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Social Support in Collegiate Athletics: An Evaluation of the Efficacy of Perceived Social Support Among Injured College Athletes and its Effect Upon Well-being Throughout the Rehabilitation Process

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Social Support in Collegiate Athletics:
An Evaluation of the Efficacy of Perceived Social Support
Among Injured College Athletes and its Effect Upon
Well-being Throughout the Rehabilitation Process

By Gabriella Bores

Submitted to the Honors Program Committee
in partial fulfillment
of the requirements for University Honors Scholars

Southeastern University

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Dedication

I would like to dedicate this body of work to Dr. Gordon Miller. Your empathy and support throughout the most distressing season of my life was invaluable to me. The emotional, tangible, and listening support you provided as my professor enabled me cope with my injury and the eventual loss of my collegiate athletic career. It was your support that inspired me to conduct this research. Never stop loving and supporting your students, it impacts them more than you know.

Abstract

Athletic injuries are increasingly common at the collegiate level. These injuries not only produce physical detriments, but often elicit emotional responses as well. As a result, injured athletes are often facing increased stress and are in dire need of social support throughout the rehabilitation process. This study seeks to add to the amassing literature on the stress-buffer hypothesis and evaluates social support provided by athletic trainers, coaches, teammates, and professors and instructors for injured collegiate athletes. Qualitative findings revealed the most commonly expressed type of social support was emotional support from coaches, teammates, and professors, while tangible support was the most commonly reported type of support from athletic trainers. Overall, athletes reported disappointment and frustration to sit out from competitive competition, but generally felt support from all providers studied whose support instilled intrinsic motivation to sustain the rehabilitation process.

Key words: Social Support, Injured Athletes, Rehabilitation, Athletic Trainers, Coaches, Teammates, Professors/Instructors, Perceived Social Support

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Chapter One: Introduction and Background of the Problem

Athletic injuries are becoming increasingly common in modern society. In any given year, there are about 17 million sport injuries occurring in the U.S. alone (Heil, 1993, as cited by Bone & Fry, 2006). When athletes sustain injuries, an extensive physical rehabilitation process aims to treat physical needs so the athlete may return to health and heal properly (Christaou & Lavallee, 2009). What is often not recognized, however, are the psychological needs an athlete may possess during this time (Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004). An injury often includes severe stressors that are catalysts for emotions such as loss, fear and anxiety, and self-esteem issues (Brewer, 2010). Social support during this process may act as a buffer to these stressors (DiMatteo, 2004). Social support is defined as, “an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient” (Shumaker & Brownell, 1984, p. 11).

In the realm of college athletics, social support is increasingly necessary in order to enhance rehabilitation adherence and promote reintegration to sport (Ford, 1999; Grindstaff, Wrisberg, & Ross, 2010; Schwab Reese & Yang, 2012; Wiese-Bjornstal, 2010). Many previous empirical studies have explored the role of social support in healing and recovery, but few have evaluated its role in collegiate athletics. This research study was a pioneer effort to explore perceived social support from athletic trainers, coaches, teammates, and professors/instructors throughout the rehabilitation process. The relationship between social support and general well-being was explored as well as the specific type of social support that was relevant and helpful to the injured athlete.

Chapter 2: Literature Review

Introduction

Research on this budding topic has been developed only over the past few decades. The literature review will aim to synthesize this research and address the psychological effects of sport injury, the history of social support, along with potential sources and types of social support.

Psychological Response to Sport Injury

Current literature from sports medicine, psychology, and sports science examines injury through a biological, psychological, and sociological (biopsychosocial) framework to create an informed approach for psychological intervention, prevention and management efforts, successful recoveries, and optimal performance and health. In a study of the biopsychosocial contextualization of sport injury, Wiese-Bjornstal (2010) classified sports injuries as occurring during training or competition, necessitating medical intervention, and resulting in a loss of participation. According to Wiese-Bjornstal (2009), the etiology of sport injury encompasses the interaction between intrinsic biological and psychological characteristics with the extrinsic physical and sociocultural characteristics of the sport environment (Wiese-Bjornstal, 2009 as cited by Wiese-Bjornstal, 2010). One of the biggest psychological susceptibilities to injury supported in literature is negative life event stress (Steffen et al., 2009). After an injury occurs, the injury itself becomes another stressor in the athlete's life, which can consequently affect sense of self, identity, optimism, and burnout (Creswell & Eklund, 2006). Overall, post-injury response includes themes such as stressors, coping and adjustment, psychological and physical rehabilitation, and reintegration to sport.

Behavior that seeks social support is not uncommon, which can “ameliorate distress and aid recovery” (Hoar & Flint, 2008, p. 107). Hoar & Flint (2008) concluded psychology and socioculture contribute to sport injury risk, response, and recovery.

Brewer (2009) also addressed psychological effects of injury using a biopsychosocial approach. Similarly to Wiese-Bjornstal (2010), Brewer (2009) emphasized injury prevention and expressed psychological stress, including both positively and negatively perceived events, as having a strong association with injury occurrence. Social support was considered a coping resource that has the capacity to influence vulnerability to sport injury by buffering perceived stress in an athlete’s life (Brewer, 2009). To communicate the complexity of stress and sport injury, the author included the Stress and Injury Model (Williams, J.M. & Andersen, M.B., 1998, as cited by Brewer, 2009). Personality, history of stressors, and coping resources can influence the inciting of a sports injury and dictate the stress response and intervention strategies for the rehabilitation process. Brewer (2009) addressed the common misconception that the rehabilitation process is entirely physical. Indeed, psychological factors are an essential part of the rehabilitation process and can determine the outcome of the recovery from injury. Many athletes face decreased self-esteem, and self-confidence wavers over the course of the rehabilitation process. There is no exact formula for proper psychological intervention, as every athlete responds differently, but biofeedback, relaxation/imagery, goal setting, and self-talk have proven effective (Brewer, 2009; Johnston & Carroll, 2000; Schwab Reese, Pittsinger, & Yang, 2012).

Athletic injury often involves a loss of resources that can impact the athlete greatly. Ford & Gordon (1999) investigated resources available to injured athletes and the

prospective benefits of social support behavior during the rehabilitation process.

Hobfoll's (1998) Conservation of Resources (COR) theory was used to identify potential sources of stress in this study. This theory suggests individuals seek to acquire and maintain resources, and stress occurs when there is a perceived loss of resources. Ford and Gordon (1999) identified perceived loss of physical health, finances, mobility/independence, self-perception, achievements, and social roles as malleable resources after an athletic injury. Encouragement, reassurance, advice, maintaining involvement, personal assistance, and financial assistance were identified as prominent types of social support that reduced the stress resulting from diminished resources. Although causal relationships and generalizable conclusions were not possible in this study, the authors reasoned that injury impedes an athlete's capabilities in many areas of life. This is likely to result in a greater need for social support (Ford & Gordon, 1999).

In a study of athletes' psychological strengths and emotional responses to sport injury, Madrigal & Gill (2014) assessed psychological responses to injury in Division I female athletes. The authors explored athletes' responses in light of changes in mental toughness, hardiness, optimism, athletic identity, sport confidence, stress, rehabilitation environment, response to injury, and coping with the injury. The authors concluded athletes' level of mental toughness, hardiness, and optimism decreased from the time of injury to midway through the rehabilitation process. Common sources of stress included lack of control, uncertainty of abilities, and the fear of letting the team down. This conclusion is contradictory to Ford & Gordon (1999) who suggested loss of resources as the biggest source of stress. Also, Madrigal & Gill (2014) concluded motivation and confidence increased as athletes progressed through the rehabilitation process, which

contradicts Brewer's (2009) study in which confidence and self-esteem decreased as a result of injury. All sources revealed congruency in the conclusion that athletic injury involves psychological responses that have the capacity to influence the rehabilitation experience (Brewer, 2009; Ford & Gordon, 1999; Madrigal & Gill, 2014).

