

THE COMPARISON BETWEEN CHRONIC INJURIES VERSUS ACUTE INJURIES AND  
DEPRESSION SYMPTOMS IN DIVISION I AND DIVISION II COLLEGE ATHLETES

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## ABSTRACT

This study was designed to determine through a review of literature if a comparison existed between chronic injuries and acute injuries and the level of depression symptoms in Division III college athletes. Research suggested that chronic injuries that required surgery had more severe psychological effects on athletes than acute injuries (Shuer & Dietrich, 1997). The heavy amounts of stress placed on athletes could lead to a confusing and devastating rehabilitation process for those injured. A common outcome was that athletes developed symptoms of depression throughout the recovery stages (Smith & Milliner, 1994). Previous studies indicated that some symptoms might even be severe enough to lead to suicidal thoughts for athletes. This study found a relationship between chronic injuries and depression among varsity collegiate athletes at Division III universities and a difference between the psychological states of athletes who suffered from minor injuries and those who suffered from severe injuries. Based on research by Shuer & Dietrich (1997) athletes with chronic injuries that required surgical repairs were at greater risk for depression symptoms than those with acute injuries.

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## CHAPTER I

### INTRODUCTION

At the time of this study, being a collegiate athlete was much more than putting on a jersey and participating in a sport in front of screaming fans. Constant highs and lows were associated with being an athlete. Numerous practices, pure exhaustion, memorized plays, and game day elation were intrinsic to college sports. So much time and effort was put into becoming an athlete that it could easily consume one. However, what might happen if it all came to a halt? Athletes might become so focused on the sport--winning, playing well, scoring points, and being a key part of a team--that, when an injury sidelined them, athletes might feel devastated. A number of psychological factors could arise as a result of an injury, including the change in social support and a potential switch in a team role; and those could weigh heavily on the minds of injured athletes (Shuer & Dietrich, 1997).

Athletic injuries also placed an athlete into a state of unknown outcomes, which could add extra stress to the already difficult situation (Shuer & Dietrich, 1997). When an athlete sustained an injury, the goal was to return to competition as quickly as possible; but sometimes the rehabilitation process could be longer than anticipated (Christakou & Lavallee, 2009). This could change the emotions of frustration and anger that an athlete experienced during the initial stages of the injury process to confusion and depression. Setbacks might have occurred that produced those feelings, and the rehabilitation process continued (Granito, Hogan, & Varnum, 1995). Depression among injured athletes was becoming more of a common result following a serious injury (Clement, Granquist, & Arvinen-Barrow, 2013). Smith and Milliner (1994) researched the connection between chronically injured athletes and depression levels post-injury. Included in the study conducted by Smith and Milliner were five case studies of athletes who had

attempted suicide post-injury. Common factors present in all five cases were that the athletes suffered from injuries that required a surgical repair, a rehabilitation process that lasted several months up to a year, a loss in athletic ability despite extensive rehabilitation, and role replacement by another teammate due to inability to compete.

Millions of athletes sustained injuries every year within the United States (Smith & Milliner, 1995). As that number only continued to grow, a frightening consideration was that many of those athletes might have been suffering from psychological symptoms that warranted attention. Research continued to grow and explore this topic, especially at the Division I collegiate level. Results suggested that more support and knowledge of such injuries be provided for athletes. Better understanding of the psychosocial needs of injured athletes was imperative (Yang, Peek-Asa, Lowe, Heiden, & Foster, 2010). Considering that much of the research had only been completed at the Division I level, conclusions and recommendations based on this study could benefit Division III athletes.

### **Statement of the Problem**

The current study addressed the question: did a relationship exist among chronic injuries, support systems, and depression in Division I and Division II collegiate athletes?

### **Purpose of the Study**

This study aimed to create awareness of the psychological effects of chronic injuries among athletes. The information found in this study could benefit athletic trainers, coaches, and the athletes themselves. The startling facts that link chronic injuries to depression could impact individuals and provoke further research in this field.

