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Importance of Social Support in Athletics as it Relates to Injury Recovery and Preparedness to Return to Play

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To the Dean of the Graduate School:

We are submitting a thesis written by Haleigh Gray entitled, IMPORTANCE OF SOCIAL SUPPORT IN ATHLETICS AS IT RELATES TO INJURY RECOVERY AND PREPAREDNESS TO RETURN TO PLAY.

We recommend acceptance in partial fulfillment of the requirements for the degree of Master of Science in Sport and Fitness Administration through the Richard W. Riley College of Education.

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IMPORTANCE OF SOCIAL SUPPORT IN ATHLETICS AS IT RELATES TO INJURY RECOVERY AND PREPAREDNESS TO RETURN TO PLAY

A Thesis

Presented to the Faculty

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Abstract

Background: Recent studies have evaluated the physical problems as well as the psychological complications that arise from sport injuries. However, little research has been done on techniques to address or mitigate these psychological issues. ***Objective:*** The purpose of this study was to investigate how social support was perceived during the injury rehabilitation process and how it influenced return to play preparedness. ***Setting:*** National Collegiate Athletic Association (NCAA) Division I mid-major university. ***Participants:*** A total of 21 previously injured student-athletes participated in the study. ***Methods:*** Through this mixed method study, each student-athlete completed a validated social support survey that evaluated perceived social support provided from athletic trainers, coaches, and teammates during the rehabilitation process. Following the survey, participants had the opportunity to participate in a follow-up interview on preparedness to return to play. ***Results:*** Participants felt athletic trainers and teammates provided more social support than coaches. In addition, participants identified social support as a key factor in their return to play. ***Conclusion:*** The results appear to support the significance of social support during the injury recovery process and return to play. More emphasis needs to be put on social support to improve patient outcomes.

Keywords: mental health, rehabilitation, psychological factors, stressors, social support

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Chapter 1: Introduction

Mental health disorders are a rising crisis on college campuses (Rosenbuam & Liebert, 2015). An estimated 10-15% of young adults experience signs and symptoms of mental health illnesses, such as anxiety and depression, causing the current college students to be perceived as the sickest generation (Rosenbuam & Liebert, 2015). The transition from high school to college brings forth additional stressors that many have never experienced before (Assari & Lankarani, 2018). These increased stressors are likely the leading cause of mental health problems in this age group. Many college students are learning what it is like to live on their own and all the responsibility that comes with living away from home. Some may have a difficult course load or must worry about maintaining a certain grade point average to keep scholarships. Others will be working their way through college in order to pay back student loans. Regardless of the stressor, all college students will either find a positive or negative way of coping or have no plan at all.

With mental health issues on the rise, these issues have become increasingly problematic in the college student-athlete population. The rise in mental health issues is largely due to the additional stresses placed on student-athletes that other college students would not necessarily endure. Specifically, National Collegiate Athletic Association (NCAA) student-athletes endure many challenges as part of representing their respected colleges or universities in the athletic world. Participation in college athletics creates a huge time commitment including practices, conditioning, and competition (Sudano &

Miles, 2017). In addition to time, the physical demands to perform at such a level and be competitive can be overwhelming (Petterson & Olson, 2017). The academic aspect of being a collegiate student-athlete is oftentimes just as demanding as the preparation needed to have a successful season. Individual student athletes are under substantial pressure to positively contribute to the overall team grade point average. Sustaining an injury, whether it sets the student-athlete back a few weeks or is season/career ending, can surpass all the other every day stressors a student-athlete experiences.

Being able to compete is generally the main goal for a student-athlete so when competition is taken away, regardless of how long, it can have an impact on mental health. Oftentimes the physical injury is the focus while the psychological affects can be a complete afterthought. Research has found that social support is an important factor in addressing the psychological aspect of an injury (Yang, Peek-Asa, Lowe, Heiden, & Foster, 2010). However, there is a gap in literature between the types of social support offered by athletic trainers, coaches, and teammates and whether social support is perceived as being effective by the injured athlete during rehabilitation and return to play.

Having a better understanding of the types of social support specifically provided by these three groups may be beneficial. Also, determining if social support is currently being perceived as effective by injured student-athletes could encourage the development of a psychological plan including social support to be added to the rehabilitation protocol. The purpose of the study was to understand student-athletes' perception of social support from athletic trainers, coaches, and teammates during the rehabilitation and recovery

process as well as determining whether social support affects readiness to return to participation. The results would help determine how social support is perceived and whether social support should be considered as a pertinent part of a successful rehabilitation and return to play.

Chapter 2: Literature Review

Mental Health

Mental health can be defined as emotional, psychological, and social well-being of a person (Center for Disease Control and Prevention, 2019). Mental health impacts how a person thinks, feels, and acts. Positive mental health enables a person to accomplish multiple objectives such as coping with life stress and understanding self-worth or potential. Having a positive outlook on life enables an individual to sustain quality mental health and well-being. Specifically, in the athletic population, a positive mental health status can be key in success. A major attribute in maintaining positive mental health is resilience. Resilience is defined as the ability to physically and psychologically overcome adversity in order to maintain normal functioning levels (Fletcher & Sarkar, 2013). Resiliency is influenced by various factors depending on the individual. Some studies have highlighted personality as a determining factor (Fletcher & Sarkar, 2013). Research has also identified social support, coping skills, job satisfaction, and productivity as implications for resilience (Fletcher & Sarkar, 2013). Resilience plays a significant role in athletes' ability to endure the everyday physical and psychological strain of competing. Setbacks and adversity, such as not winning the starting position or injury, are not uncommon. However, the ability to turn these instances into something positive, can assist in maintaining stable mental status.

In addition, the Self-Determination Theory is another positive area of mental health and well-being. The Self-Determination Theory emphasizes the innate desire to acquire three basic psychological needs: autonomy, competency, and relatedness (Ryan

& Deci, 2000). Autonomy is characterized as the ability to be in control of one's own destiny. Competency is achieved by becoming proficient a certain skill or acquiring knowledge. Relatedness can be attained by developing relationships and obtaining a sense of connectedness. Each area is needed in some capacity to help maintain stable mental health and well-being (Podlog & Eklund, 2006). According to this theory, motivation assists in one's ability to attain the three basic psychological needs (Ryan & Deci, 2000). Motivation is identified as either intrinsic or extrinsic. Intrinsic motivation is the desire to perform an activity to achieve satisfaction or enjoyment (Ryan & Deci, 2000). Extrinsic motivation is dependent on external factors such as support or pressure (Ryan & Deci, 2000). While, generally, most athletes are intrinsically motivated, extrinsic motivation may be necessary to help an individual meet the basic psychological needs.

While mental health can be a positive aspect of well-being, it sometimes has negative implications. According to the Center for Disease Control and Prevention (2018), more than 50% of Americans are diagnosed with a mental illness or disorder at some point in their lifetime. Mental illness is any condition that alters a person's feelings, mood, thinking, or behavior. Some of the more common mental illnesses specifically on the college campus are depression, anxiety, suicide, eating disorders, and addiction. The National Institution of Mental Health (NIMH) (2019) investigated the prevalence of any mental health illness from mild to severe as well as the prevalence of serious mental health illnesses alone. Based on the research completed by the NIMH (2019), young

adults ages 18 to 25 were found to have the highest prevalence in suffering from any mental illness at 22.1% and serious mental illness at 5.9%.