Social Support

Over time, conceptual ambiguity has emerged in the realm of social support. In 1984, Shumaker & Brownell sought to classify social support by identifying the content and functions of social support. Social support was defined as "an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient" (Shumaker & Brownell, 1984, p. 11). The primary functions of social support included health-preserving functions, gratification of needs, self-identity development, and self-esteem enrichment. There are other stress reducing functions, which include cognitive appraisal (or the interpretation of a stressor) and cognitive adaptation. The authors made the distinction that social support often occurs between affiliates of the same network. Perceived support was considered ideal when both the provider and recipient recognized the exchange as helpful. However, that is not always possible. Incongruity often occurs when the provider and recipient have different goals, when recipients are unwilling or unable to provide information about their specific needs, or when providers have a different model of support than what is fitting. The authors addressed several factors that influence the outcomes of social support, which include person-environment fit, perceptions of the exchange, resources exchanged, and short versus long term effects (Shumaker & Brownell, 1984).

There have been 122 articles published from 1948-2001 examining the effects of structural or functional social support in adherence to rehabilitation in medical settings (DiMatteo, 2004). In DiMatteo's study (2004), adherence was defined as "patient acceptance and follow-through with treatment recommendations" (p.208). Nonadherence was classified as not following through with treatment recommendations (DiMatteo, 2004). The results concluded practical support had a strong positive correlation with adherence. Patients were 3.6 times more likely to adhere to rehabilitation if practical support had been provided. Rehabilitation in adherence was also 1.35 times more likely if no emotional social support was provided. The risk of nonadherence was 1.53 times higher when little social support had been provided. The article determined more systematic empirical studies are needed in order to identify the type of social support that is valuable.

In a study by Johnston & Carroll (1998), a qualitative analysis was used to explain the role of social support for injured athletes. The data was comprised of semi-structured interviews, whereby athletes evaluated eight functional types of social support during the beginning, middle, and end of rehabilitation. These included shared social reality, which is the perception of someone helping confirm the support recipient's perspective of the world (Gottlieb, 1983); technical challenge, which is challenging a way of thinking about a task or an activity to stretch, motivate, and lead the recipient to greater creativity, excitement, and involvement (Gottlieb, 1983); technical appreciation, which is acknowledging the support recipient's efforts for the work he or she does (House, 1981); listening support, which is attending to the person without giving advice or being judgmental (Gottlieb, 1983); emotional comfort, which is providing care and

comfort (Caplan et al., 1980); material assistance, which is providing financial assistance, necessary products, or gifts (Caplan et al., 1980); and practical assistance, which is providing services such as running errands or driving the recipient somewhere (Caplan et al., 1980). The athletes ranked each type of social support twice: once for the support they actually received and again, based upon their ideal contributions of support. The results revealed a pattern of information types of support increasing over time, while emotional and practical support decreased throughout the rehabilitation process. In the beginning, informational support was offered mostly from other teammates, while in the middle of rehabilitation, it was predominantly provided from physiotherapists. The main purpose perceived by athletes regarding informational support was to denote progress in rehabilitation and improve fitness levels. The purposes for emotional support were revealed to be recognizing the severity of the injury and elucidating the athlete's thoughts and feelings. Emotional support was deemed most valuable early in rehabilitation, and the need decreased as rehabilitation progressed. Practical support was also present at the beginning, but was not received toward the middle and end of rehabilitation. The authors concluded listening support was the highest perceived and preferred type of social support at the beginning of rehabilitation, while informational support was considered valuable and present at the middle and end of rehabilitation.

The need for social support may vary throughout rehabilitation. In a study conducted by Yang et al. (2010), the association between pre-injury and post-injury social support among collegiate athletes was explored. Social support was defined as athletes' appraisal of the support that might be available to them from their social network and how satisfied they were with that support. Male and female athletes (n=256)

18 years or older who participated in NCAA Division I athletics from 13 sports were represented in the study. Social support was assessed using the Social Support Questionnaire (SSQ6) at both the pre-injury and post-injury phases. The results yielded male athletes receiving more consistent sources of social support, while females reported greater gratification with the social support they experienced. Authors also found changing patterns of social support: post-injury, athletes relied more on coaches, athletic trainers, and physicians. However, the athletes described larger satisfaction with social support received from friends, coaches, athletic trainers, and physicians at the post-injury phase.

Recently, social support has received attention in literature, seeking to inform others about the role of social support in sports injury rehabilitation. Fordsyke and Gledhill (2014) used the amassing empirical research that has been published on the topic to convey how different types of social support enhance an athlete's recovery. The authors defined social support as a "form of interpersonal connectedness which encourages the constructive expression of feelings, provides reassurance in times of doubt, and leads to improved communication and understanding" (p. 10). The article expressed the problematic experience many athletes have during rehabilitation is concerns of overall social support. This is unfortunate, as social support is effective in reducing the anguish injured athlete experience, increasing athletes' inspiration throughout the rehabilitation process and cultivating rehabilitation adherence (Brewer, 2009; Clement & Shannon, 2011; Granquist et al., 2014). The study hypothesis classified the relationship between social support and stressors using the buffering effect approach (Fordsyke & Gledhill, 2014). The buffering effect approach means social support can act

as a “buffer” against other stressors, which leads to more productive and adaptive cognitive, emotional, and behavioral responses to injury. The stress-buffering effects of social support were also identified in a study conducted by Bianco (2001). The purpose was to investigate the role of social support as a coping resource that combats stress associated with injury. In order for social support to be an effective coping resource, the article proposed it must match the demands presented by the stressor (Cutrona & Russell, 1990, as cited by Bianco, 2001). Medical professionals, teammates, and home support networks were identified as the most prominent sources of social support. Consistent with Wiese-Bjornstal (2010), the athletes in Bianco’s study identified the primary function of social support to be reducing distress, which consequently motivated them throughout the rehabilitation process. Analysis of the interviews disclosed that the injury process occurred in three distinct phases: “the injury phase, the rehabilitation phase, and the return to full activity phase” (Bianco, 2001, p. 379). As each source of social support was assessed at each phase, the authors concluded social support was needed to facilitate coping in all three phases.

A study conducted by Malinauskas (2010) investigated the associations among social support, stress, and life satisfaction in injured college athletes. The article explored the impact of injury severity on necessary social support. Major injuries generate greater perceived stress and contribute to less life satisfaction. Perceived stress and total social support also significantly added to the prediction of life satisfaction for athletes with major injuries in this study. The article suggested that the more severe an injury, the more social support is crucial to maintaining overall life satisfaction (Malinauskas, 2010).

When discussing social support, it is important to alleviate conceptual ambiguity and distinctly categorize different types of social support. In their seminal work, Rosenfeld & Rickman (1997) classified eight main types of social support used to enhance recovery. Listening support was defined as the perception that someone is listening without giving advice or being judgmental (Gottlieb, 1983). Emotional support was defined as the awareness of someone providing comfort and care, demonstrating that he or she is on the recipient's side (Burlison, 1994). Emotional challenge was defined as the perception of another individual challenging the support recipient to evaluate attitudes, values, and feelings (Pias, Hoover-Dempsey, & Wallston, 1985). Reality confirmation support was classified as the perception of someone helping confirm the support recipient's perspective of the world (Gottlieb, 1983). Task appreciation support was identified as the perception that someone is acknowledging the support recipient's efforts and is expressing appreciation for the work he or she does (House, 1981). Task challenge support was seen as someone challenging the support recipient's way of thinking about a task or an activity to stretch, motivate, and lead the recipient to greater creativity, excitement, and involvement (Gottlieb, 1983). Tangible assistance support meant providing the support recipient with financial assistance, necessary products, and/or gifts (Caplan et al., 1980). Personal assistance support was defined as providing services or help, such as running errands or driving the recipient somewhere (Caplan et al., 1980).

Potential Providers of Social Support in a Collegial Setting

Social support can be received from a variety of sources (or providers) in a collegial setting. Social support from athletic trainers (ATC's) is routinely noted as their

role facilitates a unique relationship with the injured athlete (Grandquist, Podlog, Engel, & Newland, 2014). The nature of the athlete-athletic trainer relationship is ideal for fostering social support because it often requires one-on-one attention over an extended period of time (Rich, 2000; Christakou & Lavalley, 2009; Grandquist, Podlog, Engel, & Newland, 2014). College coaches are also important providers of social support; their support has the capacity to increase voluntary commitment to sport (Robbins & Rosenfeld, 2001; Santi, Bruton, Pietrantonio, 2014). Teammates also play a critical role in providing social support as they can help facilitate cohesion and integration between the injured athlete and the rest of the team (Fabien, Crossman, & Jamieson, 2008). Lastly, university professors and instructors have the opportunity to provide social support to injured athletes in a unique way. However, the concept of professor or instructor social support has rarely been explored in literary studies.

