The impact of injuries on Division III student-athletes

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THE IMPACT OF INJURIES ON DIVISION III STUDENT-ATHLETES

by

Danielle Lodics

A Thesis

Submitted in partial fulfillment of the requirements of the Master of Arts in Higher Education Administration of The Graduate School at Rowan University June 17, 2009

Approved by

Dr. Burton R. Sisco

Date Approved June 17, 2009
ABSTRACT

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THE IMPACT OF INJURIES ON DIVISION III STUDENT-ATHLETES
2008/2009
Dr. Burton R. Sisco
Master of Arts in Higher Education Administration

The primary purpose of this study was to examine emotions and processes of 21 Rowan University student athletes that experienced a minor or major injury during the fall and spring semester of the 2008/2009 academic year. A minor injury is defined as an injury that keeps the student athlete out of competition for 7 to 10 days. A major injury is defined in this study as an injury that is season-ending or surgical. Of the 21 student athletes 13, experienced a minor injury and eight student athletes experienced a major injury. The major injuries in this study were: a torn ACL, a torn ACL with a meniscal tear, a torn ACL with a MCL tear, a shoulder labrum tear, a hip labrum tear, a dislocated ankle with a fracture fibula, a fractured clavicle with an acromioclavicular ligament tear, and a Grade II Concussion. Data on the emotions and processes were collected from a demographic questionnaire, consisting of nine demographical questions, and an interview, consisting of 14 questions. Data analysis suggest that when a minor or major injury occurs, student athletes are overwhelmed with many different emotions such as: frustration, anger, fear of re-injury, being scared, motivation, and determination.
ACKNOWLEDGMENTS

This work is dedicated to my boyfriend, Matt, who has put up with my work load throughout this process. Matt has been very understanding and has helped me work through three classes and two jobs. Thank you for your support, your love and your understanding through this thesis project.

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CHAPTER I

INTRODUCTION

Throughout the United States there are many higher education institutions that include student-athletes as part of the student body. Student-athletes are a very important part of higher education today. Therefore, when an athlete becomes injured, he/she is impacted in many ways, not just physically but emotionally and psychologically. An injury can be minor or major and when an injury is major it can bring on many different emotions and behaviors that have an impact on the individual, team, coach, family, peers and others. Looking at the psychological impact of an athlete who has suffered a minor or major injury will help medical and psychological professionals in the future.

Statement of the Problem

Student-athletes are a significant part of the student body at many colleges and universities across the country. Minor injuries happen often during sports competition but these injuries are not quite as significant as a major injury. When a major injury occurs, it not only affects that individual athlete, it also affects coaches, team members, and support staff. The student-athlete deals with a range of emotions when a minor or major injury occurs. According to Tracey (2003) the greatest mood disturbance happens in the initial phase of the injury, when athletes experience anxiety, fear, anger, and confusion. Some individuals will experience these emotions and struggle with the pain
from an injury, loss of mobility and function, and sense of frustration that comes with the injury (Udry, 1997).

Injured athletes tend to experience anxiety and sense being perceived as weak by others, especially by their coaches and teammates (Cassidy, 2006). There are many professionals, such as athletic trainers and sport psychologists that are trying to understand what a student-athlete goes through when an injury occurs. Student-athletes deal with more stress than is needed and when an injury occurs, emotions can add up. Understanding how to better manage these emotions will help medical and psychology professionals, as well as other student-athletes in the future.

Purpose of the Study

The purpose of this study was to investigate how student-athletes are impacted by a minor injury and a major injury during their sport season. The study also looked at the impact of injury on selected Division III student athletes at Rowan University and what emotions they go through when a minor or major injury occurs. This study investigated the frequency of the emotions that are mentioned by the student athletes and what they had in common with other student athletes in the study.

Significance of the Study

This study can be significant in the future for athletes, medical professionals, athletic trainers and psychological professionals. Understanding an athlete’s injury can also help coaches and teammates know what is going on with an injured athlete. When an injury occurs that is minor, season-ending or surgical, recognizing how the athlete is impacted by that injury can give the medical and psychological professionals a head start on the injury and help the athlete better cope with the injury.
Assumptions and Limitations

In this study, it is assumed that all the student-athletes were truthful when answering questions that were asked during the interview. It is also assumed that the head athletic trainer was truthful in the facts given about student athletes and their rehabilitation process. This study was limited to the Division III student-athletes at Rowan University in Glassboro, NJ. The study was also limited to the student-athletes at Rowan University who suffered a minor or major injury while in their season at Rowan University. Another limitation is the use of a convenience sample that could limit the amount of generalizable information. Student-athletes will not always tell the truth about the emotions they are feeling which can present potential bias in the findings of this study. Also, there is the potential for researcher bias because the researcher is an athletic trainer that works with the student athletes at Rowan University.

Operational Definitions

1. Emotions: Defined as a state of mind in which feeling, sentiment, or attitude is predominant (Quakenbush & Crossman, 1994). For this study, finding out the emotions of the student-athletes at Rowan University will help the outcome of the study.

2. Minor Injury: An injury that occurs during season that keeps the athlete out from competition for 7 to 10 days.

3. Major Injury: An injury that is season ending or an injury that requires surgery and results in the athlete missing the rest of the competitive season.

4. Rehabilitation: The process of which the athlete regains range of motion, strength, agility, flexibility, and returns to normal daily function.
5. Rowan University: Division III institution in Glassboro, NJ where the student-athletes compete and may suffer an injury.

6. Student-athletes: Students at Rowan University who participated in a season sport during the fall, winter or spring season of the 2008-2009 academic year.

Research Questions

The study addressed the following research questions:

1. What emotions do selected student-athletes report going through when a minor injury results in the student-athlete missing competition for 7 to 10 days?

2. What emotions do selected student-athletes report going through when a major injury results in the athlete missing the rest of the competitive season?

3. What processes, such as imagery or looking ahead, do student athletes use to motivate them through the rehabilitation process?

Overview of the Study

Chapter two focuses on scholarly literature that is applicable to the study. This section provides a brief introduction, focuses on the initial onset of the injury, focuses on accepting the injury and looks at the positives during rehabilitation. Discussed is current research on psychological factors that are impacted by athletes after a minor or major injury.

Chapter three explains the methodology and procedures of the study. The following details are included: the context of the study, the population and sample selection and demographics, the data collection instrument, the data collection process, and how the data were analyzed.
Chapter four presents the findings and results of the study. The focus of this chapter is to address the research questions given in the introduction of the study. Content analysis was used in this chapter to summarize the data in this section.