The Stigma. The major issue impacting mental health is the stigma surrounding mental health disorders and seeking help (Talebi, Matheson, & Anisman, 2016). Stigma can be defined as a negative perception which threatens self-worth (Cheng, Wang, McDermott, Kridel, & Rislin, 2018). Stigma can be developed by one's own perception and/or society's perception. Self-stigma is an internalized perception which acknowledges negative thoughts or views of mental illness to be true (Lannin, Vogel, Brenner, Abraham, & Heath, 2016). Self-stigma damages self-esteem and self-worth. According to research by Lannin et al. (2016), society was found to be more accepting of celebrities who make their mental health status public than athletes. Multiple labels, such as weak or disturbed, have been attached to individuals who seek counseling for mental health disorders (Lannin et al., 2016). The stigma around mental health is largely due to the lack of mental health literacy (Cheng et al., 2018). Mental health literacy is the ability to understand the difference between general stress and mental health conditions. Previous research has shown that individuals with higher mental health literacy are more likely to acknowledge the symptoms of mental health disorders and seek help or encourage others to seek counseling (Cheng et al., 2018). In addition, college students must be made aware of mental health services and resources provided by the college or university. Services and information on mental health must be presented in a positive and non-threatening manner. Some studies have found that if materials reflect even a slightly threatening tone, it will deter those with self-stigma from participating (Lannin et al.,

2016). One study by Lannin et al. (2016) advised the use of the self-affirmation interventions. Self-affirmation interventions focus on positive perceptions which act as a buffer from threats to self-worth (Lannin et al., 2016). One way to create this buffer is through having an individual discuss or write about a positive personal attribute or value. The goal is to break down the stigma barrier before providing information on counseling or other psychological treatments. Addressing the stigma prior to giving someone information can create a sense of trust and assist in making the person more willing to seek help (Lannin et al., 2016).

Mental Health Illnesses. The top three mental health problems of specific concern on college campuses are anxiety, depression, and suicide (Assari & Lankarani, 2018). According to Assari and Lankarani (2018), anxiety impacted approximately 12% of college students. Anxiety is characterized as an overwhelming feeling of worry or fear (Bhujade, 2017). There are multiple types of anxiety; however, generalized anxiety disorder, social phobias and post-traumatic stress disorder are the types more commonly found in the college population (Assari & Lankarani, 2018). The second most common mental health problem experienced in the college population is depression. Depression is a mood disorder where symptoms such as loss of interest or hopelessness are experienced consistently for more than two weeks (Bhujade, 2017). An estimated 9% of college students suffer from depression (Assari & Lankarani, 2018). Suicide is the third most common mental health issue affecting college campuses. While only 0.5% of college students have completed suicide in the past year and 2% had a plan of how to complete suicide, and approximately 7% of college students have considered completing suicide

(Assari & Lankarani, 2018). These percentages may not seem very significant, but unfortunately the three conditions are subject to co-exist meaning college students will experience more than one of these mental health problems at one time. College students endure a variety of stressors that make them more susceptible to developing a mental health disorder. Specific stressors college students encounter include lifestyle changes, greater responsibility, increased academic demands, and meeting new people with different views (Bhujade, 2017). These stressors cause students to question themselves and their abilities. Identity is oftentimes challenged along with values and morals. Encountering stressors is inevitable with a transition such as going to college; however, the ability to cope with stressors determines if the individual will experience symptoms of a mental health disorder. Those lacking positive coping skills are predisposed to developing a mental health disorder.

Mental Health in College Athletes

While mental health problems such as anxiety, depression, and suicidality have been described among college students, these issues are rarely mentioned when discussed in relationship with collegiate athletics. The impact mental health problems have on student-athletes is not well understood. In comparison to statistics on young adults suffering from mental illness, approximately 20% of student-athletes have experienced depression or other mental health issues during their time competing at the collegiate level (Sudano, Collins, & Miles, 2017). Freshman are at the greatest risk of developing mental health issues due to the change in lifestyle and the difference in demands from high school to college (Sudano et al., 2017). Stressors like high physical demands, meeting

academic/athletic standards, and occurrence of injury are all factors that can play a role in the unraveling of psychological stability (Bhujade, 2017). The physical demands in high school are likely much different than those at the collegiate level. Athletes may struggle with the demand difference because even though they were the most athletic individual on their team in high school, they are now one of many talented athletes. In addition, keeping a certain academic standing is crucial for athletes to maintain eligibility status set forth by the NCAA. College classes generally require a high level of thinking which can cause added stress for those who barely achieved the acceptance requirements. The last major stressor experienced by collegiate athletes is occurrence of injury. Injuries create an unexpected stressor endured as part of participating in athletics. Most injuries occur with no warning which makes coping with this stressor more difficult. Physical demands, in addition to demands of being a college student, predispose athletes to suffering from an injury. Sustaining an injury can have a drastic impact on an athlete's ability to compete which also has an influence on psychological status.

Psychological Strategies and Treatments

There are a multitude of psychological strategies and treatments that can be used to alleviate stress and mitigate mental health disorder symptoms. Many of the methods fall into the coping strategies category. One example is mindfulness-based interventions. Mindfulness is a state of nonjudgmental open-mindedness that requires acceptance of thoughts and emotions (Petterson & Olson 2017). Mindfulness-based interventions focus on increasing ability to cope with negative thoughts and emotions rather than trying to eliminate negativity completely. The main goal of any mindfulness or acceptance-based

intervention is to maximize mental flexibility which decreases perception of stress and encourages positive emotional states (Petterson & Olson, 2017). Another coping strategy was relaxation techniques (Wiese-Bjournstal, 2010). Relaxation techniques include activities such as meditation and yoga which clears one's mind of stress and decreases muscle tension. Imagery is also utilized as a coping strategy (Wiese-Bjournstal, 2010). Imagery consists of developing a mental picture of a particular setting or experience which brings forth positive feelings like peace.

Counseling. Counseling is one of the most prevalent psychological treatments. Most college campuses have some type of counseling center and/or services available to students. In a study by Sudano and Miles (2017), 98% of student-athletes acknowledged having access to mental health care services. More than half of the student-athletes indicated the services where provided through the student counseling services. While having a sport psychologist as a full-time staff member is on the rise, some athletic administrators are reluctant to pay for services on a regular basis when other staff members could be hired (Zakrajsek, Steinfeldt, Bodey, Martin, & Zizzi, 2013). In addition, sport psychologists are hired specifically for performance-based assistance rather than for life-related issues (Barnard, 2016). Due to the stigma surrounding mental health disorders and seeking help, of the estimated 32% of college students with symptoms of a mental health disorder 64% do not seek any type of help (Nordberg, Hayes, McAleavey, Castonguay, & Locke, 2013). Not only can stigma influence the decision to seek help, but financial barriers make it difficult for individuals to seek needed counseling. While some college campuses offer free counseling services, many

still charge college students for taking advantage of counseling services. Most college counseling centers provide services at a low-cost; however, even charging $15 per session eventually adds up for those needing long-term counseling. For student-athletes, the financial situation can be slightly different. Generally, if a sport psychologist is being seen because of a sustained injury, it could potentially be covered by the university's insurance. However, if an athlete decides to seek counseling on their own, it likely will not be covered unless the coach is the one sending them to see the sport psychologist. While most universities have a policy in place for how athletic injuries and general medical illnesses are addressed, psychological issues have more of a gray area.