Role of athletic trainers. Athletic trainers are common providers of social support for collegiate athletes. The nature of the athlete-athletic trainer relationship is one founded upon partnership with the athlete in order to recover from an injury from a biological and psychological perspective (Moulton, Molstad, & Turner, 1997). From a biological perspective, athletic trainers must seek to understand the athlete's injury and design an appropriate rehabilitation program tailored to each individual athlete's injury (Rich, 2000 & Christakou & Lavalley, 2009). Grandquist, Podlog, Engel & Newland (2014) conducted a study on the role of athletic trainers throughout the rehabilitation process. The authors noted athletic trainers have the responsibility to provide informational support through education on both the nature of the injury and the plan for rehabilitation (Grandquist, et al., 2014). A study by Washington-Lofgren, Westerman,

Sullivan, & Nashman (2004) also presented the importance of this education. The authors argued it was helpful for athletes to fully understand the extent of their circumstances in order to properly rehabilitate, as this education has the potential to impact rehabilitation outcomes. The athletic trainer's role often involves providing informational support through explaining the rationale for specific rehabilitation exercises and answering any questions the athlete may have about his or her rehabilitation (Grandquist, Podlog, Engel, & Newland, 2014; Moulton, Molstad, & Turner, 1997).

Fostering trust is an indispensable aspect of the athletic trainer's role in sustaining psychological recovery of an athlete's injury (Christakou & Lavalley, 2009). Athletic trainers can facilitate trust not only through proper education and communication, but also through listening and emotional support (Grandquist, Podlog, Engel, & Newland, 2014). Their role often goes beyond the prevention and care of injuries as they often employ counseling characteristics such as listening and empathizing with the athlete's situation (Moulton, Molstad, & Turner, 1997). In a study on the role of athletic trainers in counseling collegiate athletes, 79% of athletic trainers stated counseling student athletes regarding personal issues related to their injury was a necessary requirement of their position (Moulton, Molstad, & Turner, 1997). Providing this type of support is highly valuable to athletes. Robbins and Rosenfeld (2001) illustrated the value of listening support from athletic trainers in their study. The authors stated, "during rehabilitation...injured athletes perceived their athletic trainers' listening support as more influential to their well-being than support from either their head or assistant coaches" (Robbins & Rosenfeld, 2001, p. 289). Providing listening support has the capacity to

increase athletes' optimism and beliefs about rehabilitation as well as to increase the athlete's resources to cope with the injury itself (Christakou & Lavalley, 2009).

Goal setting is also an important aspect of the athletic trainer's role in providing social support and fostering rehabilitation (Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004). Collaborating with the athlete to create short term and long term goals for rehabilitation fosters social support for the athlete and facilitates recovery (Christakou & Lavalley, 2009). Realistic goals encourage athletes' optimism and expectations about the potential success of their recovery (Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004). A healthy relationship between the athlete and athletic trainer also increases an athlete's motivation to adhere to the rehabilitation program (Christakou & Lavalley, 2009). Athletes are also more likely to adhere to rehabilitation if they receive support from athletic trainers (Christakou & Lavalley, 2009; Robbins & Rosenfeld, 2001; Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004).

Adherence refers to the degree of an athlete's compliance to participation in a rehabilitation program (Christakou & Lavalley, 2009). Adherence is essential in order to ensure effective clinical rehabilitation and return-to-play outcomes (Grandquist, Podlog, Engel, & Newland, 2014). The motivation to adhere to rehabilitation can often be fostered through social support provided by the athletic trainer (Fordsyke & Gledhill, 2014).

In their study on athletes' beliefs about rehabilitation, Bone and Fry (2006) assessed the correlation between athletes' perceived social support from their Athletic Trainers (ATCs) and their views about the rehabilitation process. Fifty-seven Division I athletes who had been injured for a minimum of five consecutive days in the last twelve

months participated in the study. The Social Support Survey (SSS) was used to evaluate listening support, task appreciation, task challenge, emotional support, emotional challenge, reality confirmation, tangible assistance, and personal assistance in the rehabilitation process. The Sports Injury Rehabilitation Beliefs Survey (SIRBS) was used to measure athletes' rehabilitation beliefs and included the following 5 scales: susceptibility, treatment efficacy, self-efficacy, rehabilitation value, and severity. The results of the study revealed athletes with severe injuries were more likely to believe in their rehabilitation programs when they perceived a strong sense of social support from their ATCs.

In a study that sought to classify injured athletes' perceived satisfaction, availability, and contribution of social support throughout rehabilitation, Clement and Shannon (2011) demonstrated the strong influence of athletic trainers. Forty-nine injured athletes within two universities at the NCAA Division II and Division III level participated in this study that sought to find the most valuable source of social support. Three main sources of social support were considered: teammates, coaches, and athletic trainers. Similarly to Bone and Fry (2006), the authors utilized the Social Support Survey (SSS) to evaluate social support throughout the rehabilitation process. The results yielded athletic trainers as the most impactful source of social support, and athletes were most satisfied with listening support of all the three possible sources.

Yang et al. (2014) studied the buffering effect of social support from athletic trainers and found that social support from athletic trainers stimulated successful physical and psychological recovery for injured college athletes. The authors concluded athletes were 70% less likely to report symptoms of depression and anxiety upon completing the

rehabilitation program if athletes were satisfied with the support received from athletic trainers (Yang et al., 2014).

Role of coaches. Coaches also have the opportunity to provide social support to injured athletes. In the athletic realm, coaches and athletes have to collaborate in order to achieve common goals and be successful in their respective sports. This factor suggests coaches are in an ideal position to be supportive after an injury (Wang, Chen, & Chen Ji, 2004). Part of the coach's role is to understand athletes' views on the environment of their sport so the athlete's needs are met and a positive sport environment is in place (Malinauskas, 2008). Providing social support can cultivate that understanding.

Coaches have a tremendous amount of power and control when it comes to supporting the well being of athletes (Malinauskas, 2008). Santi, Bruton, and Pietrantonio (2014) assessed the influence of coaches as it related to sport commitment. The study revealed when an athlete felt supported by their coach, his/her voluntary commitment to the sport increased. This increased commitment level can lead to increased motivation, which in turn promotes rehabilitation adherence (Malinauskas, 2008). In a study by Granquist et al., (2014) practical implications for social support from coaches in the context of rehabilitation adherence were addressed. The authors concluded adherence could be fostered through accountability for attendance to rehabilitation and through a constructive, supportive relationship between the coach and the athletic trainer (Granquist et al., 2014). Ideally, coaches should strike a balance between discipline and support for their injured athletes (Granquist et al., 2014). Discipline can help foster adherence, but support has the possibility to enhance and encourage an athlete's self-esteem, which can also increase motivation and adherence (Malinauskas 2008).

In the aforementioned study on social support by Robbins & Rosenfeld (2001), all participants reported task appreciation, task challenge, and emotional challenge support as the three main types of support provided by a coach both before and after injury rehabilitation. However, all participants also reported they would have accepted and appreciated more support from their coaching staff after their respective injuries (Robbins & Rosenfeld, 2001). This finding is consistent with Malinauskas (2008). Coaches were perceived as providing task challenge, task appreciation, and emotional challenge support, but they did not provide listening support and emotional support (Malinauskas, 2008). However, Malinauskas (2008) uniquely found that listening and emotional support was perceived by the athlete to be more important to the athlete's wellbeing throughout rehabilitation as opposed to preinjury.

In a study on the influence of coaches' social support to injured athletes, Fabien, Crossman, and Jamieson (2008) asked athletes to rate their satisfaction with coaches and teammates on the respective type of social support, availability of the support, and the perceived contribution of the support. The results yielded greatest satisfaction in coaches' listening support and task-challenge support, while athletes reported dissatisfaction with tangible assistance and reality confirmation support. Starters (i.e. athletes that play at the start of competition and are likely to have more playing time) reported higher satisfaction with social support than non-starters, and the number of injuries negatively corresponded with the contentment of listening support from coaches. Listening support had the greatest effect on satisfaction, while tangible assistance was the least available type of social support.