Chapter five summarizes and reviews the major findings of the study, with conclusions and recommendations for practice and further study.
CHAPTER II

REVIEW OF THE LITERATURE

For many years, researchers have been studying student-athletes and the emotions they go through when a minor or major injury occurs. Student-athletes know that participating in any sport brings on the inherent risk of injury (Tracey, 2003). When an injury occurs, the athlete goes through many emotions that can put great stress on the athlete and individuals involved in the athlete's life. It is important to better understand why injuries are stressful for athletes so that medical professionals, psychological professionals, and student-athletes themselves can better cope with injuries (Gould, Udry, Bridges, & Beck, 1997a). Many injuries occur daily but most of these injuries are minor. Minor injuries are an injury that keeps the student-athlete out of competition for 7 to 10 days. Some examples of a minor injury are muscle strains, ligament sprains and minor concussions. To better understand injuries, researchers have been studying athletes in many different stages of the injury. For example, Tracey (2003) interviewed subjects at the onset of an injury, one week post-injury, and three weeks post-injury because it gave a better idea of what the athletes were going through over a period of time. It is also important for the athlete, coach, athletic therapist, and sport psychologist to understand the emotional feelings an athlete may experience during an athletic injury and during the subsequent stages of recovery (Quakenbush & Crossman, 1994).
Initial Onset of an Injury

Athletes are subject to unique pressures from performance demands imposed by coaches, fans, family members, peers and themselves (Mann, Grana, Indelicato, O’Neill, & George, 2007). Therefore, during the initial onset of the injury athletes can experience many emotions including anxiety, fear, anger, and confusion (Tracey, 2003). Some researchers even go farther in saying that athletes can experience loss of identity, fear of re-injury and even loss of athleticism (Cassidy, 2006; Thatcher, Kerr, Amies, & Day, 2007). Loss of athleticism can be caused because of the injury, which brings on loss of strength, decreased level of fitness, decreased function, and physical appearance of the injury (Cassidy, 2006). One study mentions that the most severely injured athletes experienced more tension, depression, anger, and less vigor than college norms; this mood disturbance failed to improve until one month after injury (Smith, Scott, O’Fallon, & Young, 1990). The initial onset of injury can be the most difficult part for a student-athlete to navigate. Some big questions that athletes tend to ask themselves is “How could this happen to me?” and “Why has this happened to me?” With these questions, athletes tend to have self-doubts about themselves which can hinder rehabilitation in the later stages of the injury. Tracey (2003) states, “For many participants, reflecting on what happened to cause the injury resulted in a period of time when they experienced the what-ifs and self-doubts that spurred internally directed anger” (p. 286). Distress and denial tend to occur during the initial phase of the injury and can diminish throughout the stages of rehabilitation, but denial can show up throughout the entire stages of rehabilitation (Bloomfield, Fricker, & Fitch, 1995).
For the student-athlete, minor injuries are easier to handle and the student-athlete knows that he/she will be back in competition before the season ends. Patients with less severe injuries showed less mood disturbance (with the exception of anger) than the college norms (Smith et al., 1990). Anger is an initial emotional response to injury and with major injury; anger seems to be more prevalent.

Accepting the Injury

Researchers have noted the importance of athletes accepting the reality of being injured in order to have a successful recovery from the injury (Tracey, 2003). Acceptance is also a big part of the grief response, which is why acceptance plays a major role for student-athletes because they are grieving in their own way over the injury that has occurred (Evans & Hardy, 1995). Accepting a minor injury is much easier because the athlete understands that he/she will be back in competition within the next 7 to 10 days after injury occurred. Accepting a major injury can be more difficult for a student-athlete because of the way he/she is perceived by teammates, coaches, peers and many others. Injured athletes can experience more anxiety because teammates and coaches may perceive them as weak and no longer part of the team (Cassidy, 2006). Student-athletes can start to think that they are not part of the team and may feel isolated and lonely because of the major injury that they are dealing with (Bloomfield et al., 1995).

Accepting an injury is not always easy for athletes, especially when the injury is season-ending. When athletes are having trouble, one way to help them handle their emotions and accept the injury is through counseling. The counseling treatment can be described as a focus on an empathetic and supportive relationship between the counselor
and athlete, a general feeling of acceptance, and increasing emotional awareness and resulting catharsis (Myers, Peyton, & Jensen, 2004). It is important to help the athlete understand that psychological intervention, or counseling, is in their best interest and nobody will think less of them. College student athletes have been found to underutilize the mental health services that are available to them (Bergandi, & Wittig, 1984). Counseling can be performed individually, which means one-on-one with the student athlete, or it can be with a group of student athletes that have experienced a season ending injury. Group counseling also permits injured athletes to learn that they are not alone in being injured and to benefit from the experiences of others with similar concerns (Brewer, Jeffers, Petitpas, & Van Raalte, 1994). Student athletes can benefit greatly from counseling but health professionals need to emphasize that counseling is not something to be looked down upon. Without confidence in the treatment, psychological intervention is unlikely to be effective (Brewer et al., 1994).

Fear is a major emotion that plays a significant role in student-athletes lives. Gould et al. (1997a) report that athletes worried about re-injury and it was a source of stress that lingered longer than the athletes expected. Another fear is keeping or losing a spot on the team. After experiencing an injury and dealing with negative emotions, student-athletes start to doubt their ability to get back to the sport to compete (Tracey, 2003). Tracey also describes that many student-athletes felt the fear of being labeled “damaged goods” by the coach. Major injury causes student-athletes to be eliminated from the sport they love to play so they feel that part of their lives has been stolen from them. Many of these fears are why it is important to understand that accepting an injury is a positive step toward the rehabilitation process.
The Grief Cycle

Minor and major injuries can cause student athletes to experience many different emotions throughout the process of recovery. The Kubler-Ross Grief Cycle represents five stages of emotions that people experience when they are grieving (http://changingminds.org, 2009). The grief cycle can be looked at from a student athlete’s perspective and can be applied to the student athletes that have suffered from a minor or major injury, especially with the student athletes who suffered from a major injury. There are five stages to the Kubler-Ross grief cycle which are: denial and isolation, anger, bargaining, depression, and acceptance.

The grief cycle was introduced by Elisabeth Kubler-Ross in 1969 in her book, *On Death and Dying* (http://en.wikipedia.org/wiki/K%C3%BCbler-Ross_model, 2009). The grief cycle was meant for people who are dealing with a death, especially with a family member who is terminally ill. In the ensuing years, it was noticed that this emotional cycle was not exclusive just to the terminally ill, but also to other people who are affected by bad news, such as change (http://changingminds.org, 2009). The important factor is not that the change is good or bad, but that student athletes perceive an injury as a significantly negative event.

In a study by Quinn and Fallon (1999), elite athletes were studied throughout the stages of their rehabilitation. The stages that Quinn and Fallon (1999) set are: upon injury, partial recovery, semi-recovery, and full recovery. Increased confidence and vigor and decreased negative emotional responses over the recovery period were noted in the study. Quinn and Fallon found that the grief cycle could be adapted to better understanding how elite athletes dealt with a significant injury. Observing a student
athlete throughout the rehabilitation process can give the researcher a better understanding of the emotions they experience after an injury. Smith, Scott, & Wiese (1990) suggested that injured athletes progress through a grief cycle similar to that experienced by the terminally ill. The emotions that are observed can then be compared to the grief cycle.

The first stage called denial and isolation, happens to student athletes after an injury occurs. During the initial onset of an injury, student athletes can experience denial and say to themselves that they are fine and can get through the injury. Tracey (2003) explained that when student athletes reflect on their injury, that is when they experience the what-ifs and the self-doubts, which can lead to the next stage of the grief cycle.

The second stage called anger happens when student athletes tend to have self-doubts and ask themselves “How could this happen to me?” and “Why has this happened to me?” Anger is an initial emotional response that occurs with student athletes that suffer from a minor or a major injury. Anger is more prevalent in student athletes that suffer a major injury. In a study by Udry (1997), interviews with the student athletes revealed their greatest difficulties during rehabilitation were dealing with personal anger and the inability to cope with an injury.