Social Support. Another beneficial psychological strategy is the use of social support. As defined by Clement and Shannon (2011), social support is the "exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient" (Clement and Shannon, 2011). Social support can be broken down into eight different types: listening support, emotional support, emotional challenge support, reality confirmation support, task appreciation support, task challenge support, tangible support, and personal assistance (Clement & Shannon, 2011; Bone & Fry, 2006). Listening support is when the provider listens to the recipient's problems or concerns without passing judgement or giving advice (Bone & Fry, 2006). Emotional support transpires when the provider shows empathy for the recipient. Emotional support links to emotional challenge support where the provider attempts to challenge the recipient to evaluate his or her feelings about the current situation. Another type of social support is reality confirmation support which requires

the provider to be similar or of like-mind in order to help confirm the perspective of the recipient in the situation (Bone & Fry, 2006). Task appreciation support is when the provider acknowledges the effort of the recipient. Task challenge support occurs when the provider helps challenge the recipient's way of thinking about tasks. Tangible support is the giving of financial assistance or gifts. Personal assistance is when the recipient is accommodated with services (Bone & Fry, 2006).

Previous studies have shown that social support plays a key role in recovering from a sports-related injury (DeFreese & Smith, 2014). Having a strong social support system affects how student-athletes are able to cope with the situation and handle it in a positive way. Social support has the potential to be a buffer when complications or setbacks arise (DeFreese & Smith, 2014). In addition, social support is a form of extrinsic motivation which can assist in obtaining autonomy, competency, and relatedness. Social support can be provided by multiple people. However, athletic trainers, coaches, and teammates are the closest, non-related forms of support provided to student-athletes.

Social Support from Athletic Trainers. Athletic trainers are the most involved in an injury process because they have a direct impact on every phase: injury/diagnosis, rehabilitation, and return to play (Zakrajsek, Martin, & Wrisberg, 2016). For acute injuries, the athletic trainer is typically the first to approach the injured athlete. In that moment, the athletic trainer's attitude and demeanor plays a huge role in the athlete's perception of their injury (Zakrajsek, Martin, & Wrisberg, 2016). Ultimately, the athlete wants to hear a calm voice. Once the diagnosis is determined, athletes will most likely

look specifically to the athletic trainer for an explanation of what the diagnosis means and what the treatment options are, as well as for guidance on what treatment plan best fits the situation (Yang, Schaefer, Zhang, Covassin, Ding, & Heiden, 2014). At this point, being neglected or set aside can increase the risk of depression. Throughout the rehabilitation process, athletes need feedback to encourage and motivate them especially when complications emerge. Once the process is complete and it is time for the athlete to return, having motivational reassurance and medical validation from the athletic trainer can be crucial to the athlete's success (Yang et al., 2014).

In various studies, athletic trainers were found to provide the most social support during an injury. Overall athletes acknowledged receiving more social support from athletic trainers which met their standards, was readily available, and contributed to well-being than that of other sources in the athletic department (Clement & Shannon, 2011). These findings are not surprising due to the close proximity of athletic trainers with injured athletes. Out of all eight types of social support previously discussed, athletes were most satisfied with athletic trainers' listening support. Athletes felt task-appreciation support was the most readily available, and emotional support from athletic trainers contributed the most to overall well-being (Clement & Shannon, 2011). The athletic trainer being able to contribute each type of social support is a significant precursor to psychological readiness for return to participation (Podlong, Banham, Wadey, & Hannon, 2015). Through support provided by the athletic trainer, student-athletes are able to achieve all three psychological needs if treated appropriately. Student-athletes can attain some level of autonomy by being allowed to take part in the goal

setting process. The athletic trainer is responsible for ensuring the goals made are attainable and provide tools to successfully reach the goals set. When an injured athlete can reach goals throughout the recovery and rehabilitation process, he or she is acquiring competency. Finally, by having a positive and strong relationship between the athletic trainer and the athlete, a sense of relatedness has naturally been achieved.

Social Support from Coaches/Teammates. In addition to social support from athletic trainers, injured athletes look to their team to show sympathy and encouragement (DeFreese & Smith, 2014). If an athlete is putting extensive work into their rehabilitation to return, but the team shows no interest, the athlete may question the point in even trying to return. Also having a team that not only encourages the injured athlete through the rehabilitation process but also challenges the athlete can provide that competitive edge and motivation to keep improving. Strong social support ultimately starts with the coaching staff (DeFreese & Smith, 2014). When a coach forgets about an injured athlete solely because they are unable to participate, it not only has a crippling effect on the injured athlete, but also can impact the rest of the team's perception of the situation (DeFreese & Smith, 2014).

While athletic trainers have been more highly rated in rendering social support after injury, previous research has acknowledged that coaches and teammates are still relatively high in ranking of social support specifically satisfaction with and availability of social support (Clement & Shannon, 2011). Due to coaches and teammates holding different roles, it is likely these roles predetermine the type of social support each are best

at offering. In a study by Podlog and Dionigi (2010), coaches expressed their belief that social support plays a significant role in injury recovery. The coaches also acknowledged the challenge of providing adequate support while doing their job as a coach. Coaches' jobs are highly dependent on athlete performance so when an athlete is unable to participate because of an injury, the focus is getting them back in the game. As a result, coaches more consistently provide task-challenge support (Clement & Shannon, 2011). Teammates, however, being similar in age and possibly having been through an injury before, are able to give better emotional support. Since coaches and teammates are only somewhat involved in the injury rehabilitation process, they do not necessarily comprehend the need for certain types of social support. This lack of understanding is likely why satisfaction ratings with social support are lower (Clement & Shannon, 2011). Coaches and teammates also have the opportunity to help an injured athlete attain the three basic psychological needs. Autonomy could be achieved by giving the injured athlete specific tasks allowing them to make decisions. For example, letting him or her create part of the practice plan. Coaches and teammates should be made aware of the goals that have been set for the injured athlete. Being aware of the goals enables coaches and teammates to provide encouragement for working towards these goals and allows a way for the goals to be acknowledged by the team when met. Awareness from the team of the goals that are set and attained provides a sense of not only accountability but also competency when the goals are successfully met. Relatedness can waver during injury because of the natural tendency of coaches and teammates to distance themselves from the injured athlete (Podlog & Dionigi, 2010; Podlog & Eklund, 2006). It is important for

coaches and teammates to continue to help fulfill this area regardless of the presence of an injury. While relatedness from the athletic trainer can be valuable, it will not match that of the team.

Psychological Response to Injury

An estimated 17 million sport-related injuries occur annually (Clement & Shannon, 2011). Nearly 50% of college student-athletes experienced at least one injury in their collegiate career that require being removed from participation for more than a day (Yang et al., 2014). In addition to the everyday stressors, such as time commitments and physical demands student-athletes face, enduring an injury can lead to a huge setback in sport participation. In some cases, academic standing can even be endangered if the athlete misses class due to surgery and/or appointments (Yang et al., 2014). Injuries, especially those that restrict or prevent participation for an extended period, put an excessive amount of psychological stress on the athlete suffering from the injury (Yang et al., 2014). Recovery rates vary according to the injury and the individual who sustained the injury (Bone & Fry, 2006). Previous studies have identified three main phases in which different psychological responses may be triggered throughout the injury and recovery process (Clement, Arvinen-Barrow, & Fetty, 2015). Psychological responses are classified as cognitive appraisal, emotional reaction, and behavioral response (Podlong, Heil, & Schulte, 2014). Cognitive appraisal is where an individual assesses the situation and interprets whether it presents a threat. After determining the presence or absence of a threat, the feelings expressed in response to the situation is the emotional reaction. The

behavioral response includes any action that is used to get back to homeostasis or normal (Clement, Granquist, & Arvinen-Barrow, 2013).