At the collegiate level, an athlete's relationship with his or her coach is a top priority of his or her sports involvement (Wang, Chen, & Chen Ji, 2004). A good relationship can be fostered through an athlete's perception of social support from his or her coach. Perception of available social support has the potential to buffer the impact of stress and helps balance threats and negative experiences as a result of the injury (Malinuskas, 2008).

Role of teammates. Teammates are also prominent providers of social support to injured athletes throughout rehabilitation (Bianco, 2001; Covassin et al., 2014; Podlog, Dimmock, & Miller, 2011). Covassin et al. (2014) conducted a cross-sectional study analyzing social support among athletes with concussions and orthopedic injuries. The results suggested athletes with both concussions and orthopedic injuries relied heavily on their teammates for social support 65% of the time (Covassin et al., 2014). Socialization with teammates was also proven to be top priority for athletes at the collegiate level in the aforementioned study by Wang, Chen, and Chen Ji (2004). Social support from teammates can enhance the commitment level of athlete, which in turn increases their motivation to adhere to rehabilitation (Santi, Bruton, & Pietrantonio, 2014).

In a study on the influence of teammates' social support to injured athletes, Fabien, Crossman, and Jamieson (2008) assessed athletes' satisfaction with support post-injury. The type of social support received from teammates with greatest satisfaction was listening support, while the least satisfaction was found in tangible assistance and emotional challenge. Teammates have the power to influence injured athletes' subjective rehabilitation experience (Podlog, Dimmock, & Miller, 2011). In a study on returning to sport after injury, Podlog, Dimmock, and Miller (2011) addressed the power teammates

possess in order to prevent isolation and foster inclusion rather than estrangement. Teammates play a vital role in supporting the injured athlete as they can affirm the injured athletes and can have a positive impact on their psychological well-being (Rosenfeld & Richman, 1997). Teammates providing social support can also fulfill esteem and belonging needs of injured athletes who feel disconnected from the team (Chen, 2013). Prominent areas of social support provided by teammates include emotional support, esteem support, informational support, and tangible support both inside and outside the sport (Chen, 2013). This perceived support from teammates contributes to overall well-being and satisfaction with sport (Chen, 2013). All in all, teammates play a vital part in providing social support to athletes during the rehabilitation process (Bianco, 2001).

Role of professors/instructors. The role of professors and instructors in injured athletes' rehabilitation process has never been studied in the literature. In general, the use of social support from university faculty has not been sufficiently examined (Reeve et al., 2013). Reeve et al. (2013) studied 107 nursing students using social support to buffer stress; professors and instructors were identified as a potential social support provider. The article emphasized the potential professors and instructors have to affect the development of their students as they transition from college to their respective roles in society. The study identified stress to be a common experience in nursing students, and it noted social support was a positive coping mechanism to combat such stress. The participating students reported they used social support from their peers, significant others, and their parents more frequently than from professors or instructors. However, the article concluded students' extreme stress should motivate professors and instructors

to provide social support to their students by assisting them in developing coping strategies to ameliorate stress (Reeve et al., 2013).

In another article by Baker (1996), professors and instructors were examined as leaders within the collegial setting. The author addressed the complex roles of a professor or instructor and emphasized how their role impacted student development. Baker (1996) argued the most powerful way professors and instructors can encourage their students or “future leaders” is through formal teaching. Part of the professor’s role is to model effective leadership in their teaching that can cultivate motivation from their students. Another way professors can create motivation in their students is through the role of advising and mentoring (Baker, 1996). Baker (1996) stressed advising and mentoring has the greatest opportunity for influence. Professors have a unique opportunity for one on one teaching and instruction outside of the classroom; this can assist students in establishing goals and performing better in classes. Perhaps the most important distinction this article makes about the role of professors is they are “looked upon as ethical paragons by their students, and sources of moral strength and courage” (Baker, 1996, p. 84). Although this article does not make a direct correlation between social support from professors in the athletic realm, it can be easily inferred that some of these characteristics may also be applicable to injured athletes throughout their rehabilitation process.

The role of professors and instructors providing social support is increasingly complex because of the nature of the professor/student relationship. In a work by Jordan Del Corso and McAdams (2016), maintaining professional faculty-student relationships is discussed. The article addresses there is an inherent power difference between

professors and students, which can limit the potential availability of social support. The professor or instructor has the obligation to maintain a healthy professor-student relationship through upholding a balance of power (Jordan Del Corso & McAdams, 2016). Therefore, it is essential the professor-student relationship has clear boundaries and distance that allows professors to remain unbiased and objective in their relationships with all students. This reality may limit the amount of social support that can be provided to students, as professors are responsible to distinguish these boundaries and operate accordingly (Jordan Del Corso & McAdams, 2016).

As previously mentioned, social support from professors and instructors has received little attention in literature. However, this study will seek to explore the role of professors and instructors in providing social support to injured athletes throughout the rehabilitation process.

Social Support as Psychological Intervention

In general, there is a specific lack of research that evaluates the efficacy of psychological intervention strategies in athletic injuries. Schwab, Pittsinger, and Yang (2012) address this gap in their meta-analysis. Only six current studies (after 2000) met inclusion criteria for their study. Articles included intervention studies evaluating severely injured athletes, who were age 17 years of age or older. To be included, a study must have assessed the success of psychological interventions.. Overall, the results revealed guided imagery, goal setting, or relaxation frequently correlate with decreased negative psychological consequences, improved coping, and reduction of re-injury anxiety. The authors concluded there is a significant lack of research that evaluates the efficacy of psychological intervention strategies in athletic injuries.

The buffering effect theory of social support is a complex phenomenon that has received minimal attention in the literature in the realm of collegiate athletics. While general studies have been conducted, there is little concrete evidence concerning the most beneficial source and type of social support. The thesis will seek to explore social support in light of these limitations. Collegiate athletes will be interviewed on their respective rehabilitation process, as well as the most helpful type and source of social support. An unexplored aspect in the literature is the affect of social support from college professors or faculty members on injured athletes. The study will also seek to classify this relationship. All in all, social support is a budding concept in a collegial setting that is helpful in enhancing psychological well being through buffering stressors in the rehabilitation process. The main sources of social support are athletic trainers, coaches, and teammates, but the role of professors and instructors will also be explored.

Chapter 3: Methodology

Overview of the Study

While previous research has focused on social support provided to injured collegiate athletes by athletic trainers, coaches, and teammates, this study was a pioneer effort in examining social support from university professors and instructors. The sample was comprised of injured athletes from a small, NAIA Division I liberal arts university in Florida. Participants must have sustained injuries involving loss of participation for seven days or more sometime in the preceding twelve months. The participants in this study ranged in age from 18-22 years and were active participants in collegiate athletics. The athletes ranged from freshmen to seniors. Surveys were sent to athletes participating in a

variety of sports including baseball, basketball, cross-country, football, golf, soccer, softball, tennis, volleyball, and wrestling.

Ethical Considerations

The researcher applied for review and received approval for the research endeavor through Southeastern University's Institutional Review Board (IRB). Permission was also obtained from the university's athletic department. The university's Institutional Review Board and the Athletic Director provided written approval for the consent forms, recruitment emails, and the qualitative instrument used. All research protected confidentiality of the participants. The demographic information collected did not include identifying information such as sport played or type of injury sustained.

Design

This study was a cross-sectional design in which data was collected from athletes at one point in time. Availability sampling was used to produce a sample of 40 athletes who had sustained severe injuries, classified as a loss of participation for seven days or more in the last twelve months. The main threat to internal validity included memory recall of athletes post-injury, as inclusion criteria allowed the injury to occur up to 12 months prior to the study. A cross-sectional design was used because the research was time-sensitive upon the researcher's impending graduation. This research design is valid and will help build the limited research on professor/instructor support (Reeve et al., 2013).