The third stage in the grief cycle is called bargaining and this stage is an extension of denial and anger. In this stage, student athletes may try to bargain with the athletic trainer or sport psychologist to let them return to competition earlier than they should. Bargaining is another variation of the denial stage and student athletes can express feelings of wanting to return to competition (Grovenman & Brown, 1985).
The fourth stage in the grief cycle is called depression. Student athletes tend to stay in this stage the longest which hinders the rehabilitation process, especially for a student athlete with a major injury. Tracey (2003) states that the internal thoughts of athletes caused them to feel depressed, down, have low self-esteem, and increased anxiety. During this stage, the student athlete begins to realize that he/she can no longer deny an injury and begins to understand that the injury needs additional attention (Groveman & Brown, 1985).

The final stage of the grief cycle is called acceptance where student athletes begin to accept their injury throughout the rehabilitation process. Accepting and taking responsibility for an injury has been noted as an important part of coping more effectively with the injury and rehabilitation process (Tracey, 2003). Acceptance of an injury is an important aspect that the student athlete must do in order to become successful in returning to competition safely without further risk of injury.

This grief cycle can be used to understand how student athletes handle their emotions throughout the injury process. The cycle is helpful in examining the emotions that student athletes who suffered a major injury go through. It also helps in examining the student athlete who suffered a minor injury and how he/she handled the experience.

Positives During the Rehabilitation Stage

Studies have shown that student-athletes who focus on the positives will return to competition much quicker than those who hold on to negative emotions. Holding onto negative emotions adds stress that can be debilitating in this stage of rehabilitation. A common theme in the research is that if the student-athletes remain positive throughout the rehabilitation process, they will return to participation successfully with little fear of
re-injury (Gould et al., 1997a; Tracey, 2003). Tracey (2003) states that “several participants realized and recognized how much inner strength they had, which influenced them further in rehabilitation” (p. 286). After an athlete realizes that he/she is injured, the process of accepting the injury and showing inner strength is important. Athletes who are able to focus on future sport-related goals often possess a positive outlook on the rehabilitation process of the injury (Gould, Udry, Bridges, & Beck, 1997b). Student athletes who suffered a minor injury are more positive than those who have suffered a major injury. Student athletes with minor injuries understand that they will be back in competition quicker than an athlete with a major injury. Therefore, these students will be more positive and determined to return to competition 7 to 10 days after the injury occurred.

Social support is another factor that athletes depend on when a major injury occurs. There are a number of studies that have been found to show that social support is an important factor to an athlete’s well-being during rehabilitation (Corbillon, Crossman, & Jamieson, 2008). Social support has been defined as “an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance well-being of the recipient” (Shumaker & Brownell, 1984, p.11). Whether the injury is minor or major, student-athletes need some form of social support to help them get through the emotion of dealing with an injury. For minor injuries, the coaches behavior can increase the frustration experienced by the athlete at the onset of an injury instead of being helpful (Corbillon et al., 2008). Coaches expect their athletes to make a quicker recovery when the injury is only minor but, a quicker recovery can sometimes lead to a major injury. A study by Hanson, McCullagh, and Tonymon (1992) mentioned
that social support was a discriminator for the severity, but not the frequency of the injury itself. Social support is a key factor in dealing emotionally with being injured and recovering from an injury (Tracey, 2003). Throughout the onset and recovery of an athletic injury there may be many possible providers of social support including coaches, teammates, medical practitioners, and significant others such as family and friends (Petitpas, 1999). Injured athletes consider a lack of social support to be a hindrance in recovering from a major injury. Social support has been recognized as a potentially strong influencing factor to dealing emotionally with an injury (Gould et al., 1997a).

Athletes will typically require more emotional support at the beginning of their injury because the athlete may have a tough time experiencing this injury (Corbillon et al., 2008). Many athletes will avoid social support from their coach because they do not want to be perceived as the weak player of the team (Tracey, 2003). There is limited research on why athletes avoid going to their coach, but further study could be beneficial for coaches and for athletes. Social support is a positive influence on the athlete, whether it be parents, peers, coaches, medical staff, counselor or any other role model in that athlete’s life.

Imagery is another positive factor that influences athletes to return to competition faster and more successfully. Referring athletes to someone who is knowledgeable in relaxation techniques like a sport-psychologist or school counselor can be beneficial to athletes. These professionals can train athletes to use imagery, cognitive restructuring and reliving the injury in order to return to play quicker (Cassidy, 2006). Athletes use imagery to picture themselves back in competition and this method helps athletes navigate rehabilitation more successfully and safely. Another useful application that can
be employed by sports psychologists or counselors is to have the major injury athletes assemble in a group and discuss how they are feeling and what they can do to support one another (Tracey, 2003).

Summary of the Literature Review

Despite the technological advances in safety equipment, improved coaching and emphasis on proper conditioning, athletic injuries occur every day to several thousands of athletes around the United States (Hansen et al., 1992). When a minor or major injury happens, emotions are flowing rampantly throughout an athlete’s mind and many different emotions are present. The main psychological and emotional responses are fear of re-injury, loss of identity, anger, frustration, depression, self-doubt, and disbelief (Thatcher et al., 2007).

The initial onset of an injury seems to manifest the greatest mood disturbance within an athlete because of the experience he/she is going through (Tracey, 2003). Loss of athleticism is another emotion that surfaces around athletes because of loss of mobility, pain, loss of function and inability to perform in the competitive sport. Initial injury also brings elements of denial and self-doubt which are present in major injuries and tend to linger longer with athletes during the rest of their rehabilitation process.

Accepting the injury is what an athlete has to do in order to successfully navigate the rehabilitation process and return to competitive play. Fear tends to become a problem when dealing with acceptance of a major injury. Fear of re-injury tends to be present in the athlete’s mind and that can hinder the rehabilitation process. Fear of losing a spot on the team and fear of staying on the team is also another emotion that athletes have to handle.
The grief cycle can be used to compare the emotions of student athletes with the five stages of the cycle. The five stages of the Kubler-Ross grief cycle are denial, anger, bargaining, depression, and acceptance. Student athletes experience many emotions that can be looked at through the five stages of the grief cycle (Smith, Scott, & Wiese, 1990). Student athletes experience many emotions and organizing them with the five stages of the grief cycle can help to implement further research.

Imagery is a significant positive force that athletes use to picture themselves getting through rehabilitation and resuming competition. Sports psychologists, counselors and support groups can influence athletes to use imagery and get them back into competition successfully and safely. During recovery from sports injury, psychological factors such as attributions for rehabilitation progress have been shown to be related to perceived rate of recovery (Thatcher et al., 2007).

The main themes in these studies were the emotions that the athletes experience during the initial injury, acceptance of the injury, and the positive implications that athletes can use to get back to competition safely and successfully. Further study is needed in areas such as how the athlete’s emotions affect their overall behavior and impacts the lives of others around the student-athlete. More research is needed in the area of emotions the student-athletes are feeling and how they impact the student-athletes rehabilitation process and recovery from injury.
CHAPTER III
METHODOLOGY

Context of the Study

The study was conducted at Rowan University in Glassboro, NJ. Rowan University is a Division III, public university located in Gloucester County in Southern New Jersey. Division III comprises of colleges and universities who choose not to give athletic scholarships to their athletes and only enrolls up to or around 10,000 students. Division III universities are associated with the NCAA and must comply with rules and establishments that are set by that body (NCAA, 2009). A public university is a university that is funded by public means through a national or state government (http://en.wikipedia.org/wiki/Public_university 2008).