Phase 1: Reaction to Injury. Initially after an injury is sustained, the overall reaction to the injury is expected to be negative (Clement et al., 2015). The student-athlete's perception of the injury severity will impact cognitive appraisal which in most case is negative (Clement et al., 2015). Student-athletes experience heightened emotional responses due to uncertainty. If the athlete perceives the injury as a minor setback, they most likely will be slightly more optimistic than those who view it as a career ending injury (Clement et al., 2015). The dominate behavioral response is seeking social support. It is important for the injured athlete to know support is available regardless of the outcomes of diagnosis. After a diagnosis is made, the emotional reaction is typically determined by the actual severity of the injury in comparison with the perceived severity (Clement et al., 2015). For example, if an athlete believes their injury is severe but then the results are mild, the athlete will likely have a more positive outlook. However, in a case where the perceived and actual severity are both negative, the risk of depression and other negative outcomes become a major issue. With specific knowledge of the injury and its severity, some athletes continue with negative thoughts such as self-doubt and disappointment, while others move towards cognitive reappraisal. Cognitive reappraisal during this phase begins with understanding that there is a long recovery process ahead and acknowledging the need to be focused on returning at the appropriate time. Returning at the right time means being physically, emotionally, and mentally prepared to participate. Towards the end of this phase, student-athletes begin seeking social support

from specific people such as family, friends, team members, and sport medicine professionals (Clement et al., 2015). In the beginning, listening and emotional support are important to help the injured athlete start to cope with their situation.

Phase 2: Reaction to Rehabilitation. Once rehabilitation for the injury has begun, there are multiple cognitive appraisals, emotional reactions, and behavioral responses to the injury that impact the outcomes of how rehabilitation will progress (Podlong, Heil, & Schulte, 2014). Cognitive appraisal could take various forms from perceptions of oneself and possible benefits of injury to coping strategies (Podlong et al., 2014). Perceptions of self-esteem tend to waver following injury for many people (Podlong et al., 2014). Possible benefits of injury that an athlete may discover could be the improvement of overall character as well as increased sport appreciation, greater self-awareness, and the opportunity to explore non-sport interests (Podlong et al., 2014). Positively coping with an injury is crucial for recovery (Wiesel-Bjarnstal, 2010). Emotional reactions will vary depending on the person and change throughout rehabilitation according to successes and setbacks. Depression may still be an issue if the athlete is continuously absorbed in what happened (Sudano et al., 2017). Injury rehabilitation can cause athletes frustration mainly due to the fact that they are now struggling to do simple tasks (Clement et al., 2015). Also, during this time, it is not unusual for an athlete to experience setbacks in their rehabilitation process which causes feelings of confusion or anger making them question the process or themselves (Clement et al., 2015). Emotional responses can also be of a more positive nature. Positive emotions such as happiness, excitement, and hope are usually experienced as goals are

successfully attained and progress through the rehabilitation program is continuing (Podlong et al., 2014). Behavioral responses, like cognition and emotional responses, have the potential to be positive or negative. This type of response, when associated with injury, is linked to use of coping skills and adherence to rehabilitation (Podlong et al., 2014). Positive coping skills or lack of coping skills impact adherence to the rehabilitation plan (Podlong et al., 2014). Utilizing coping skills such as goal setting, imagery, and social support influence factors affiliated with adherence. Coping skills boost positive characteristics such as self-motivation, mental toughness, and self-confidence (Podlong et al., 2014). Attaining goals and being encouraged increases adherence behaviors; however, the lack of positive coping skills brings forth mood disturbances, decreased motivation, and fear of reinjury which reduces the student-athletes' likelihood of adhering to the rehabilitation program (Podlong et al., 2014).

According to Podlong et al., (2014) two of the most influential social factors that affected injury rehabilitation were patient-practitioner interactions and social support availability. Patient-practitioner interaction or the relationship between athletes and athletic trainers/sport physiotherapist is crucial for successful progression through an injury rehabilitation program (Podlong et al., 2014). Due to regular engagement, this relationship is naturally built; however, the more acceptance, understanding, and communication that is offered, the stronger the relationship becomes (Podlong et al., 2014). The athletic trainer must clearly express expectations in order to optimize motivation and adherence throughout the rehabilitation process. Although social support is generally offered from the patient-practitioner interaction, it is also important to have

social support from family, coaches, teammates, and other people close to the injured athlete. Throughout the injury rehabilitation process, athletes need different types of social support from different people (Podlong et al., 2014). In addition, the need for social support varied based on factors such as gender, age, and personality type. For example, studies show males report less availability of social support in comparison to females. However, in general males are expected to be more independent which also indicates they do not feel they need as much support (Podlong et al., 2014). Lack of social support hinders a student-athlete's willingness to adhere to the rehabilitation program which is detrimental to the athlete's successful return to participation.

Phase 3: Reaction to Return to Play. Cognitive appraisal during return to play focuses on the lessons learned up to this point (Clement et al., 2015). Athletes returning from an injury take this time to reflect on the injury rehabilitation process. Lessons learned from both successes and setbacks bring forth positive or negative appraisals. Positive appraisal involves making various acknowledgments such as a love for the game or the ability to overcome the challenges faced in the previous phases (Clement et al., 2015). Negative appraisals may also be present which would include overthinking about the possibility of reinjury. Cognitive appraisals, regardless of whether positive or negative, connect with the emotional responses experienced during return to play.

During the final phase, athletes experience a mix of both positive and negative emotional reactions. The excitement to return is indescribable for many student-athletes; however, fear of reinjury is just as prevalent (Clement et al., 2015). Also, the nervousness

and anxiety to not only return but to come back at the same performance level as before injury is overwhelming for most athletes (Clement et al., 2015). If an athlete is not able to return to the same performance level or at least relatively close, the disappointment can cause more difficulties with depression, anxiety, and other mental health problems.

Cognitive appraisals and emotions influence behavioral responses. During the return to play phase, the athlete's behavioral response is to be cautious while returning. After being unable to participate for an extended period of time, transitioning to playing again can naturally cause an athlete to be somewhat hesitant without even realizing the hesitation. For this reason, social support continues to be essential in the last phase. Social support impacts emotions and cognitive appraisals which in turn affects behavioral responses while returning to sport.

Psychological Readiness

Recent studies have suggested that physical readiness does not necessarily coincide with psychological readiness (Podlong, Banham, Wadley, & Hannon, 2015). Psychological readiness can be defined as being mentally and emotionally prepared for something. Occasionally, student-athletes may be physically ready to move to the next phase in rehabilitation or even return to participation after an injury. However, being physically prepared for the next step does not always mean the athlete is mentally and/or emotionally ready to transition to the next step (Podlong et at., 2015). Many athletes return to competition without being psychologically prepared to do so or without having coping skills to face the challenges that arise when returning.

Psychological readiness has been linked to post-injury level of performance, occurrence of re-injury, and presence of competitive anxiety. Research by Podlong et al., (2015) established three attributes of psychological readiness. The first is confidence in returning to sport. Confidence in returning to sport consisted of the following themes: a belief in one's injury rehabilitation program, a belief that one's former injury is completely healed, and certainty in one's performance capabilities. Precursors that impact confidence in returning to sport includes trusting rehabilitation providers, availability of social support, and achievement in clinical outcomes (Podlong et al., 2015). Another attribute of psychological readiness is realistic expectations of performance capabilities. This attribute requires the athlete to acknowledge the injury that was sustained. Some precursors identified by Podlong et al. (2015) that influence realistic expectations were accepting any post-injury limitations, patience, and effective goal setting skills. Last attribute identified is the motivation to regain previous performance level. Athletes must first understand the time needed to reach previous performance level then recognize what will motivate reaching that level. Precursors to finding this motivation are effective goal setting, boredom that arises from being injured, feeling wanted by coaches, teammates, etc., and social support (Podlong et al., 2015).