### **Significance of the Study**

Little or no research had been done at the Division III level regarding athletes. Due to the increased number of athletic injuries, broader studies needed to be done that spanned across the spectrum of all college sports at all divisions. Chronic injuries could have lasting effects on athletes both mentally and physically (Clement & Shannon, 2011). In a wave of recent research findings surrounding football players and concussions, signs of depression, brain damage, and even fatalities were strongly linked to their college careers (Reuters, 2016). A former college football player passed away in the fall of 2015; and results of the autopsy showed signs of chronic traumatic encephalopathy (CTE), brain damage, and major depression. Researchers reported that, prior to death, the athlete experienced depression symptoms ranging from a loss of appetite to suicidal thoughts. Because of tragedies such as this, more research needed to be done involving college athletes and chronic injuries.

### **Definition of Terms**

**Chronic injuries:** Serious injuries that often require surgery to repair the damage; they can often be caused from overuse and prolonged stress to the injured area (Shuer & Dietrich, 1997).

**Post-injury depression:** Emotional state presenting with several psychological symptoms similar to those of depression, commonly occurs after an athlete is sidelined with an injury (Smith & Milliner, 1994).

**Support systems:** Important factors for assisting in the recovery process for athletes from injuries (Yang, Peek-Asa, et. Al, 2010).

### **Delimitations of the Study**

The first delimitation of this study is that only articles related to Division I and Division II colleges were reviewed in this study. At the time of this study, Division III colleges such as the universities in the Wisconsin Intercollegiate Athletic Conference (WIAC) had generally the same student population size, were drawn from the same cultural backgrounds, and were typically located in similar-size cities throughout the state of Wisconsin. The results from this study might not apply to these and other smaller Division III colleges in the country.

### **Method of Approach**

The researcher used the University of Wisconsin-Platteville online library to find articles pertaining to the topic. EBSCOhost was the only database searched. From there, the researcher used Academic Search Complete, which was a full-text database, to type in key words pertaining to the topic. Key words used in the search included: chronic injuries, college sports and depression, psychological effects of sports injuries, and depression in athletes. The key words filtered out numerous full-text articles. The researcher chose articles based on the relatedness to the topic and the publishing date.

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

#### **Introduction**

Collegiate athletes put their emotional and physical selves through demanding regimens during their careers. Due to exposure to high level competition day in and day out, athletes were more susceptible to injuries. Some of those injuries might be severe enough to sideline an athlete for an extended period of time. The feeling of sitting out and suffering an injury could be emotionally draining on an athlete and could lead to symptoms of depression or a decrease of self-esteem (Granito, et al., 1995). At-risk athletes, those with chronic injuries (such as end-of-season or end-of-career injuries, injuries requiring surgery, etc.), were found to be those with increased depression symptoms from the initial diagnosis of the injury and throughout the rehabilitation process (Shuer, 1997). Collegiate athletes were typically between the ages of 19-24, which was one of the high-risk age groups for suicide (Smith & Milliner 1994). These athletes were in need of therapy and support throughout the recovery process. What exactly was being done to help athletes who had experiences with serious injury and recovery? To what techniques and strategies did athletes respond best? Was there a common trend with injuries based on age, gender, or type of injury? According to the research that was reviewed in this study, these questions were constantly being reviewed by athletic trainers, coaching staffs, and researchers to understand the most beneficial ways to treat athletic injuries. Hundreds of surveys, questionnaires, interviews, and other informational research methods were being used to dive further into the athlete's mind, as well as the minds of those who were closest to them during the recovery process. The majority of the research conducted on this topic consisted of athletes at the

Division I level of collegiate athletics. Below are some of the general findings about Division I athletes who had gone through the rehabilitation process.

### **Comparison of Age, Sport, Gender**

According to available literature, researchers and athletic trainers often questioned if any sort of correlation existed between age, sport, and/or gender compared to the type of injury and the emotional response of the athlete. The University of Rochester Sports Medicine Section completed a study that involved a seven-year period of research on patients being treated in that department (DeHaven & Lintner 1986). Over 4,500 patients were involved in the study, with the average age being 21. The findings of this study included males having just over 80% of the injuries, with the most common sport related injury coming from football. The most common injuries for both men and women involved the knees and ankles. In 2010 a more recent study completed at a university in the Big Ten Conference showed similar results with men being treated the most for injuries (Yang, et al., 2010). No in-depth findings within that research stated any common injuries among males and females, nor was there any information on the sport causing the most injuries.