Data Collection

All data were collected by the investigator and the responsible party investigator (RPI) in an on-going method that included recruitment and data collection between

November 2016 and January 2017. All participants were eligible for a raffle of a \$25 Visa gift card in order to encourage participation.

Step 1: Recruitment of participants. All current collegiate athletes (N=448) were sent recruitment letters via email. Athletes that met injury criteria were encouraged to participate. The recruitment email provided detailed information about the nature and purpose of the study, as well as the potential risks and benefits of participating in the study. The recruitment letter also emphasized voluntary participation and that all information would be kept confidential in the research process. The letter requested any questions or concerns be directed to the investigator and/or the responsible party investigator (RPI). If an athlete met criteria and consented to participation, a survey link was included in the recruitment email for participation in the study.

Step 2: Survey administration to participants. Upon opening the survey link, participants were directed to a statement of consent page, where written informed consent was obtained. If participants did not agree with the statement of consent, they were directed to a disqualification webpage that excluded them from participation in the survey. If participants agreed with the statement of consent, they were directed to the survey link for completion of the study.

Instrumentation

The investigator and RPI developed a qualitative instrument to obtain information regarding social support from athletic trainers, coaches, teammates, and professors/instructors. The questionnaire consisted of eleven items to qualitatively classify social support throughout the participants' injury rehabilitation. Specific

questions related to social support and psychological response to injury included the following:

Are you male or female?

What is your age?

What is your current year in school?

How many consecutive days of practice/competition were lost due to injury?

Have you played a sport at another university? If yes, did your injury occur at the prior university or the current university?

Describe the support you received from the athletic trainers at your university throughout the rehabilitation process.

Describe the support you received from your coaches at your university throughout the rehabilitation process?

Describe the support you received from your teammates at your university throughout the rehabilitation process?

Describe the support you received from the professors and instructors at your university?

Please describe any other type of support you received that was meaningful to you?

Discuss how you felt when you first learned the severity of your injury?

Data Analysis

The data was categorized through the qualitative method of open coding. According to Strauss and Corbin (1990), open coding “pertains specifically to the naming and categorizing of phenomena through close examination of the data...during open

coding the data are broken down into discrete parts, closely examined, compared for similarities and differences, and questions are asked about the phenomena as reflected in the data” (p. 2).

All participant responses were entered into separate word documents and the researcher thoroughly examined the data. Responses were coded according to themes or categories that emerged. After the researcher coded the data, the RPI also coded the data to establish a degree of consistency among coders and to boost inter-rater reliability. The RPI was provided a list of codes and their definitions and was asked to assign one of the codes to each response. The RPI received a PhD in Social Work and has experience reviewing data and performing qualitative analysis. Upon the second coding, the PI and RPI codes were compared and revealed 94% agreement between coders. According to Strauss and Corbin (1990), this indicates good intercoder reliability.

Research Questions

The research questions considered in conducting this research are as follows:

1. What source of social support was identified as most helpful throughout the rehabilitation process?
2. What type of social support was identified as most helpful throughout the rehabilitation process?
3. What psychological response occurs when an athlete learns the severity of an injury?

Chapter 4: Results

This chapter depicts the results of the qualitative analysis used to assess the research questions. First, the demographic variables are presented. Then, the qualitative data are described.

Demographic Characteristics

The sample contained 35 collegiate athletes who had sustained a severe injury that restricted active participation in their sport for 7 days or more sometime over the preceeding 12 months. One respondent reported he or she was injured for less than 7 days, so the individual's responses were omitted, as the individual did not meet criteria for participation. Gender of participants was evenly distributed with 50% male (n=17) and 50% (n=17) female participants. Age ranged from 18-23 years old: 50% of respondents (n=17) ranged from 18-19 years of age; 35% of respondents (n=12) were ages 20-21, and 14.7% of respondents (n=5) were ages 22-23. Participants also reported year in school: 32.35% of participants (n=11) were freshmen (0-29 credit hours); 17.65% were sophomores (30-59 credit hours) (n=6); 23.53% were juniors (60-89 credit hours) (n=8), and 26.47% were seniors (90-120+ credit hours) (n=9).

Participants also reported the number of days that were lost due to injury: 23.53% of participants (n=8) reported missing 7-9 days due to injury; 20.59% (n=7) reported missing 10-14 days due to injury. 5.88% (n=2) reported missing 15-20 days due to injury and 47.06% (n=16) identified loss of participation for 21 days or more. Most participants (94%) reported their injury and rehabilitation occurred while playing a collegiate sport at their present university. However, 6% of participants stated their injury and rehabilitation

happened while playing a collegiate sport for another university. Due to IRB restrictions, the PI was not permitted to gather demographic data pertaining to sport or type of injury.

Qualitative Results

Research Question #1

What source of social support was identified as most helpful throughout the rehabilitation process?

Research Question #2

What type of social support was identified as most helpful throughout the rehabilitation process?

To answer these research questions, participants were asked to describe the type support they received from four different sources of social support: athletic trainers, coaches, teammates, and professors at the university. Qualitative content analyses were conducted in order to classify the nature of responses.

Support from Athletic Trainers

When asked to describe the support received from athletic trainers, 30 participants responded. Two of those responses were not included in the analysis as they were too vague to be coded. Of the 28 responses, 27 were coded as “supportive” (96%). Only one response was classified as “not supportive” due to a lack of information provided. Three main subthemes emerged from the supportive category: tangible support, emotional support, and informational support.

Tangible support. This category was by far the most prevalent code. It was defined as “support in the form of personal assistance, services, or help, such as running errands or driving the recipient somewhere (Richman et al., 1993, p. 291). Fifteen of the

twenty-seven “supportive” responses (56%) were coded into this category. Responses in this category were centralized around perceived help by the athlete in ways such as “helping to get through rehab and physical therapy,” “making sure I had the ability to use different heading and icing methods,” and “helping me become stronger.” The act of conducting rehabilitation exercises was a perceived service and was thus included in this category (e.g., “received stem treatment,” “helped me rehabilitate,” and “being taken to the doctor for visits”).

Emotional support. Emotional support was defined as “the perception that the provider is acting in a caring and comforting way” (Richman et al., 1993, p. 291). Six responses (22.22%) were coded into this category. Responses generally conveyed the athletic trainers were caring, helpful, and comforting (e.g., “They truly cared about me getting better,” “Asking how I was doing, which was very reassuring,” and “Made me feel comfortable and made the injury much easier to deal with”).

Informational support. Informational support was defined according to Cohen (1990), “Provides feedback and assistance in problem solving by offering written or verbal information” (p. 283). Seven of the twenty-seven “supportive” responses (26%) fell into this category. The education associated with rehabilitation services encapsulated the nature of this category (i.e., “They spoke about what needs to be done to get back on the field,” “Letting me know what I can do,” and “Explained everything and informed me about my injury and what steps we would take to fix it”).

Support from Coaches

The role of coaches was classified similarly to that of athletic trainers, but the manner in which that support was provided was different. Again, responses were first

classified as “supportive” or “not supportive,” then further separated into distinct themes. Overall, 26 out of the 30 participants reported coaches were “supportive” (87%) of their athletes. The means in which they provided support were through emotional and tangible support. In this category, more responses were considered to be “not supportive” than the responses regarding the athletic trainer. Of the 34 participants, 32 responded to this question. Two responses were excluded from analysis, as they were too vague to be coded. Altogether, emotional and tangible supports were frequently reported.

Emotional support. As previously mentioned, emotional support was defined as “the perception that the provider is acting in a caring and comforting way” (Richman et al., 1993, p. 291). Twenty-three out of the twenty-six “supportive” responses (89%) fit into this category. Of this category, two distinct subthemes emerged to describe the manner in which coaches were providing support: checking in and encouraging healthy recovery. Checking in was defined as the act of following up or keeping up with an athlete throughout the rehabilitation process. Out of the 23 “supportive” responses, 5 fell into this category, which included efforts to maintain communication with the athlete (e.g., “My coaches would always text me and ask how I was doing and if I needed anything,” “Constantly asking how I was feeling,” and “They do keep up with me and try to encourage me”). Encouraging healthy recovery was defined as coaches motivating athletes to prioritize healing, rest, and rehabilitation before reintegrating to sport. This was the most commonly reported means of support: 14 out of the 23 “supportive” responses (61%) fell into this category. Encouraging healthy recovery meant coaches were understanding of the injury and did not rush the athlete to recover (e.g., “My coach was understanding and took precautions to make sure I was fully recovered,” “Sat me out

while injured to insure I didn't further injure myself, encouraged me to heal fully before returning to activity"). Athletes also perceived accountability from their coaches as support toward encouraging healthy recovery (e.g., "The coaches held me accountable in aspects such as being on time for therapy, and following any post-rehabilitation instructions," "Made me rehabilitate until I was healed," and "Came in the training room almost every day to see how I was doing and to encourage me to keep pushing myself").