Rowan University was established in 1923 and was known as the Glassboro Normal School (www.rowan.edu/subpages/about/history/ 2007). In 1997, the university was renamed Rowan University and is currently flourishing to become one of the most extraordinary schools in New Jersey. It consists of seven different colleges which are: Business, Communication, Education, Engineering, Fine & Performing Arts, Liberal Arts & Sciences, the College of Professional and Continuing Education and a Graduate School. Rowan University consists of 16 athletic teams and these teams combined add up to around 400 student athletes (www.rowanathletics.com 2009).

Rowan University has two athletic training rooms. Injured athletes go to the athletic training room to seek treatment and rehabilitation for personal injuries. Rowan
University employs a head athletic trainer, an assistant athletic trainer, and one graduate assistant athletic trainer. Every athletic trainer is certified and is well prepared to handle injuries from minor to major. Student-athletes used for this study are Rowan University students enrolled during the 2008-2009 academic year and attended the athletic training room on a daily basis.

Population and Sample Selection

The target population for this study were student-athletes with an injury that was season ending or a minor injury that kept the student-athlete out of competition for 7 to 10 days. The target population were student-athletes who attended a public Division III institution in New Jersey during the 2008-2009 academic year. The available population was student-athletes with a minor, season ending or surgical injury at Rowan University in Glassboro, NJ during the 2008-2009 academic year. A convenience sample was selected from student-athletes at Rowan University who experienced a minor injury that kept them out of competition for 7 to 10 days, or a season ending or surgical injury that kept the student athlete out of competition during the 2008-2009 academic year. A significant number of minor injuries occurred during the academic year and these injuries were used for the study. Nineteen student athletes with minor injuries were qualified for this study but only 13 chose to participate. The 13 student athletes with minor injuries consisted of five males and eight females. The minor injuries of the five male student athletes were: two ankle sprains, a MCL sprain, a hip flexor strain, and a Grade I concussion. The minor injuries of the eight female student athletes were: three ankle sprains, two hamstring strains, a hip flexor strain, a rotator cuff strain, and a Grade I concussion. The competitive sports that these student athletes with minor injuries played
included: football, women's soccer, men's soccer, field hockey, softball, baseball and track and field. For this study, there are a limited number of student-athletes who experienced a season-ending or surgical injury. The final number of student-athletes with a major injury that were eligible for this study is eight but this was subject to change during the spring semester of 2009. Of the eight student-athletes that participated in this study, there were a range of different types of injuries. The season ending or surgical injuries included: three torn Anterior Cruciate Ligaments (ACLs), a hip labrum tear, a Grade II concussion, dislocated ankle with a fibular fracture, fractured clavicle with an acromioclavicular ligament rupture, and a shoulder labrum tear. A total of six male and two female student athletes participated in the study. The competitive sport that these athletes play were: baseball, lacrosse, football, and soccer. This study was conducted in the fall semester of 2008 and spring semester of 2009 which means that the student athletes used in this study were in-season athletes and out-of-season athletes. The out-of-season athletes were doing rehabilitation for an injury after a surgery or in season athletes that got injured during practice or a game.

Instrumentation

The instruments (demographic questionnaire and an interview) that were used in this study were grounded in the knowledge base from the literature review and designed by the researcher to ensure appropriate questions would be asked to answer the research questions of the study. The demographic questionnaire (Appendix C) asked for: name, age, sport, academic year, injury and how the injury occurred, whether the injury was minor, season-ending or surgical, how long athlete was out of competition before returning to competition, and how far along the student-athlete is in his/her rehabilitation
process. To ensure that student-athletes gave reliable and valid answers, consultations with the athletic trainers occurred on a regular basis.

The second instrument (Appendix D) used in this study was an interview. The interview consisted of 14 questions for each student-athlete to answer. The interviewer asked open-ended questions after the answers were given from each student athlete. Since impact of injury is involved with the student-athletes, an interview provided an opportunity to ask follow-up questions along with structured questions. Responses from the student athletes focused on their emotions, how the student athletes handled these emotions when the injury occurred, and the emotions associated with the rehabilitation process. The interviews were tape recorded in order to capture accurately what each student-athlete said. The interview questions were implemented from the knowledge base and were designed by the researcher to get meaningful answers from the student athletes that were involved in this study. To test validity, the interview questions were pilot tested by five student athletes with a major injury during the 2007/2008 academic year. The student athletes noted all questions were clear and understandable; they reported no problems answering each query.

Following approval from the Institutional Review Board of Rowan University (Appendix A), student-athletes received a consent form explaining the study, a demographic questionnaire and information about where the interview was to be conducted. The head athletic trainer was consulted about the student-athletes who were involved in this study because he was the person who worked with the student athletes during the rehabilitation stage.
Data Collection

Signed consent forms were collected from each student athlete who participated in the study (Appendix B). The interviews took place during the 2008-2009 academic years. The student-athletes were those who had suffered a season-ending or surgical injury. Data collection started when a student-athlete had an injury that was minor or season-ending. The interviews were conducted in the team house athletic training room office. The interviews were recorded with a digital recorder then transcribed by the researcher. Each interview took an average of 15 minutes to conduct. Field notes were utilized to document the subject’s body language and nonverbal communication. If the student-athlete had not met the requirements to participate in this study, then the data collection was cancelled.

Data Analysis

The interview questions and the demographic questionnaire were combined for analysis. The head athletic trainer was consulted to ensure credibility of the student athlete’s information that was given during the interview. The recorded tape and the questionnaire data were analyzed and compared with the notes of the athletic trainer. Data analysis involved summarizing the information and looking for recurring themes among the data collected from the student-athletes. Data analysis focused on the emotions and behaviors of the student athletes during and after an injury occurred. Content analysis was used to find these recurring themes (Sisco, 1981) and direct quotes were used in this study to illustrate themes from the content analysis. The emotions were analyzed by identifying which was the most prevalent emotion and which emotions the student athletes had in common.
CHAPTER IV
FINDINGS

Study findings are the result of subject interviews that were collected during the 2008-2009 academic year at Rowan University. Each student athlete was interviewed once and each interview lasted about 15 minutes. The interviews were conducted to identify the emotional response to an injury that a student athlete experienced when the injury occurred. The experiences of the students athletes can further the knowledge of medical and psychological professionals in the future. Interviews were transcribed and interpreted using content analysis (Sisco, 1981).

Profile of the Subjects

The participants of this study were student athletes at Rowan University who suffered a minor or season ending/surgical injury during the 2008-2009 academic year. The study involved a convenience sample consisting of eight student athletes with a major injury and 13 student athletes with minor injuries from Rowan University. The eight student athletes consisted of six males and two females. The major injuries of the six male student athletes were: a ruptured ACL, a hip labrum tear, a grade II concussion, a dislocated ankle with a fibular fracture, fractured clavicle with an acromioclavicular ligament tear, and a shoulder labrum tear. The injuries of the two female athletes were a torn ACL with a meniscal tear and a torn ACL with a MCL tear. The competitive sports that these athletes played are: baseball, men's basketball, women's basketball, lacrosse, and football.
To give the reader a more in depth look at the student athletes with major injuries, a short biography of each athlete is given.