### **Psychological Effects**

As a result of sports-related injuries, research reported that athletes often felt a wide variety of emotions, most of which had negative mental impacts. A most recent study completed in 2013 involved e-mailing the Athletic Training Sport Psychology Questionnaire (ATSPQ), a self-report questionnaire, to athletic trainers who were members of the National Athletic Trainers Association, or NATA for short (Clement, et al. 2013). Over 215 athletic trainers responded by filling out the questionnaire that involved in-depth, thorough analysis of their work setting. Among the questions asked, was one that addressed the perceived psychological responses

athletes might present to the athletic trainers during rehabilitation. The most common response found was stress/anxiety, followed closely by anger. The athletic trainers concluded that the psychological responses of the athletes affected their motivation during the treatment process, as well as their mental state of mind. This trend did not appear to have changed much from the past, as an earlier study by Shuer and Dietrich (1997) had similar results. A self-report survey, the Impact of Event Scale, was administered to 280 athletes at a Division I institution to analyze their responses to chronic injuries. The study found that chronic injuries caused the most distress to athletes, especially those injuries that required surgical procedures. The results of the study led researchers to believe that psychiatric intervention was something to strongly consider for those with chronic injuries.

### **Support and Coping**

**Family and friends.** Support systems for athletes were found to be the most beneficial factors in the recovery process. Yang et al. (2010) found that social support such as support from family and friends was a major emotional boost for athletes suffering from injuries. Positive and involved social support systems were shown to lead to an increase in positive thinking, hope, and positive behavior for athletes (Lu, 2013). Prior to their injuries, athletes reported having support, but were not actively seeking it until they suffered an injury (Yang, et al. 2010). However, once the injury occurred, the support systems on which they depended most changed from the groups on which they initially relied. Athletes then turned more to athletic trainers and coaches for support.

**Athletic trainers and coaches.** Athletes reported benefiting the most from support systems that were involved with their daily routines while recovering from injuries (Clement, 2011). Athletic trainers played a large role in the recovery of the athletes and are the only

individuals who are hands-on with the injury. Coaches were largely involved in the process as well, trying to motivate and encourage their athletes to get back to the playing field. While athletic trainers and coaches had their own forms of positive inspiration for their athletes, some of the most effective psychological strategies were analyzed in a mixed-methods study involving an online survey. The Athletic Training and Sport Psychology Questionnaire (ATSPQ) that was completed by athletic trainers who were members of NATA (Clement, et al. 2013) found that the three most important and beneficial psychosocial strategies that coaches and athletic trainers used on injured athletes were keeping the athlete fully involved with the team, creating short-term goals, and mixing up the rehabilitation exercises to keep the body fresh. Athletic trainers also reported the important use of counseling and sports psychology services. Research stated that athletic training staff members must inform and continually update athletes throughout the injury and rehabilitation process and provide positive social support, as they were usually the ones with whom the athlete felt most comfortable, in whom they confided, and in whom they trusted throughout the process (Christakou & Lavalley, 2009).

**Counseling and sport psychology.** Athletic trainers reported taking full advantage of counseling and sport psychology services when available to them and the athletes (Clement, 2013). The ATSPQ study showed that nearly 40% of athletic trainers sent their athletes to counseling services, while another 30% stated that, if they had had the availability to do so, they would have. The use of counseling or sport psychology services could play a key role in the mental status of individuals; therefore, utilizing those services for athletes who were overcoming a very stressful and perhaps depressing time in their lives provided them with a positive uplift in their recovery status.

Athletic trainers were exploring this option further at the time of this study, especially for those athletes with chronic injuries. A separate study took a further look at the opportunities counseling and sport psychology services provided athletes by creating a type of plan for athletic trainers, coaches, and others involved in an athlete's recovery process to follow (Granito, Hogan, & Varnum 1995). The plan was based on results and studies in both the athletic training and sport psychology/counseling fields, and it emphasized the importance of collaboration between the two professionals. The Performance Enhancement Group created this plan and reported success with athletes who used it. It stated key components both counseling and athletic training professionals must meet in order to make the group a successful one. The sport psychology and/or counseling members were to provide the support, education, counseling services, and psychological evaluations of the athletes. Athletic training staff members were in charge of administering the physical tests, recruiting and screening of athletes, and supporting injured athletes. Together, these programs created the process of what occurred when athletes were in need of psychological treatment, as perceived by their athletic trainers and/or coaches. This resource grew in popularity for athletic trainers and was utilized whenever possible because it appeared to be absolutely benefiting the athletes and their mental statuses.