Tangible support. Tangible support was defined as "support in the form of personal assistance, services, or help, such as running errands or driving the recipient somewhere" (Richman et al., 1993, p. 291). Of the 26 "supportive" responses, 4 (16%) were classified as providing tangible support to athletes (e.g., "They were very helpful in trying to get the help that I needed," and "She was very helpful in making sure I had everything I needed and could see the trainers at the perfect time").

Not supportive. While most responses were classified as "supportive," 3 out of the 30 total responses (10%) were coded as "not supportive." Two of those three responses (67%) were coded as inconsistent communication (e.g., "2 coaches contacted me the first day. The second day only one continued, but after that no further contact for 3 weeks from coaches," and "Little support. Some communication from assistant coach"). The other response (34%) was "none" and was thus coded as "not supportive."

Support from Teammates

Teammates were very common providers of social support for injured athletes. Of the 31 responses, 27 (87%) were classified as "supportive." The three main types of support described included emotional, tangible, and listening support. Emotional support also consisted of two subthemes: checking in and spiritual encouragement.

Emotional support. Once again, emotional support was defined as “the perception that the provider is acting in a caring and comforting way” (Richman et al., 1993, p. 291). Emotional support was the most commonly reported type of social support provided by teammates: twenty-four of the twenty-seven “supportive” responses (89%) were categorized as emotional support. The 24 responses were then coded into two distinct subthemes: checking in and spiritual encouragement. Checking in was defined as the act of following up or keeping up with an athlete throughout the rehabilitation process. Eleven out of the twenty-four responses (46%) comprised this category. Checking in provided a sense of emotional support that made athletes feel appreciated and cared for (e.g., “All of my teammates were very caring and checking up on me often,” “They would ask me how I was doing. I knew they cared,” and “The teammates constantly checked up on me and let me know what I missed”). Spiritual encouragement was another prevalent form of emotional support. It was defined as spiritual actions seeking to encourage or motivate the athlete. Four out of the twenty-four responses (17%) were categorized as spiritual encouragement. Prayer was a commonly reported form of spiritual encouragement (e.g., “My teammates were respectful and considerate...they prayed for me,” “Saying they were praying for me and encouraging me that in time I’d be better,” and “They prayed for me and motivated me again”).

Tangible support. Tangible support from teammates was also commonly reported. It was defined as “support in the form of personal assistance, services, or help, such as running errands or driving the recipient somewhere (Richman et al., 1993, p. 291). Seven out of the twenty-seven “supportive” responses (27%) were further coded as tangible support. Many responses in this category were centralized around teammates

helping injured athletes complete tasks with which they needed assistance (e.g., “My teammates were willing to help with anything I needed,” “They would help me carry things when I was on crutches and would wait to walk slow with me on the way to class,” and “They helped me with whatever I needed while I was on crutches whether it was carrying a plate or waiting with me so I wasn’t alone”). This was the second most commonly reported type of social support perceived to be helpful or beneficial by injured athletes.

Listening support. Teammates also provided listening support to athletes throughout the rehabilitation process. Listening support was simply defined as, “perceived non-judgmental listening” (Richman et al., 1993, p. 291). Three out of the twenty-seven “supportive” responses (11%) were categorized as listening support. These responses included perceived help or assistance through allowing the athlete to talk about their injury (e.g., “Anything I need they will help me with, including just talking about it and moral support” and “My closer friends on the team are supportive and try to encourage me and listen”).

Not supportive. A separate category included teammates that were not supportive. Four out of the thirty-one total responses (13%) were categorized as “not supportive,” meaning the injured athlete did not perceive the behavior as helpful or beneficial toward recovery. This theme was then broken down into two distinct subthemes: inconsistent communication and not aware. Inconsistent communication was defined as a lack of follow up, consistency, or prioritization of an athlete’s injury throughout the rehabilitation process. Three out of the four “not supportive” responses (75%) contained this category. Responses in this category were centralized around

communication issues (e.g., “Few teammates gave support, most didn’t really say anything to me in the time I was out for,” “A pat on the back basically,” and “Many of them do not communicate with me about my injury”). The other response (25%) was “not supportive” due to teammates not being aware of injury and thus unable to provide support (e.g., “Other guys didn’t even know if I was hurt or not”).

Support from Professors & Instructors

Participants were asked to describe the support received from university professors and instructors throughout the rehabilitation process. Thirty-two participants responded; twenty-nine were included for analysis as the other responses were vague or inconsistent such as “n/a” or “none.” Most responses (13 out of 29, or 45%) were coded as “supportive.” From this theme, two main subthemes emerged: supportive by providing emotional support and supportive by providing tangible support.

Emotional support. The most prevalent type of support given by professors was emotional support: 10 out of the 13 “supportive” responses (77%) involved emotional support. Emotional support encompassed the same definition as listed on page 37. This code was analyzed further and split into two distinct subsections: checking in and spiritual encouragement. Checking in was defined as following up or keeping up with an athlete’s rehabilitation process. Five out of the thirteen emotional support responses (38%) were related to checking in. Responses centered around the idea of professors staying informed with the rehabilitation process and with how the athlete was doing (e.g., “Professors kept good communication during the whole process,” “Asks frequently how everything’s going,” and “All of my professors would ask how I was doing”). Spiritual encouragement was another prevalent subtheme in this section. It was defined as

“spiritual actions seeking to encourage and motivate the athlete, such as prayer.” 3 out of the 13 responses containing emotional support (23%) made up this theme. Spiritual encouragement was demonstrated through prayer (e.g., “My professors would pray for me before class,” “Most didn’t know I was injured, but those who did prayed for me,” and “no support, except prayer if I mentioned it”).

Tangible support. Tangible support given by professors was commonly reported from the sample. Tangible support was previously defined on page 36. Of the 13 “supportive” responses, 5 (38%) were coded as tangible support. Participants’ perceived help on maintaining academics while being injured demonstrated tangible support (e.g., “Professors and instructors worked with me on my due dates for assignments, scheduled make-up dates for tests/quizzes,” “My professors allowed me to miss class when I needed treatment,” and “They were very lenient and understanding of my surgery and helped out a lot”).

Not supportive. Some responses were categorized as “not supportive,” meaning the behavior or lack thereof was perceived as not supportive to the athlete. 5 out of the 29 total responses (17%) fell into this category. Responses in this category generally included lack of support through failing to provide assistance (e.g., “I didn’t receive much support from my professors as I ended up failing a class due to missing so much time,” “They don’t give much attention, even thinking that I would be lying. They don’t even respond to my emails anymore,” and “Professors were sympathetic but not actually supportive of my recovery”).

Not aware/not needed. Two distinct themes that emerged related to professor support were that professors were not aware of the need for support and support was not

needed. These themes are interrelated but can also be considered mutually exclusive. Not aware meant professors were uninformed of the injury and thus unable to provide support. Six out of the twenty-nine responses (21%) fell into this category. Responses were related to professors not providing support because they did not know the injury occurred (e.g., “My professors didn’t know about my injury,” “My injury was during preseason so I was not going to classes yet, and “I didn’t get any support but I also never told them I was injured”). Some participants reported professor support was unnecessary, which created a separate theme in the data. Three out of the twenty-nine responses (10%) indicated support was not needed (e.g., “My injury has not been so severe that I have mentioned it. I don’t require any assistance or exceptions in classes,” “My injury wasn’t very serious and didn’t impact my performance in the classroom so my professors didn’t know”).