Student athlete “A” is a 21 year old, junior, male basketball player who sustained a torn ACL during an afternoon practice at Rowan University. Student athlete “A” went to take a jump shot and when he landed, he felt/heard a loud crack and then a lot of pain. This injury was a season ending injury and required surgery.

Student athlete “B” is a 19 year old, freshman, female lacrosse player who sustained a torn ACL with a meniscal tear during an afternoon practice at Rowan University. Student athlete “B” was running after the ball and she twisted her right ankle and knee and then fell awkwardly. She felt a pop and a lot of pain when this injury occurred. The injury was season ending and required surgery.

Student athlete “C” is a 21 year old, junior, female basketball player who sustained a torn ACL with a MCL tear during a game at Rowan University. Student athlete “C” went up for a layup and came down with her foot planted and her knee twisted in the opposite direction. She also felt a pop and immediate pain and needed to be helped off the court by the athletic training staff. This injury was a season ending injury and required surgery.

Student athlete “D” is a 22 year old, senior, male football player who sustained a fractured clavicle with an AC ligament tear during a Saturday afternoon football game at Rowan University. Student athlete “D” was participating in a kickoff play and attempted to make a block and got hit with an opponent’s helmet on his collarbone. Student athlete “D” felt a crack and immediately felt intense pain. This injury was a season ending injury and required surgery.
Student athlete “E” is a 20 year old male, junior, baseball player who sustained a shoulder labrum tear during an afternoon practice at Rowan University. Student athlete “E” was playing right field, he dived to catch a fly ball and came down on his shoulder the wrong way. He felt a pop in the back of his shoulder and also felt pain and tightness. This injury was season ending and required surgery.

Student athlete “F” is a 20 year old, sophomore, football player who sustained a hip labrum tear during a spring ball practice at Rowan University. Student athlete “F” hurt his hip during spring ball and the pain got worse as he continued to train over the summer months. His injury was confirmed with an MRI and later required surgery. This injury is a season ending injury.

Student athlete “G” is a 19 year old, freshman, male football player who sustained a Grade II Concussion during an away game on a Saturday afternoon. Student athlete “G” is a defensive linemen who went to block an opponent and got hit and fell backwards and hit his head on the field. He walked off the field and could not remember anything that happened, so the athletic trainer sent him to the emergency room for further evaluation. This injury did not require surgery but it was a season ending injury.

Student athlete “H” is a 21 year old, junior, male football player who sustained a dislocated ankle with a fibular fracture during a preseason practice at Rowan University. Student athlete “H” is a running back who was running with the ball and got hit by a linemen, who then fell on his foot and pushed his leg the wrong way. He felt a crack in his leg and intense, immediate pain. The fracture and dislocation was confirmed with an x-ray imaging. This injury was season ending and required surgery.
Table 4.1 breaks down the major injuries by body part, injury, sport played, rate and rank.

### Table 4.1

**Major Injuries Sustained by Student Athletes**

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Injuries</th>
<th>Sport Played</th>
<th>Rate</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knee</td>
<td>Torn ACL</td>
<td>Men's Basketball</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Torn ACL with a Meniscal Tear</td>
<td>Lacrosse</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Torn ACL with a MCL Tear</td>
<td>Women's Basketball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoulder</td>
<td>Fractured Clavicle with AC ligament tear</td>
<td>Football</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Torn Shoulder Labrum</td>
<td>Baseball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hip</td>
<td>Torn Hip Labrum</td>
<td>Football</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Head</td>
<td>Grade II Concussion</td>
<td>Football</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Ankle</td>
<td>Dislocated Ankle with Fibular Fracture</td>
<td>Football</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Nineteen student athletes with minor injuries were qualified for this study but only 13 chose to participate. The 13 student athletes with minor injuries consisted of five males and eight females. The minor injuries of the five male student athletes were: two ankle sprains, a MCL sprain, a hip flexor strain, and a Grade I concussion. The minor injuries of the eight female student athletes were: three ankle sprains, two hamstring strains, a hip flexor strain, a rotator cuff strain, and a Grade I concussion. The competitive sports that these student athletes with minor injuries played are: football, women’s soccer, men’s soccer, field hockey, softball, baseball and track.
To give the reader a more in depth look at the student athletes with a minor injury, a short biography is given.

Student athlete “1” is a 20 year old, sophomore, male football player who sustained a grade I ankle sprain during an afternoon practice. Student athlete “1” is a tight end who went up to catch a ball and came down and rolled his ankle. He was back practicing in eight days.

Student athlete “2” is a 19 year old, freshmen, female field hockey player who sustained a grade I ankle sprain during a night game at Rowan University. Student athlete “2” was going for the ball and stepped on an opponent’s foot and rolled her ankle. She was back into competition and practice in nine days.

Student athlete “3” is a 21 year old, junior, female soccer player who sustained a grade I ankle sprain during an afternoon practice at Rowan University. Student athlete “3” was running and stepped in a divot on the field and rolled her ankle. She was back into practice and competition in seven days.

Student athlete “4” is a 21 year old, junior, softball player who sustained a grade I ankle sprain during an afternoon practice at Rowan University. Student athlete “4” was running the bases and stepped on second base wrong and rolled her ankle. She was back into practice and competition in nine days.

Student athlete “5” is a 20 year old, sophomore, male baseball player who sustained a grade I ankle sprain during an afternoon practice at Rowan University. Student athlete “5” was running the bases and hit third base wrong and rolled his ankle. He was back into practice and competition in 10 days.
Student athlete “6” is a 19 year old, freshman, male football player who sustained a hip flexor strain during an afternoon practice at Rowan University. Student athlete “6” is a wide receiver who was making a cut toward catching the ball and stretched out his leg further than he anticipated. He immediately felt tightness within his hip and a sharp pain. Student athlete “6” was back into competition and practice in nine days.

Student athlete “7” is a 21 year old, junior, female soccer player who sustained a hip flexor strain during a night game at Rowan University. Student athlete “7” was covering an opponent on the field and went to kick the ball and stepped further than she anticipated. She felt tightness and pain within her hip. She was back into practice in 10 days.

Student athlete “8” is a 22 year old, senior, female field hockey player who sustained a hamstring strain during an afternoon practice at Rowan University. Student athlete “8” was sprinting down the field after the ball and felt tightness in the back of her leg. She felt pain and had to discontinue what she was doing. Student athlete “8” was back in competition and practice in seven days.

Student athlete “9” is a 19 year old, sophomore, female track and field runner who sustained a hamstring strain during an afternoon practice at Rowan University. Student athlete “9” was sprinting during practice and felt an immediate tightness and a sharp pain in the back of her leg. She returned to competition and practice in nine days.

Student athlete “10” is a 20 year old, sophomore, football player who sustained a Grade I concussion during an afternoon practice at Rowan University. Student athlete “10” is an offensive lineman who was going to make a block when he hit his teammate’s
helmet with his helmet. He had a headache and slight dizziness. He returned to practice and competition in nine days.

Student athlete “11” is a 21 year old, junior, female soccer player who sustained a Grade I concussion during an afternoon practice at Rowan University. Student athlete “11” was going to head a soccer ball and collided with one of her teammates. She came off the field with a slight headache and dizziness. She returned to competition and practice in 10 days.