Summary

With mental health illness on the rise and the recent realization of psychological issues developing from sport injuries, treatment alterations need to be considered. While many different techniques exist in mitigating psychological issues, social support can be utilized as a simple technique to alleviate some of the psychological stress. Ultimately,

the need to focus on the psychological aspects instead of solely the physical factors of sport injury is essential. This study will seek to further the work of Clement and Shannon (2011) on perception of social support during injury rehabilitation. In addition, the study will facilitate more investigation into Podlong and Eklund's (2006) research on preparedness to return to participation.

Chapter 3: Methods

Participants

Participants in this study were NCAA Division I collegiate athletes aged between 18 to 25 years. Each participant was enrolled in a Division I mid-major university and participated in an NCAA sanctioned sport. All the athletes that participated in the study previously suffered an injury in the past two year that resulted in surgery or being removed from sport participation for a least six weeks.

Measures

Survey. The Social Support survey used was modeled after one previously found in similar research by Clement and Shannon (2011) on student-athletes in Division II and Division III universities. The survey consisted of a short demographic section including gender, sport, and year in school. The demographic section was concluded with a question about sustaining an injury requiring surgery or a least six weeks restricted from participation. Following the demographic section, was an eight section Likert-scale. The Likert-scale consisted of five points. One being the least, and five being the greatest. The eight sections represented each type of social support being evaluated: listening support, emotional support, emotional challenges support, reality confirmation support, task appreciation support, task challenge support, tangible support, and personal assistance. Each of the eight sections contained three questions about satisfaction with the eight types of social support, availability of social support, and contribution to well-being during the injury rehabilitation process. Athletic trainers, coaches, and teammates all had individual Likert-scales to grade each on satisfaction, availability, and contribution of

social support. The survey included 24 questions total which took an estimated eight minutes.

Interview. The interview questions used in this study were originally from literature on return to play after a serious injury by Podlong and Eklund (2006). The interview questions were modified to only ask about the competition phase and address more on social support as well as readiness to return to play (Podlog & Eklund, 2006). A total of four open-ended questions were asked during the interview. The order of the questions was flexible to make the interview more conversational. Additional questions like "What do you mean, or can you explain?" were utilized to clarify points being made in greater depth. The length of the interview was largely based on how much the interviewee had to say about the topic in question.

Procedures

Before recruiting any participants for the study, institutional review board approval was attained. An email was sent to the athletic director of a small, mid-major Division I university in the southeast to gain permission to do research on student-athletes. After permission was granted from the athletic director, each head coach was made aware of the study via email. The athletic trainer was then emailed information about the study as well as a cover letter with instructions and the link for the Qualtrics survey for the student-athletes. The athletic trainers were asked to send an email with the cover letter and the attached link to the Qualtrics survey to all of their student-athletes.

Each student-athlete was given approximately two months to complete the survey, and weekly reminders were sent via email. The survey required approximately eight minutes.

Once the survey was completed by the student-athletes, those who fit the inclusion criteria of being a Division I student-athlete who either had surgery or were not cleared to participate for at least six weeks were contacted about a follow-up interview. An interview with each of the student-athletes willing to participate was scheduled and conducted in private at a location on the university's campus or via phone call. During this interview, the student-athletes were asked to elaborate more on the social support they were provided during their rehabilitation process as well as how prepared they felt when returning to participation.

Data Analysis

Quantitative. Once the survey was completed, the data were entered into Statistical Package for Social Sciences (SPSS). For each of the eight types of social support three repeated measure MANOVAs were conducted. These three MANOVAs compared satisfaction, availability, and contribution of social support from three sources (athletic trainers, coaches, and teammates). Through SPSS, means and standard deviations were calculated for each type of social support and separated based on the source.

Qualitative. Audio recordings of the five interviews were transcribed verbatim and stored in a Microsoft Word 2016. Key themes were identified in each interview. The

established key themes for all interviews were cross referenced and placed into categories based on common themes.

Chapter 4: Results

A total of 93 (11 men, 81 women, and 1 not identified) NCAA Division I student-athletes participated in the demographic portion of the survey. The inclusion requirement of sustaining an injury that required surgery or at least six weeks removed from participation was met by 26 participants. Only 21 student-athletes completed the entire social support survey of which two were male, 18 were female, and one did not identify gender. After the survey, five individuals participated in the follow-up interview. The sports represented in the study were mainly team sports (basketball, lacrosse, softball, soccer, and volleyball); however, a few individual sports such as track/cross country and golf were also represented.

Social Support Satisfaction

The mean scores for social support satisfaction for each of the eight different types are presented in Table 1. Coaches, teammates, and athletic trainers were all assessed individually through a 3x8 repeated measures MANOVA. The comparison between all three sources and the satisfaction with each type of social support was not significant. Results suggested that athletes were more satisfied with social support provided by athletic trainers or teammates than coaches. When comparing across different types of social support, athletes were more satisfied with the task-challenge support received over the tangible support.

TABLE 1:

Satisfaction with Social Support						
Type of Social Support	**Coaches**		**Teammates**		**Athletic Trainers**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Emotional Support	3.60	1.39	4.35	1.10	4.10	1.12
Emotional-Challenge Support	3.60	1.23	4.00	0.97	4.15	0.99
Listening Support	3.70	1.53	4.35	0.99	4.05	1.10
Personal Assistance	3.31	1.49	4.19	0.83	4.38	0.81
Reality-Confirmation Support	3.63	1.17	4.05	0.91	4.16	0.90
Tangible Support	3.25	1.29	3.50	1.10	3.81	1.28
Task-Appreciation Support	3.71	1.45	4.06	1.03	4.24	0.97
Task-Challenge Support	3.82	1.29	4.29	0.77	4.18	1.07

Social Support Availability

The mean scores for social support availability for each of the eight different types are presented in Table 2. Coaches, teammates, and athletic trainers were all assessed individually through a 3x8 repeated measures MANOVA. The comparison between all three sources and the availability with each type of social support was not significant. Athletes identified social support from athletic trainers and teammates as being more readily available than that of coaches. In addition, personal assistance was found to be more available than tangible support.

TABLE 2:

Availability of Social Support						
Type of Social Support	**Coaches**		**Teammates**		**Athletic Trainers**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Emotional Support	3.70	1.22	4.30	0.80	4.05	1.23
Emotional-Challenge Support	3.68	1.20	4.26	0.73	4.16	0.90
Listening Support	3.80	1.20	4.40	1.00	4.10	1.12
Personal Assistance	3.88	1.09	4.44	0.81	4.31	1.01
Reality-Confirmation Support	3.71	1.21	4.24	0.90	4.18	1.07
Tangible Support	3.25	1.48	3.25	1.44	3.88	1.36
Task-Appreciation Support	3.94	1.20	4.18	1.02	4.29	0.92
Task-Challenge Support	3.82	1.24	4.24	0.90	4.18	1.07

Social Support Contribution to Overall Well-being

The mean scores for social support contribution to overall well-being for each of the eight different types are presented in Table 3. Coaches, teammates, and athletic trainers were all assessed individually through a 3x8 repeated measures MANOVA. The comparison between all three sources and the contribution of each type of social support was not significant. Results determined that athletes believed social support from athletic trainers or teammates contributed to their overall well-being more than social support

from coaches. Pairwise comparisons between the eight types of social support expressed task-appreciation support contributed more to overall well-being than tangible support.

