received regarding your injury?

How did you cope with the injury?

How were you treated at practice/ in competition when you were injured?

Did you experience pressure to keep training/competing despite pain or injury?

Tell me about how that pain/injury affected you.

Probe: Can you share about the cognitive (thinking) process you experienced?

Can you share about the emotional (feeling) process you experienced?

What was most the most important thing or challenge related to your injury experience?

How would you describe the difference in your thoughts/feelings during practice/competition as opposed to afterwards, if any?

If you think about a time when you were in pain or injured, can you tell me how you were treated by people surrounding you?

**Some people think pain and injury...** is defined as a self-reported pain or injury or injury determined by an athletic-trainer that a student-athlete experienced during participation in a sport related athletic activity (practice and competition) and a student-athletes self-report feeling pain in such a way that the injury required some level of mental attention during participation, caused some level of loss or change in function, which then directly affected performance, and the student-athletes engaged in a mental process to determine whether participation should be initiated and continued.

Do you think it is a good definition from your perspective?

What would you say is the definition of pain and injury based on your experience?

**IV. Identity**

(Athletic Identity) What were the most important parts of who you were or who you wanted to become during the time when you played through pain and injury?

Do you think being a woman has somehow shaped or complicated your experience with pain and injury? If so, how?

Do you think your race/ethnicity has somehow shaped or complicated your experience with pain and injury? If so, how?

**V. Use of Resources**

Tell me about resources available to you during the times you were in pain or injured.

Probe: What are your thoughts on mental health support?

What are your thoughts on use of a counselor or sport psychologist?

If you were to use a counselor, what would you like that person to be like or know?

Was there anything you wish you had access to while you were in pain or injured, if yes what?

**VI. Looking back**

Knowing what you know now, would you change anything about your experience?

If you could influence a change for current student-athletes based on your experiences pertaining to pain and injury, what would you like to see different or changed?

Tell me about lesson/s (if any) you learned from your experience of playing through pain and injury.

Is there anything else you would like to share that I haven't asked about?

*Thank you so much for your time and valuable insight you shared with me!*