Student athlete “12” is a 21 year old, junior, male football player who sustained a MCL sprain during a Saturday afternoon football game at Rowan University. Student athlete “12” is a running back who was hit on the outside of his leg causing his knee to go in. He felt pain on the inside of his knee and he realized he could not play the rest of the game. He returned to competition and practice in eight days.

Student athlete “13” is a 22 year old, senior, female softball player who sustained a rotator cuff strain during an afternoon practice at Rowan University. Student athlete “13” plays third base and she was throwing the ball to first and felt a pain in her shoulder. She was unable to continue practice that day. She returned to competition in eight days.

Table 4.2 breaks down the minor injuries by body part, injuries, sport played, rate and rank.
Table 4.2

Minor Injuries Sustained by Student Athletes

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Injuries</th>
<th>Sport Played</th>
<th>Rate</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankle</td>
<td>Ankle Sprain (5)</td>
<td>Football</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field Hockey</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women's Soccer</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Softball</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Baseball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hip</td>
<td>Hip Flexor Strain (2)</td>
<td>Football</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women's Soccer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leg</td>
<td>Hamstring Strain (2)</td>
<td>Field Hockey</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Track &amp; Field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head</td>
<td>Grade I Concussion (2)</td>
<td>Football</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women's Soccer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knee</td>
<td>MCL Sprain</td>
<td>Football</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Shoulder</td>
<td>Rotator Cuff Strain</td>
<td>Softball</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

The age range of the student athletes involved in the study was 18 to 22. This study was conducted during the fall and spring semester of the 2008-2009 academic years, which means that the student athletes used in this study were in and out-of-season athletes.

Analysis of the Data

Research Question 1: What emotions do selected student-athletes go through when a minor injury results in the student athlete missing competition for 7 to 10 days?

“What emotions did you feel when the injury occurred?”

Table 4.3 portrays the emotions that the 13 student athletes with minor injuries experienced when their injury occurred. When injury occurs, student athletes go through
many emotions but the most common emotion for student athletes that sustained a minor injury was frustration. Eleven of the 13 student athletes said that frustration was the main emotion that they experienced. When asked this questions student athlete “2” who sustained an ankle sprain said, “I was very frustrated when it happened and all I wanted to do was get back into the game.” Frustration can play a role in hindering the rehabilitation process but the student athletes with minor injuries felt that frustration was not a factor in the rehabilitation process. Student athlete “12” said, “Even though I was frustrated, I knew that I was going to be back and that made me work harder to get back.” This frustration can be looked at from the perspective of the grief cycle. The first stage of the grief cycle is denial and frustration can be an influencing factor that contributes to this denial. Student athletes that experience this frustration can be said to be going through the first stage of the grief cycle.

A student athlete with a minor injury goes through many emotions but after frustration comes anger. Nine of the 13 student athletes said that when the injury occurred, they felt very angry with themselves. Student athlete “12” who sustained an MCL sprain said, “I can’t believe that I got hurt during practice, I was so mad at myself after I found out what I had done.” The student athletes in this study were angry in the beginning but after they found out they would be returning in a week or so, they were relieved. Student athlete “13” who sustained a rotator cuff strain said, “I definitely was angry and I was taking it out on my teammates, but after a day or two I realized that I need to work to get back, so I did.” The second stage of the grief cycle is anger and anger was the second most prevalent emotion that presented itself when a minor injury occurred. Many of the student athletes, who suffered from a minor injury, in this study
knew that they would only be out for a short period of time so they continued to work hard to get back to competition.

One final emotion that student athletes experience when a minor injury occurs is anxiety. Student athletes with the minor injury felt anxious because they were ready to get back into competition. The anxiety can also cause the student athlete to think that they are ready to get back to competition before they are actually ready. Student athlete “7” who sustained a hip flexor strain said, “I felt very anxious to get back to competition and I thought I was ready the day after but, I had to tell myself that I needed more time to heal.” Many other emotions occurred but frustration, anger, and anxiety were the top three emotions experienced by the student athletes who sustained a minor injury.

Table 4.3

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frustration</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Anger</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Anxiety</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Annoyance</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Depressed</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

“What emotions are you feeling during your rehabilitation process?”

During the rehabilitation process, many emotions changed from frustration to determination. Twelve out of the 13 student athletes stated that they were determined to get better to return to competition. Student athlete “8” who experienced a hamstring strain said, “During rehab, I was determined to get stronger and better, so I could get
back to playing.” The 12 student athletes felt the same way about their rehabilitation process and worked hard to get back to competition.

Another emotion that occurred during the rehabilitation process was motivation. Eight of the 13 student athletes with minor injuries said that motivation helped them through their rehabilitation process. The student athletes said they used motivation to get back to competition to help their teams, either in games or in practice. Student athlete “3” who suffered from an ankle sprain said, “The athletic trainers actually motivated me to get back to playing and I used that to help me through my rehab.”

Motivation and determination are two leading emotions that can bring the student athlete through the final stage of the grief cycle which is acceptance. Acceptance tends to occur throughout the rehabilitation process and motivation and determination are two emotions that can help the student athletes get through this tough injury process.

Determination and motivation were the top two emotions felt but there were many others that student athletes experienced during their rehabilitation process. Table 4.4 contains the emotions of the student athletes with minor injuries and the frequency of those emotions among the 13 student athletes.

Table 4.4

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determination</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Motivation</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Hope</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Relieved</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
"Upon return to competition, do you fear re-injury or losing your spot on the team?"

Every student athlete with a minor injury said that they do fear re-injury. This is common with student athletes because when they become injured, that fear will always be in the back of their minds. Student athlete “6” said, “I will always fear re-injury but if I work hard during rehab, hopefully that will not happen.”

Only three out of the 13 student athletes said that they do fear losing their spot on the team. The other 10 said that because it’s a minor injury, they knew they would be back in a decent amount of time and then get back to competition. Student athlete “10” who said yes to losing their spot is a male football player who said, “I do fear losing my spot because there are so many players on the football team that it could happen.”

Research Question 2: What emotions do selected student-athletes report going through when a major injury results in the athlete missing the rest of the competitive season?

“What emotions did you feel when the injury occurred?”

The eight student athletes with the major injuries in this study gave many different emotions to this question because these athletes knew they were not going to be back to compete in their current competitive season. The emotion that was stated this most for this question was frustration. All eight of the student athletes that suffered from a major injury answered that frustration was their number one emotion they felt when the injury occurred. Student athlete “H” who had the dislocated ankle and a fibular fracture said, “I was very frustrated and really scared, the season hadn’t even started yet and I am already out, it sucked.” Student athlete “B” who tore her ACL said, “When I found out I
couldn't play the rest of the season I felt frustration and anger. I was very disappointed because I was just getting started with this team.” Frustration is an emotion that was prevalent with the student athletes that sustained a major injury during the 2008-2009 academic years. Frustration is an emotion that can incorporate denial and then leads into the second stage of the grief cycle which is anger.

The next emotion that the student athletes mentioned was anger. Six out of the eight student athletes said that frustration caused the anger. The student athletes were angry with themselves, with teammates, with coaches and with peers. Taking out anger on other people is just another way to cope with a season ending injury. Student athlete “F” with a torn hip labrum said, “I was very frustrated and angry that I was not going to be able to play football this season.” Student athlete “D,” the football player who suffered from a fractured clavicle with an acromioclavicular ligament tear said, “This injury could have easily been prevented and this should have never have happened to me. I was very angry with myself and my teammates because this should have never of happened.” Anger is the second stage of the grief cycle and student athletes tend to stay in this stage the longest. Many of the student athletes said that anger played a part during their rehabilitation process and that it was effecting their recovery.