TABLE 3:

Contribution of Social Support to Well-Being						
Type of Social Support	**Coaches**		**Teammates**		**Athletic Trainers**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Emotional Support	3.20	1.51	3.95	1.19	4.15	1.18
Emotional-Challenge Support	3.26	1.33	3.79	1.03	3.95	1.08
Listening Support	3.50	1.47	4.05	1.15	4.00	1.17
Personal Assistance	2.81	1.52	3.87	0.96	3.81	1.17
Reality-Confirmation Support	2.94	1.52	3.71	0.92	3.76	1.44
Tangible Support	2.56	1.21	2.94	1.24	3.25	1.34
Task-Appreciation Support	3.71	1.45	3.94	1.35	4.18	1.19
Task-Challenge Support	3.53	1.38	4.12	0.99	4.00	1.32

Interviews

Following the five interviews, four expected themes were identified consisting of the following: physical and mental adversity, preparedness to return, motivation to return, and perception of social support. In addition, one surprising theme expressed in a few of the interviews was self-reliance. Each category was discussed to some extent during each individual interview. Participants expressed facing physical and/or mental adversities

with the process of returning to play. Some experienced issues with their injury causing them not to feel the same as they once felt. This problem was mostly due to the injury not healing properly or side effects from surgery. As one stated:

Like I said physically like they think I have tendonitis so you know that's just caused more pain. They say it's a 6-8 month recovery. You expect to be one hundred percent at that point so that was weird expecting that and then not getting it.

The majority of the interviewees emphasized having to adjust to the fact that their body would not be completely the same as it was before the injury. The interviewees described having to be aware that of their technique because if altered it can be problematic. Even simple tasks like kneeling can cause discomfort which is difficult for many to understand. In addition to physical setbacks, mental adversity plays a significant role in return to participation. Being unable to participate in sports and having to watch your teammates play, takes a psychological toll. Sitting out for a long period of time easily causes a multitude of questions to build up in one's mind. Some athletes wonder if they will ever be able to participate again, and if so, will they play at the same level as before. As one questioned:

You always think am I going to be terrible when I come back? I'm not going to know what I'm doing?

Following an extensive rehabilitation program, the student-athlete ideally should be completely ready to return. All the preparation has been done and the physician has

cleared the athlete. When the opportunity finally arrives to return to play, the "mental jitters" as one student-athlete described it, were still prevalent. As one explained:

It was hard mentally trusting that my knee was going to still hold up or not re-injury itself since I still have like some pain.

In some cases, mental adversities cannot be overcome until they are tested, and goals are met. For example, after a previously injured athlete continues playing, they eventually do not put as much thought into the injury and become more focused on meeting their performance goals. Being able to participate once again becomes more of a habit which replaces the time that previously was spent on rehabilitation.

Another expected theme expressed in the interviews was preparedness to return to play. While most experienced some apprehension, each had a sense of confidence that the rehabilitation they completed fully prepared them to play again. Confidence is continuously built with participation. As one student-athlete conveyed:

Once I came back, I got the groove of things, and I was able to catch up. It made me relax a little. Like okay, I can actually do this.

In addition, preparedness to return was dependent on perception of the recovery process. Several emphasized not being able to focus on the injury when returning. Continuing to focus extensively on the injury and the chance of re-injury inhibits the athlete from enjoying being able to participate once again. Also, it limits the ability to achieve performance goals. One student-athlete who has endured multiple injuries, perceived injury as another part of the "athletic journey." Those who have been through an

extensive recovery process before, tend to better understand the situation and what it takes to get back to playing their respected sport. The final three themes consisting of motivation, social support, and self-reliance also influence a player's readiness to return to participation.

Motivation ranges from internal to external sources. Internally, student-athletes want to prove to themselves they are ready to compete. Towards the end of rehabilitation, athletes were generally anticipating their return and know exactly what must be done to successfully return. Most student-athletes had specific goals set for themselves upon return to participation. As one stated:

My goals are to kind of just honestly beat my own record in javelin and place at conference.

External sources of motivation more commonly came from coaches, teammates, athletic trainers, and family. Each of these also fit into the theme of perceived social support. When asked in interviews, athletic trainers and teammates were highly commended for the social support they provided. In reference to athletic trainers one explained:

You guys are like little mini therapists.

Most alluded to the fact that athletic trainers are expected to be supportive but also push them to reach their goals without pressuring them. As one stated:

She met me where I was at and but also like pushed me.

Teammates were also considered to be supportive and understanding. Most participants felt their teammates recognized their progress in the rehabilitation program and appreciated their efforts to return to sport. Social support from coaches, however, varied more athlete to athlete. Some felt their coaches were understanding and tried to assist them in any way they could. For example, a few coaches provided help with alterative workouts to enable the injured athlete to maintain cardiovascular fitness. Others felt their coaches were not as supportive as they had hoped. There were a few different reasons the injured athletes believed the coaches were not as supportive. One reason identified was the difference in gender. In one case the athlete was female and had all male coaches, so she felt like they did not know how to approach the situation and were likely afraid of upsetting her. Another reason expressed was the fact that the athlete was unable to participate, and coaches were more focused on those who could participate. One athlete commented:

I didn't even hear anything from the coaches at the beginning.

However, once the injured athletes who felt ignored by the coaches began more sport-specific drills and return to play protocols, they expressed the coaches started checking on them more often. The last reason described as to why the coaches were not as supportive was because athletes perceived coaches' support as not being readily available. One athlete discussed not specifically taking the initiative to seek out social support. Based on her description, support from athletic trainers and teammates was readily available while support from the coaches was not. Some participants emphasized

how social support specifically from teammates, athletic trainers, and family played a significant role in their return to play. Others gave themselves more credit for their return to participation.

Chapter 5: Discussion

The purpose of the study was to understand student-athletes' perception of social support from athletic trainers, coaches, and teammates during the rehabilitation and recovery process as well as determining whether social support played a role in return to participation preparedness. Based on the results four areas of discussion have been identified: gender/sport differences, types of social support, sources of social support, and impact of social support on return to play preparedness.

Gender and Sport Differences

Based on results of the study, gender appeared to be significantly different in the number of males and females willing to participate. Out of the 92 participants who disclosed their gender only 11 were male. Of the 21 who fit the inclusion criteria, two were male, and only one of those were willing to participate in the follow-up interview. In correlation with research done by Cheng et al. (2017), it was found that women were more open to seeking help or support for psychological problems than men. This is likely caused by specific male characteristics such as masculinity in addition to the stigma against seeking help (Wrisberg, Simpson, Lober, Withycombe, & Reed, 2009). However, it could be argued that this finding is simple due to the possibility that women are more willing to participate in surveys.

In addition to gender differences, there was some variation between team and individual sports. The responses of the study were predominantly more from athletes participating in team sports than those involved in individual sports. It could be inferred

that those participating in team sports have a greater sense of relatedness and a better perception of social support due the availability as well as their proximity with the team. Athletes playing individual sports tend to be more self-reliant and do not seek out support as often (Wrisberg et al., 2009).