### **Division I vs. Division III Athletes**

Division I and Division III athletics were considered to be similar in some aspects, but vastly different. At the Division I level, athletes were able to receive athletic scholarships; and athletics were considered a high priority for the athletes who attended those institutions, thus, leading to a stronger emphasis on athletics at the university and potentially adding more stress to the athletes (Sturm, Feltz & Gibson 2000). Researchers posed questions comparing how Division I and Division III athletes perceived themselves at their prospective institutions in an attempt to

explore whether or not a major difference existed in the athletic identity and stress levels of two vastly diverse athletic atmospheres. Collegiate athletes in general placed athletics as a high priority in their lives, and a sudden withdrawal from that could lead to psychological problems.

This study was completed by relying heavily on literature from previous research. Research suggested that student-athletes, especially males, were frequently experiencing injuries throughout their college careers (DeHaven & Lintner, 1986). According to athletic trainers that worked closely with the injured athletes, stress and anxiety were common psychological responses athletes experienced following an injury (Clement, et al. 2013). Signs of depression were a similar result of an athletic injury and athletic trainers reported having used sport psychology services for athletes (Granito, et al. 1995). Responses to injuries might be different for athletes at the Division III level compared to those at the Division I level based on the emphasis of sports (Sturm, et al. 2000). Coping abilities might also be different among the divisions due to available resources, or the lack thereof, at both levels. The findings of this research project showed that the recovery process for athletes might vary among divisions but chronic injuries were more damaging to the psychological nature of athletes than acute injuries.

## CHAPTER 3

### CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

As athletes continue to compete at high levels of competition, their risk for injury increases. Injuries pose many problems for athletes. Research reviewed in this study indicated a relationship among chronic injuries, support systems, and depression in college athletes.

#### Conclusions

The severity of an injury plays a major role in how well the athlete handles the rehabilitation process. Researchers Shuer and Dietrich found that chronic injuries requiring surgical repairs negatively impacted athletes more than acute injuries (1997). Support systems are also very important for an athlete during a recovery process. As reported by the athletes themselves, athletic trainers, coaches, family, and friends were a few of the persons who formed crucial relationships with athletes that helped them to get through their college careers (Yang, et al. 2010). College athletes attending larger institutions such as at the Division I level typically have more opportunities and supportive sources available to them than those at lower levels. Division III athletes do not have the luxury of separate training rooms, athletic trainers that attend every practice and competition, or on-campus support resources. Therefore, the recovery and coping process of a Division III athlete may be somewhat different than a Division I athlete.

#### Recommendations

Two key questions were the impetus for the completion of this study. At the time of this study, athletes at Division I institutions were largely recruited and were most often on scholarship. If they were to get injured during sport, was more of an emphasis placed on their

recovery than on athletes at a Division III university? Were injured Division I athletes more at risk for psychological problems because of the higher athletic demands placed on them?

If available, athletic trainers or coaching personnel should seek out a sports psychologist for athletes who need extra support. Coaching staff members and athletic training personnel should be familiar with local services both on and off campus to refer athletes for extra support if needed. Research suggested that support from sports psychologists or counselors was essential to athletes who might suffer from depression due to their injured state (Granito, et al. 1995).

To continue further research within this topic, it would be beneficial to conduct studies that specifically explore the life of Division III athletes. Most of the research available in this area consists of Division I and Division II athletic institutions and their athletes. The findings of this study could vastly benefit Division III universities. In order to fully get a glimpse into the life of an athlete during a rehabilitation process, all three levels should be represented. This allows for the ability to compare and contrast what factors are beneficial to athletes. Those results could aid in the process of providing more accurate support and coping systems.

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