Other Sources of Support

Participants were also asked to describe any other sources and types of social support throughout the rehabilitation process. An overwhelming majority indicated that family was an important source of support for them. Twenty-one of the thirty-four participants responded to this question. Family encompassed 15 of the 21 total responses (71%). Most participants did not discuss the type of support family provided, but those who did elaborate on the nature of support referred to emotional support and/or checking in. Other providers of support discussed in response to this question were roommates, peers/colleagues, and campus security guards.

Research Question #3

What psychological response occurs when an athlete learns the severity of an injury?

To answer this research question, participants were asked to discuss how they felt when they first learned the severity of their injury. Responses varied across a continuum of “bummed and upset” to “depressed and distraught.” Four main themes emerged from the responses: upset to sit out, fear of career ending, questioned the nature/timing of injury, and upset due to a repeat injury.

Upset to sit out of sport. Fifteen out of thirty respondents (50%) indicated they were upset to sit out of sport. This was defined as the athlete expressing a sadness or disappointment to be unable to participate in their respective sport. The majority of participants in this category suggested the most painful part of their injury was missing out on practices and games (e.g., “I was heartbroken because I knew it would be a big process to come back to being 100%,” “I was very upset and frustrated. I don’t know many athletes who like sitting out of practice and watching their team play,” and “Upset, frustrated because it’s so little but still meant I would be out for over a week straight”).

Fear of athletic career ending. The second most widespread theme in responses involved a fear of the athletic career ending. This was defined as, “athletes expressing a fear or angst that the injury would jeopardize their future athletic career.” Five out of the thirty responses (17%) were categorized this way. This category consisted of responses concerning the state of the athlete’s future career (e.g., “I was quite upset by the news, at first I felt like my athletic career was going to be ruined by my need to rest,” “It was very sad. It took me a long time to feel any peace about the situation. I felt no hope to run again,” and “That it might jeopardize me from playing the sport again”).

Questioned nature/timing of injury. The third theme prevalent in participant responses involved athletes questioning the nature or timing of their injury. This was defined as an athlete “expressing a distinct perplexity in regards to the injury either in timing, reason, or nature.” Overall, 3 out of the 30 responses (10%) were coded into this theme. Participants expressed genuine bafflement in regards to their injury (e.g., “I didn’t understand why it happened to me,” “I was a little upset and sad about the situation because it was during the time of our challenge matches and I need my backhand to win my matches. I thought, Why now, God?” and “I felt weird because being hit by a bat is something you always hear happen but never expect it to happen to yourself”).

Upset due to repeat injury. A small percentage (7%) of participants expressed disappointment or frustration due to a repeated injury. This code was defined when an athlete “experienced the same injury in the past and expressed concern about its reoccurrence.” Participants indicated a distinct fear and frustration after experiencing a repeat injury (e.g., “I was devastated because I had went through that injury in the past” and “I was extremely fearful and nervous about how severe my injury could be. It did not turn out to be as bad as it could have been, but because I had already had surgery for the same injury, it was automatically very scary to know that I could have possibly done the same thing I did last time”).

Chapter 5: Discussion

This chapter encompasses a discussion of the results depicted in Chapter 4. The study’s strengths and limitations are also examined along with implications for future research.

Summary of Findings

Results of this study add to the empirical literature on social support for injured collegiate athletes. This research supports the stress-buffer hypothesis, suggesting social support helps injured athletes cope with the stressors of injury throughout the rehabilitation process. Qualitative findings revealed the most commonly expressed type of social support was emotional support from coaches, teammates, and professors, while tangible support was the most commonly reported type of support from athletic trainers. Findings also revealed athletes commonly feel a sense of loss after sustaining the injury, and the most prevalent emotion is being upset to sit out from athletic sport participation upon injury. This study also provided the first exploration of the unique capability professors and instructors have to provide emotional and tangible support to their student-athletes; however, sometimes they are not made aware and thus cannot provide social support.

Stress-Buffer Hypothesis

This study supports the empirical literature that suggests athletes have both physical and psychological needs as a result of injury (Hoar & Flint, 2008). The findings in this study are consistent with Brewer (2010) and Creswell and Eklund (2006), suggesting the athlete's injury itself often includes severe stressors that are catalysts for emotions such as fear and loss. However, social support is a means to successfully combat these emotional stressors as it can "ameliorate stress and aid recovery" (Hoar & Flint, 2008, p. 107).

Fordsyke and Gledhill, (2014) also suggested social support acts as a "buffer" against other stressors, which leads to more productive and adaptive responses to injury. This is called stress-buffering effect approach (Fordsyke & Gledhill 2014). Bianco (2001)

also discussed this approach and investigated social support as a coping resource to combat stress. Bianco (2001) suggested in order for social support to be an effective coping resource, it must match the demands presented by the stressor. Otherwise, the perceived support is lacking or insufficient to the athlete. This may apply to the responses categorized as “not supportive” in this research study. It is possible the provider aimed to give social support, but it did not meet the demands of the stressors in the athlete’s life.

Many responses in this study alluded to the idea of losing resources upon sustaining an injury and needing assistance as a result. This is consistent with Ford & Gordon’s (1999) research that concluded resources such as physical health, mobility/independence, self-perception, achievements, and social roles are malleable upon injury. Ford and Gordon’s (1999) reasoned sustaining an injury impedes an athlete’s capabilities in many areas of life, which is likely to result in a greater need for social support. The results from this study are congruent with Ford and Gordon’s (1999) findings and could help explain why athletes reported a great amount of emotional and tangible support to cope with their consequential loss of resources.

Several participants reported social support being an indispensable part of their recovery. The support enabled athletes to push through the process and regain strength. This substantial influence of social support used to buffer stress is consistent with Brewer’s (2009) conclusion that social support is a coping resource that has the capacity to influence vulnerability to sport injury by buffering perceived stress in an athlete’s life.

Emotional Support

Emotional support was the most widespread type of support reported by participants in this study. It was a very impactful type of support when received from any

of the four providers investigated in this study. It seemed emotional support was most highly valued throughout the entire recovery process. This is comparable to a study conducted by Caplan et al. (1980), which deemed emotional support to be the most valuable type of support early in the rehabilitation process. However, Caplan et al. (1980), concluded informational support was present and highly valuable toward the middle and end of the rehabilitation process. That conclusion was not exemplified in the current study. This could be because the PI did not clearly evaluate different stages of the rehabilitation process. Rather, the questionnaire focused on the rehabilitation process as a whole.

Some participants reported perceived emotional support through spiritual encouragement and prayer. This is likely due to the research being conducted at a faith-based institution. Because of the research setting, participants may have reported this form of support more frequently than athletes attending secular universities.

Relationships with Social Support Providers

Each provider of social support evaluated in this study had unique ways of demonstrating support to athletes through the nature of their respective relationship. Athletic trainers, coaches, teammates, and professors maintained relationships with injured athletes in different capacities. However, the findings suggest each relationship is distinctively valuable and important to an injured athlete.

An astounding 96% of respondents in this study indicated a high satisfaction of support from the athletic trainer, with the most commonly reported type of social support being tangible. This is consistent with other empirical studies suggesting the nature of the athlete-athletic trainer relationship is ideal for fostering support as it requires one-on-one

attention over the entire rehabilitation process (Rich, 2000; Christakou & Lavallee, 2009; Grandquist, Podlog, Engel, & Newland, 2014). It is generally customary for athletes to perceive high levels of support from athletic trainers and this research endeavor supported that generalization. In this study, tangible support was the most commonly reported type of social support provided by athletic trainers. This could be because athletes perceived the tangible act of providing rehabilitation as an integral form of social support for their recovery. Receiving this support assisted athletes in sustaining the longevity of the rehabilitation process and provided motivation to return to their sport. This is consistent with Christakou and Lavallee (2009) who suggested a healthy relationship between the athlete and athletic trainer increases an athlete's motivation to adhere to his/her rehabilitation program. The nature of services provided by athletic trainers could explain why athletes perceived such high levels of support from this provider.