Types of Social Support

Based on the survey results, task-appreciation support, task-challenge support, listening support, and emotional support were the most significant types of social support experienced overall. This finding closely corresponds with Clement and Shannon's (2011) affirmation that listening, emotional, task-appreciation, and reality-confirmation support contributed the most to participant's overall well-being. Throughout the interviews each of these four types of social support were specifically identified. Task-appreciation support and task-challenge support were acknowledged with the rehabilitation program as well as during return to play. Each of the injured athletes reflected on appreciating when people challenged and pushed them to achieve their goals. In addition, having support to acknowledge the work being done allowed each of the athletes to attain a certain level of competency. Injured athletes expressed the need to vent and appreciated those willing to listen which falls under the listening support category. A previous study by Clement and Shannon (2011) also indicated listening support as one of the most important types of social support. Finally, emotional support was described through allowing athletes to cry when necessary. While these four types of social support were found to be the best ranked overall, personal assistance was identified as the most readily available type of social support. Personal assistance was likely

recognized as readily available due to helping injured athletes get to and from classes or doctor appointments.

Tangible support was found to be the least significant both overall and within each of the three categories. Tangible support is defined as financial assistance or gifts. Due to financial assistance being a compliance issue within the rules of the NCAA, this likely explains the ratings being drastically less for tangible support than any other type of social support.

Sources of Social Support

According to results from both the social support survey and the interviews, athletic trainers and teammates provided the most social support overall. As previously discussed, athletic trainers are more likely to offer a significant amount of social support due to their proximity to the injury and the recovery process. However, teammates provided just as much social support and even surpassed athletic trainers in areas such as listening and emotional support based on the social support survey. Conversely, in the interviews, some participants expressed how they often vented to the athletic trainers specifically. Teammates and athletic trainers are likely ranked higher than coaches because of the role they play to the injured athlete. Teammates often take the role of friend and/or roommate; therefore, injury does not seem to significantly affect this relationship. In addition, with the presence of an injury the athlete-athletic trainer relationship tends to grow stronger. As Clement and Shannon (2011) explained, athletic trainers are acknowledged as the first line of defense when it came to injuries. A coach's

job is to prepare their athletes for competition. This statement could likely explain why injured athletes, who cannot participate, do not rank social support from coaches as high. According to the interviews, coaches struggle to change roles to accommodate injured athletes because they have to be more concerned about the athletes who can play. Perhaps, they are not sure how to address someone who is injured. In contrast to findings of this study, Clement and Shannon (2011) concluded that while athletic trainers seemed to provide the most perceived social support, teammates and coaches were still highly ranked.

Impact of Social Support on Return to Play Preparedness

Based on the results of the current study, social support improved injured athletes' attitude towards the rehabilitation process and preparedness to return to participation. As previously discussed, teammates and athletic trainers were given a great deal of credit for the social support they provided. Encouragement helped injured athletes stay motivated throughout their rehabilitation program. In addition, trust in the process and the athletic trainer enhanced injured athletes' confidence in their return to sport. The findings in the current study correspond with Podlog and Eklund's (2005) emphasis on achieving the three basic psychological needs. Social support was found to be linked to attaining relatedness by injured athletes. While most participants acknowledged how social support significantly helped them get through the entire process, some also gave themselves credit for internally motivating themselves to push through the recovery process. Therefore, some confidence was based on the injured athlete understanding what needed to be done and taking the initiative to complete the task.

Limitations

Nonetheless, this study also offers some limitations. The sample size only reflects information from a Division I university therefore it inadequately represents varying levels of competition across different divisions of the NCAA. Also, the sample size consists of a relatively small number of participants. In addition, the study assessed past injuries which might be difficult for some participants to accurately recollect what occurred during the recovery process.

While other factors can impact preparedness to return to participation, social support has a significant influence. Social support is relevant from time of injury until after competition. Injured athletes look for confirmation that they will successfully return whether it is from other individuals or from achieving specific goals, and in many cases both are necessary. Although social support from teammates and athletic trainers were ranked highly all three sources can be improved specifically the support from coaches. Ultimately, social support has a crucial role in the injury rehabilitation process and return to play. Determining how to improve social support will allow it to be better integrated into the injury recovery process which should improve recovery outcomes both physically and psychologically.

In the future, researchers should investigate the use of social support in other levels of competitions such as Division II and Division III universities. Also, different sport types like team sports versus individual sports would draw some interesting results upon examination. Researchers need to consider how to utilize specific types of social support most effectively within an injury rehabilitation plan. Essentially, future research

could work to determine the need for social support courses for the athletic department and the need to consider having a sport psychologist on staff to be available to assist student-athletes not only when injuries occur.

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Appendix A: Informed Consent Form

Researcher: Haleigh Gray

Researcher's Winthrop Position: Graduate Assistant Athletic Trainer

Title of Study: Importance of Social Support in Athletics as it Relates to Injury Recovery and Preparedness to Return to Play

You are invited to take part in a research study. Before you decide to be a part of this study, you need to understand the risks and benefits. This consent form provides information about the research study. I will be available to answer your questions and provide further explanations. If you take part in this research study, you will be asked to sign this consent form. Your decision to take part in this study is voluntary. You are free to choose whether or not you will take part in the study. If you should decide to participate, you may withdraw from the study at any time.

Purpose of the research study:

The purpose of the study is to understand student-athletes' perception of social support from athletic trainers, coaches, and teammates during injury recovery and rehabilitation as well as whether social support affects readiness to return to participation.

Procedures or methods to be used in the research study:

All student athletes will complete the demographic portion of the survey via Qualtrics. If the student athlete meets the inclusion requirements he/she will be asked to complete the rest of the social support survey. Upon completion of the entire survey, an interview either in-person or via phone call will take place to ask more specific questions about social support and preparedness to return to participation. Interviews will be voice recorded; however, responses will remain anonymous and be stored on a password locked computer.

Number of questions in the survey/questionnaire and anticipated time to complete the survey/questionnaire:

4 demographic questions with estimated time of 3 minutes, 24 social support questions with an estimated 10 minute completion time, and 5 interview questions which time will vary depending on depth of answers.

Possible Risks/Benefits from participating in the research study:

Minimal to no risks

Benefits: Understanding a better way to effectively use social support within rehabilitation and return to play. Results will allow injuries to be treated both physically and psychologically.

Right to withdraw from study:

You may withdraw at any point during the study.

Confidentiality of records or other data collected in the study:

Names will not be associated with any of the data collected. Researcher and thesis committee are the only people allowed direct access to any of the data collected.

If you have any questions, you may contact me: grayh4@winthrop.edu

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By beginning this survey, you have read the informed consent agreement, you understand what is involved, and you agree to take part in the study.

Appendix B: Survey

Social Support

Start of Block: Default Question Block

Q40 Thank you for participating in our study. Please look over the procedures and terms for consent before proceeding.
Informed consent agreement

Q1 What NCAA sanctioned sport do you play?

_____

Q2 Gender?

▼ Female (1) ... Male (2)

Q3 Year in school?

- ○ Freshman (1)
- ○ Freshman, Redshirt (2)
- ○ Sophomore (3)
- ○ Sophomore, Redshirt (4)
- ○ Junior (5)
- ○ Junior, Redshirt (6)
- ○ Senior (7)
- ○ Senior, Redshirt (8)

Q4 Have you suffered an athletic-related injury that required surgery or restricted you from participation for at least six weeks within the past two years?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If Have you suffered an athletic-related injury that required surgery or restricted you from partici... = No

Q5
Listening support: People who listen to you without giving advice or being judgmental.

In general, how satisfied were you with the overall quality of listening support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (4)	○	○	○	○	○
From your teammates (5)	○	○	○	○	○
From your athletic trainer(s) (6)	○	○	○	○	○

Q6
Listening support: People who listen to you without giving advice or being judgmental.

How difficult would it have been for you to obtain more listening support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q7
Listening support: People who listen to you without giving advice or being judgmental.

How much do you think your coaches', teammates', and/or athletic trainers' listening support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q8
Emotional support: People who comfort you and are by your side.