Another emotion that the student athletes mentioned was that of being scared. Four out of eight of the student athletes said they were very scared when the injury occurred. Student athlete “A,” the basketball player who sustained an ACL tear said, “I was actually very scared and felt very anxious, I was very upset that I did this to myself.” Student athlete “C,” the women’s basketball player who sustained a torn ACL with a
MCL tear said, “I was not sure what I did, I just felt intense pain, and was very scared. I did not know what to think when this happened.”

Table 4.5 portrays the emotions that the student athletes felt when they suffered from a major injury that ended their competitive season.

Table 4.5

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frustration</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Anger</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Scared</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Anxiety</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Depressed</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

“What emotions are you feeling during your rehabilitation process?”

The first emotion that the student athletes with a major injury felt during their rehabilitation process was nervousness. Seven out of eight of the student athletes said that they were nervous during their rehab because they did not want to further injure themselves before or after surgery. Student athlete “B,” the lacrosse player who tore her ACL with a meniscal tear said, “Before I had surgery I was nervous, but after my surgery I was even more nervous to get rehab started. I didn’t want to screw my knee up anymore than it already was.” Student athlete “E,” the baseball player who tore his shoulder labrum said, “I knew that after surgery I had to work hard during rehab but I was nervous to get started.”
The next emotion that was prevalent the most when the question was asked was the feeling of being pathetic. Student athletes feel pathetic after surgery because they do not have the strength or range of motion that they had before they were injured. Student athlete “A,” the male basketball player who tore his ACL said, “I felt pathetic and infantile in the beginning but as my strength improved so did my emotions.” Student athlete “F,” the football player with the torn hip labrum said, “I couldn’t walk after surgery so I felt really pathetic doing rehab for my hip. I could only start with small tasks and then as I progressed, I felt much better about myself. I was looking forward to getting stronger.”

The next emotion that was mentioned by five out of eight of the student athletes with a major injury was relief. Student athletes feel a sense of relief after they get surgery because they feel like they have something to look forward to for the next competitive season. Student athlete “F” who tore his hip labrum said, “During my rehab, I felt relieved that I was getting better. I am excited to get healthy for the next football season.” Student athlete “C” who tore her ACL with a MCL tear said, “I was relieved that my surgery was a success and I was able to begin my journey toward recovery. I am ready to play basketball next season.”

Table 4.6 portrays the emotions that student athletes with a major injury experienced during their rehabilitation process.
Table 4.6

_Emotions Experienced by Student Athletes with a Major Injury during the Rehabilitation Process_

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nervousness</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Feeling Pathetic</td>
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<td>2</td>
</tr>
<tr>
<td>Relief</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Anxiety</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Scared</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

"Upon return to competition, do you fear re-injury or losing your spot on the team?"

Seven out of eight student athletes with a major injury said that re-injury is one of the biggest fears they have when they return to competition. Student athlete “B,” the lacrosse player with the torn ACL with a meniscal tear said, “I don’t want to go through this again so re-injury is definitely a fear.” Student athlete “H,” the football player who dislocated his ankle with a fibular fracture said, “I do fear re-injury, but I feel when I am 100% that fear of re-injury will go away.” Student athlete “G,” the football player with the Grade II concussion said this about re-injury, “I do fear that I will get re-injured because when I make that first tackle and hit my head that it will put me back out again but I am confident that will not happen.”

As far as the athletes losing their spot on the team, only five out of eight feared losing their spot because of the injury. Student athlete “B” said, “I am also worried about losing my spot because there is a lot of competition for my position.” Student athlete
"H," the football player who dislocated his ankle with a fibular fracture said, "I do fear losing my spot on the team because there are so many people on the football team, but I won’t let that happen because I am working hard to get back to 100%.”

"Do you still feel part of the team?"

Three out of eight student athletes said that they did not feel part of the team anymore and the other five student athletes said they still feel like they are part of the team. Student athlete “G,” who said they did not feel part of the team, said, "During the fall semester I felt very distant from the team and did not feel like they were including me but when spring ball started, I felt more part of the team." Another student athlete who said they didn’t feel part of the team stated, “After I injured myself, I felt completely distant from the team. They started not to include me, even when I came to practice, they didn’t see me.”

Five out of the eight student athletes said they did still feel part of the team. Student athlete “G,” the football player that suffered from a grade II concussion said, “Even though I am only a freshman, the guys made me feel part of the team. They kept me updated with everything that was going on and everything that I was missing.” Student athlete “F,” the football player who suffered from the torn hip labrum said, “Yes, I still feel part of team. I continued to go to the practices and games and I stayed around the coaches. They helped me feel part of the team.”

“Overall, How did or are you handling this injury?”

The student athletes with a major injury said that they are handling this injury with the best ability that they can. Six out of eight student athletes said that they were not handling this injury well at first, but then realized that they have to make the best of it.
Student athlete “B,” the female lacrosse player who tore her ACL with a meniscal tear said, “At first, I wasn’t handling it well but I am doing a lot better now. I realize there is nothing I can do about it so I might as well make the best of it. I’m just trying to do everything I can to stay involved with the team.” The male basketball player who also tore his ACL said, “It’s very hard because I am very frustrated all the time and it’s hard to be happy about it, I’m just trying to take rehab day to day.” Student athlete “E,” the male baseball player who tore his shoulder labrum had this to say about handling the injury, “I am just playing the hand that I am dealt and going through this experience day by day, which is not easy all the time.” Student athlete “H,” who dislocated his ankle with a fibular fracture said, “Ok, some days are better than others. I just have to take it one day at a time and continue to work hard on my rehab.” Most of the student athletes with a major injury continued to do their rehab from day to day and try to make the best out of the situation.

Research Questions 3: What processes, such as imagery or looking ahead, do student athletes use to motivate them through the rehabilitation process?

Student athletes use certain processes or tools to motivate them to work during the rehabilitation process after their major injury. Seven out of eight student athletes choose to look ahead to the future and look ahead to themselves playing in the next competitive season. Student athlete “F” said, “I am just looking ahead to next season and hoping that my shoulder will be 100%.” Student athlete “G,” the football players who sustained a Grade II Concussion said, “I am just looking ahead to next season and I had a lot of support from peers and my family, they gave me hope to be ready for next season.”
The next tool that student athletes use is peer support or social support to help them get through this major injury. Six out of eight athletes also said that peer support or social support motivated them to work harder in the rehabilitation process. Student athlete “C” who tore her ACL with a MCL tear said, “I look ahead to next season and my friends and family have been here to help me. Their support motivates me to work harder and get through this, so I can be ready to play next season.” Student athlete “D” who suffered from a clavicle fracture with an acromioclavicular ligament tear said, “I get a lot of support from my teammates and family to get back to the game. They motivate me to work hard and continue to rehab to be ready for next season.”

Another tool that student athletes use to help motivate them to get through the injury process and rehabilitation process is music. Music can help the athlete stay focused on the task ahead of them. Student athlete “A” who tore his ACL said, “I use music to help me, I also go by the Rocky IV “No pain” attitude and that helps me to get through this. Also, I try to imagine myself dunking off my bad leg and I always try to prove people wrong and show them what I can do.” This student athlete uses multiple tools to help him but music was his top choice to stay focused in the athletic training room. The baseball player who tore his shoulder labrum said, “After surgery I listened to music a lot, especially Metallica. Metallica got me pumped up and ready to start hard work.”