Overall, athletes in this study perceived their coaches to be supportive throughout the rehabilitation process. Emotional support was the most commonly reported type of support provided and was demonstrated through the acts of checking in and/or encouraging healthy recovery. Many athletes indicated support from their coaches motivated them to continue the rehabilitation process and return to sport. This is consistent with other empirical literature that indicates social support from college coaches has the capacity to increase voluntary commitment to sport (Robbins & Rosenfeld, 2001; Santi, Bruton, & Pietrantonio, 2014). Respondents in this study also indicated coaches can uniquely give social support by providing accountability to athletes. Checking in and encouraging responsibility to rehabilitation was highly valuable

to athletes in this study. It was also valuable for coaches to prioritize full recovery over an athlete returning to sport. This provided a sense of genuine care for the athlete's well-being beyond the sport, which in turn motivated athletes to recover. This is consistent with a study by Malinauskas (2008) that revealed when an athlete felt supported by their coach, voluntary commitment to sport increased. This elevated commitment led to increased motivation, which in turn promoted rehabilitation adherence. Of the respondents in this study who reported coaches were not supportive, it was commonly a result of inconsistent communication, which further suggests the need for coaches to prioritize accountability through checking in with injured athletes. In essence, coaches have a tremendous amount of power and control when it comes to supporting the well-being of athletes (Malinauskas, 2008).

Respondents in this study indicated teammates also played an essential role in providing social support throughout rehabilitation. Most athletes reported teammates were highly supportive through emotional support, however tangible and listening support were also reported. This finding is consistent with Chen's (2013) study that revealed prominent sources of support provided by teammates to be emotional and tangible both inside and outside the sport. However, Chen (2013) also concluded informational support from teammates was frequently reported, which was not even mentioned by athletes in the current study. It seemed the most influential role of teammates discussed in the present study was to foster connectedness and integration with the team throughout the rehabilitation process. This is congruent with Fabien, Crossman, and Jamieson (2008) who concluded teammates play a critical role in facilitating cohesion and integration between the injured athlete and the rest of the team.

Consistent efforts to keep the athlete engaged with the team was a highly valuable type of emotional support provided to athletes in this study. Responses categorized as “not supportive” were a result of inconsistent communication efforts to uphold integration with the team. This suggests support from teammates is highly important to injured athletes.

Lastly, athletes in this study reported a unique role of professors and instructors in providing social support. Less than half of respondents reported their professors and instructors were supportive; others said the professors were not aware and/or their support was not needed. Athletes reported it was very helpful for professors and instructors to provide tangible and emotional support to related to academia upon injury. Many alluded to the professor demonstrating support through being understanding of the injury and showing a willingness to help. Professors exhibited support through a myriad of ways including checking in, allowing the student to miss class for appointments, working with the student on prospective due dates, and offering spiritual encouragement such as prayer. Spiritual encouragement is not commonly reported in empirical literature on this topic, but this is likely the result of the population sampled. The athletes in this study attend a Christian university with a substantive faith background, which explains the prevalence of professors providing spiritual support. In a secular university setting, this type of support may be far less common and possibly even discouraged. However, all professors regardless of institutional setting have the opportunity to provide different types of social support in a secular realm. Reeve et al. (2013) studied nursing students using social support to buffer stress. The authors emphasized professors should provide support through assisting students to develop coping strategies to reduce stress. However,

this type of support from professors was not identified in the current research study. Rather, a more personal one-on-one mentorship was expressed. This finding is consistent with Baker (1996) who suggested professors have the unique opportunity for one-on-one teaching and mentorship outside the classroom that can assist students in establishing goals and performing better in classes. In this instance, it is conceivable providing support and mentorship also aids collegiate athletes in their recovery process. While the nature of the professor/student athlete relationship is limited, support from professors appears to be very helpful to an athlete.

Psychological Response to Injury

The present study demonstrated athletes have strong psychological responses to injury that warrant the need for social support. The most commonly expressed emotional response was a disappointment to miss practices and games. Others were fearful of their athletic career ending, while some questioned their injury or were upset due to a repeat injury. The common response involves an underlying discouragement and disappointment, which has the potential to negatively impact the athlete's well-being. Podlog et al. (2011) discussed the psychological response to injury. The authors specifically addressed a sense of estrangement, not only from coaches and teammates, but from one's own body that negatively impacts recovery (Ermler & Thomas, 1990; Thomas & Rintala, 1989, as cited by Podlog et al., 2011). This estrangement is similar to the psychological responses reported in the present study. Athletes felt a sense of separation as the injury resulted in the cessation of a sport they love and with which they commonly identify. Podlog et al. (2011) also suggested athletes commonly wrestle with a lack of athletic identity, which was also evident in this study. Being upset to sit out of the sport

and fearful of an athletic career ending alludes to the idea of jeopardizing an athletic identity. Collegiate athletes are distinctly connected to their sport and a serious injury can be distressing (Bone & Fry, 2006). The participants in the current study indicated there is a strong negative emotional response to injury. This indicates there is a distinct need for social support for athletes in these circumstances.

Study Limitations and Strengths

There are several substantial limitations to this study that limits the generalizability of the findings. First, the availability sampling technique used to recruit participants is a significant limitation that impacts the external validity of the study (Rubin & Babbie, 2011). Although the sample consisted of both males and females representing a variety of collegiate sports, all participants were recruited from one small, NAIA Division I liberal arts university in the southeast region of the United States. This selection was based on the availability to the PI. However, the sampling technique chosen limits generalizations from the present study.

Another limitation includes the lack of demographic information provided. The PI was unable to inquire about the type of injury sustained or the sport played by the athlete due to IRB restrictions (related to HIPAA violations). Not knowing the type of injury or sport played further limits the analysis of data, as correlations between type of injury and need for support could not be inferred.

The study is also limited in its cross-sectional nature. As previously mentioned, this limits the ability to assess differing levels of support needed and provided throughout the rehabilitation process. This study also relied on self-report from injured athletes who had previously undergone rehabilitation. Potential limitations in this regard include

memory recall, social desirability bias, and random errors (Rubin & Babbie, 2011). The qualitative measurement tool in this study also warrants discussion in regards to the study's limitations. The PI created and developed this survey independently; it has not been used in prior studies. This substantially limits the generalizability of the results (Rubin & Babbie, 2011).

While this study has significant limitations, there are also strengths in this research endeavor. First, this study evaluated something unprecedented in current empirical literature: it assessed professors' and instructors' role in providing social support to injured college athletes. Generally, there is a dearth of empirical data on the topic of social support in the collegiate athletics realm. Many have assessed the same group of social support providers, but none have evaluated all four simultaneously. This is a strength of this study, as the researcher could compare types of support offered from all four providers. This study adds to the amassing literature on this topic, and offers insight for future empirical research to expand upon.

Implications for Future Research

The topic of social support has only emerged in the sports psychology realm over the past few decades. In general, more study is needed in the area of social support for injured athletes. Specifically, the role of professors and instructors as providers of social support for college athletes needs to be studied and discussed. Also, future research should be longitudinal in nature so that different types of support needed at different stages of the rehabilitation process may be discovered from all four of the aforementioned providers.

Future research studies should also gather more demographic data, specifically the type of injury sustained. This will enable the researcher to compare type of injury to the amount or type of support preferred from each provider. Future research should also include a large sample size from a variety of universities of all divisions. It should also use instrumentation that is quantitative in nature with strong internal validity. This way, correlational analyses between variables can be conducted and results may be generalizable to the entire population of collegiate athletes as a whole.

Conclusion

The knowledge base for social support in injured collegiate athletes is slowly beginning to expand. However, it is still a fairly new topic of research. This study strived to add to the literature on the topic along with assessing the role of university professors and instructors. While no specific and generalizable conclusions can be drawn, it serves as a pioneer effort to evaluate support from athletic trainers, coaches, teammates, and professors/instructors combined.

Despite the dearth of research on this subject, it is now becoming more widely accepted that athletes have significant psychological responses to injury that warrant attention and support. For this reason, it is critical for potential social support providers to recognize the type of support that the athlete perceives as most helpful throughout the recovery process. Each provider has a unique role that can help the injured athlete alleviate stress and aid recovery. Lastly, it is essential for more research to be conducted on this topic that solidifies specific needs of injured athletes upon injury and

rehabilitation, as well as the support deemed most helpful from each source at different stages of rehabilitation. The concept of social support for injured collegiate athletes is a worthy cause of continued study and research.

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