In general, how satisfied were you with the overall quality of emotional support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (1)	☐	☐	☐	☐	☐
From your teammates (2)	☐	☐	☐	☐	☐
From your athletic trainer(s) (3)	☐	☐	☐	☐	☐

Q10
Emotional support: People who comfort you and are by your side.

How difficult would it have been for you to obtain more emotional support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q11
Emotional support: People who comfort you and are by your side.

How much do you think your coaches', teammates', and/or athletic trainers' emotional support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q12
Emotional-challenge Support: People who challenge you to evaluate your feelings, values, and attitudes.

In general, how satisfied were you with the overall quality of emotional-challenge support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q13
Emotional-challenge Support: People who challenge you to evaluate your feelings, values, and attitudes.

How difficult would it have been for you to obtain more emotional-challenge support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q14
Emotional-challenge Support: People who challenge you to evaluate your feelings, values, and attitudes.

How much do you think your coaches', teammates', and/or athletic trainers' emotional-challenge support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q15
Reality confirmation Support: People who are similar to you and confirm your perceptions/perspectives.

In general, how satisfied were you with the overall quality of reality confirmation support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q16
Reality confirmation Support: People who are similar to you and confirm your perceptions/perspectives.

How difficult would it have been for you to obtain more reality confirmation support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q17
Reality confirmation Support: People who are similar to you and confirm your perceptions/perspectives.

How much do you think your coaches', teammates', and/or athletic trainers' reality confirmation support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q19
Task-challenge Support: People who challenge your way of thinking in order to motivate you.

In general, how satisfied were you with the overall quality of task-challenge support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (8)	○	○	○	○	○
From your teammates (9)	○	○	○	○	○
From your athletic trainer(s) (10)	○	○	○	○	○

Q20
Task-challenge Support: People who challenge your way of thinking in order to motivate you.

How difficult would it have been for you to obtain more task-challenge support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (8)	○	○	○	○	○
From your teammates (9)	○	○	○	○	○
From your athletic trainer(s) (10)	○	○	○	○	○

Q18
Task-challenge Support: People who challenge your way of thinking in order to motivate you.

How much do you think your coaches', teammates', and/or athletic trainers' task-challenge support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q21
Task-appreciation Support: People who acknowledge your efforts and express appreciation for the work you do.

In general, how satisfied were you with the overall quality of task-appreciation support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q22
Task-appreciation Support: People who acknowledge your efforts and express appreciation for the work you do.

How difficult would it have been for you to obtain more task-appreciation support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q23
Task-appreciation Support: People who acknowledge your efforts and express appreciation for the work you do.

How much do you think your coaches', teammates', and/or athletic trainers' task-appreciation support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q24
Tangible Support: People who provide you with financial assistance or products. Ex: brace, gifts, etc.

In general, how satisfied were you with the overall quality of tangible support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q25
Tangible Support: People who provide you with financial assistance or products. Ex: brace, gifts, etc.

How difficult would it have been for you to obtain more tangible support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q26
Tangible Support: People who provide you with financial assistance or products. Ex: brace, gifts, etc.

How much do you think your coaches', teammates', and/or athletic trainers' tangible support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q27
Personal assistance: People who provide you with services or help such as driving you somewhere.

In general, how satisfied were you with the overall quality of personal assistance support you received during your rehab?

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q28
Personal assistance: People who provide you with services or help such as driving you somewhere.

How difficult would it have been for you to obtain more personal assistance support during your rehab?

	Extremely easy (1)	Somewhat easy (2)	Neither easy nor difficult (3)	Somewhat difficult (4)	Extremely difficult (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Q29
Personal assistance: People who provide you with services or help such as driving you somewhere.

How much do you think your coaches', teammates', and/or athletic trainers' personal assistance support contributed to your overall well-being during your rehab?

	A great deal (1)	A lot (2)	A moderate amount (3)	A little (4)	None at all (5)
From your coaches (1)	○	○	○	○	○
From your teammates (2)	○	○	○	○	○
From your athletic trainer(s) (3)	○	○	○	○	○

Appendix C: Interview Questions

1. Describe for me what returning to competition has been like from a physical and psychological/mental standpoint?
2. Have you had any physical, mental or technical setbacks/adversity since returning? If so, can you describe them for me.
3. Describe for me the social support you've had from coaches, teammates, and/or athletic trainers regarding your return to play?
4. At this point in your return, have you accomplished your goals? If so, who would you give credit for helping you achieve these goals if anyone?

Appendix D: Email to Head Coaches

Dear Coaches,

My name is Haleigh Gray, and I'm a graduate assistant athletic trainer at Winthrop University. As part of my master's program I am completing a thesis, and I am surveying Division I student-athletes to evaluate their perception of social support from athletic trainers, coaches, and teammates specifically as it relates to injury rehabilitation and readiness to return to play. The purpose of this study is to better understand student-athletes' perception of social support and determine how effective social support is in addressing psychological issues during injury rehabilitation and return to play.

Dr. Halpin has given permission to survey all student-athletes through an online survey. If you have any questions about the research study or if you are interested in the results of this study, please do not hesitate to contact me.

Appendix E: Email to Athletic Trainers

Dear Athletic Trainers,

We are surveying Division I student-athletes to evaluate their perception of social support from athletic trainers, coaches, and teammates specifically as it relates to injury rehabilitation and readiness to return to play. The purpose of this study is to better understand student-athletes' perception of social support and determine how effective social support is in addressing psychological issues during injury rehabilitation and return to play.

Please send an email with the attached cover letter and the link to the Qualtrics survey to ALL your athletes. Also copy myself on the email (grayh4@mailbox.winthrop.edu) so I can send reminders to your athletes to complete the survey. If you are interested in the results of this study, let me know and I will send you our findings upon completion of the study.

Appendix F: Cover Letter

Dear Student Athlete,

We are surveying Division I student-athletes to evaluate their perception of social support from athletic trainers, coaches, and teammates. Therefore, we ask for your help to spend approximately 8 minutes to complete the survey. Since the purpose of this study is to understand how social support affects injury rehabilitation outcomes and readiness to return to play not everyone will have to complete the entire survey. We will take this information and determine how to effectively social support is being used in the rehabilitation and return to play process while identifying what areas need work to better address the psychological effects of injury.

Your assistance is greatly appreciated. Please complete the survey in the link below by (date).

Sincerely,

Haleigh Gray, ATC

Appendix G: Debriefing Form

Thank you for participating in our social support study!

The purpose of the study is to understand student-athletes' perception of social support from athletic trainers, coaches, and teammates during injury recovery and rehabilitation as well as whether social support affects readiness to return to participation. Based on the results we hope to determine how social support came be most effectively used to improve rehabilition and return to play outcomes.

If you are interested in learning the results of this study, please contact the researchers after February 13th.

Researchers:

Haleigh Gray, ATC

grayh4@winthrop.edu

If you have any concerns regarding this study, please contact the faculty advisor or the Director of Sponsored Programs and Research.

Faculty Advisor:

Alice J. McLaine, PhD, SCAT, ATC

Director of Athletic Training Program

mclainea@winthrop.edu

Grants and Sponsored Research

Development:

Terri Wright, Executive Director

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wrightt@winthrop.edu

If anything about this survey caused you to feel uncomfortable, health and counseling services are available to Winthrop students on the 2nd floor of Crawford. You can reach Counseling Services at (803) 323-2233 or get information at http://www.winthrop.edu/hcs/counselingservices-home.htm.

All counseling services are free and confidential.