Table 4.7 portrays the tools and processes that student athletes use to motivate themselves to get through the rehabilitation process after a major injury occurred.
Table 4.7

*Tools and Processes used during the Rehabilitation Process*

<table>
<thead>
<tr>
<th>Tool/Process</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking Ahead</td>
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<td>1</td>
</tr>
<tr>
<td>Peer or Social Support</td>
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<td>2</td>
</tr>
<tr>
<td>Music</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Imagery</td>
<td>3</td>
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CHAPTER V
SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

This study investigated the emotions that selected Division III student-athletes from Rowan University experienced when a minor injury caused the student athletes to be out of competition for 7 to 10 days or a major injury that resulted in the athlete missing the rest of the competitive season. This study was also designed to assess the processes that student-athletes used, such as looking ahead and social support, to help the athlete get through the rehabilitation stage. The subjects in this study were selected Division III student athletes from Rowan University that incurred an injury that was minor which kept the student athlete out of competition for 7 to 10 days or a major injury that was season ending or surgical during the 2008/2009 academic year. This study was conducted in the fall and spring semester, which means that student athletes used in this study were in-season or out-of-season athletes that were doing rehabilitation for an injury after a surgery, or in-season athletes that sustained an injury during practice or a game. There were eight student athletes with a major injury and 13 student athletes with a minor injury that were interviewed in this study.

This study used a demographic questionnaire and an interview schedule to collect information. A consent form was given to each student athlete before the demographic questionnaire was distributed and before the interview was conducted. The demographic questionnaire consisted of nine questions and was structured to gain background
information on the student athlete. The interview took, on average 15 minutes to conduct, and consisted of 14 questions. The interview questions were designed to gain information about the student athlete and what they experience when a minor or major injury occurs.

Content analysis was used to analyze the data from the interviews. Themes and general emotions were analyzed by looking at the interview data and finding what each student athlete had in common with the other student athletes that were interviewed. There were many emotions and processes identified by the injured student athletes.

Discussion of the Findings

Research Question 1: What emotions do selected student-athletes report going through when a minor injury results in the student-athlete missing competition for 7 to 10 days?

There were many emotions that were in common with the student-athletes with a minor injury. The most common emotions found with all the student athletes with a minor injury was frustration, anger, and anxiety. These finding support the previous studies by Tracey (2003), Bloomfield, Fricker, & Fitch (1995), and Cassidy (2006). Frustration is discussed in previous studies and was found to be the most common emotion that student athletes with a minor injury reported experiencing. The second most common emotion among the student athletes was anger. In studies by Tracey (2003), Smith et al. (1990), and Gould et al. (1997b), student athletes reported experiencing anger when injury occurs. This study shows that nine of 13 student athletes with minor injuries experienced anger when his/her injury occur. The third most common emotion that occurred after an injury was anxiety. Student athletes become anxious to get back into
competition after the injury but recognized the importance of taking the time to become healthy, whether for a minor or major injury. Tracey (2003) and Smith et al. (1990) agree that anxiety is a common emotion that occurs when an injury is present among student athletes.

Research Question 2: What emotions do selected student-athletes report going through when a major injury results in the athlete missing the rest of the competitive season?

There are many emotions that are common with the student athletes who suffered a major injury. The most common emotions that student athletes with a major injury experienced was frustration, anger, and the feeling of being scared. These findings support the research of Tracey (2003), Cassidy (2006), and Smith et al. (1990). The most common emotion that the student athletes with a major injury experienced was frustration. Frustration was felt among all eight of the student athletes who suffered from a major injury. The second most common emotion was anger as reported by six out of eight of the student athletes with a major injury. The third most common emotion that was experienced by student athletes with a major injury was the feeling of being scared.

During the rehabilitation stage, many emotions are prevalent and whether the injury was minor or major, many emotions are common in the rehabilitation process. The Kubler-Ross grief cycle is a way to identify the stages that athletes may go through when dealing with certain emotions (Kubler-Ross, 1969). The grief cycle can be used at the initial onset of an injury all the way through the rehabilitation process. Throughout the rehabilitation process, frustration and anger changed to motivation and determination. Injuries start with frustration and denial, and end up with motivation and acceptance,
which is the final stage of the grief cycle. The data show that motivation was common among the student athletes who suffered a minor injury. This finding supports the research of Gould, Udry, Bridges, and Beck (1997a), Gould, Udry, Bridges, and Beck (1997b), Tracey (2003), and Cassidy (2006). Student athletes who experienced a major injury found that nervousness and the feeling of worthlessness were the most common emotion during the rehabilitation process. Gould et al. (1997a) reported that student athletes were worried about re-injury when returning to full competition. All eight student-athletes who suffered from a major injury felt that re-injury could occur when they returned to competition.

Research Question 3: What processes, such as imagery or looking ahead, do student athletes use to motivate them through the rehabilitation process?

During the rehabilitation stage, the student athletes used tools and processes to help them to get through the rehabilitation stage. The most common tool used by the student athletes was looking ahead. Student athletes used looking ahead to have something to look forward to when they are healthy and able to return to competition. The second most common process used by the student athletes was peer or social support. The student athletes used friends, teammates, classmates and roommates to help them cope better with his/her injury. According to Hanson, McCullagh, and Tonymon (1992) and Tracey (2003), peer support helps motivate student athletes to return to competition. For the students that had surgery, the process that was most commonly used was family support. These finding support the work of Gould, Udry, Bridges and Beck (1997b) and Tracey (2003). The final process that student athletes used was music as five out of eight of the student athletes with a major injury reported using music to help them
through the rehabilitation process. Student athletes reported that using music helps motivate them through the rehabilitation process.

Conclusions

The results of this study generally confirmed the findings of previous related studies. Student athletes know that participating in any sport brings on inherent risk of injury (Tracey, 2003). The study shows that student athletes are impacted by injury and are overwhelmed with many different emotions. It is important to better understand why injuries are stressful for athletes so that medical professionals, psychological professionals, and student-athletes themselves can better cope with injuries (Gould, Udry, Bridges, & Beck, 1997a).

Student athletes with minor injuries reported feeling many different emotions but the most common emotions were: frustration, anger, and anxiety. Student athletes with a major injury also reported experiencing many different emotions but the most common emotions were: frustration, anger, and feeling scared. When the student athletes that experienced a minor injury are compared to student athletes with a major injury, the emotions are very similar. Frustration and anger were the most common emotions that were experienced by both the student athletes with a minor or major injury.

During the rehabilitation stage of the injuries, the emotions were different. The student athletes with a minor injury experienced determination, motivation, and hope during their rehabilitation process. The student athletes with a major injury experienced nervousness, the feeling of being pathetic, and relief during their rehabilitation process. When compared the student athletes with a minor injury tended to handle their injury better than the student athletes that handled a major injury.
During the rehabilitation stages, different processes were used to help the student athletes get through the difficult times. For student athletes, looking ahead and social support are key factors in dealing emotionally with being injured and recovering from injury (Tracey, 2003). In this study, it was found that looking ahead, peer support or family support and music were the top three processes used during the rehabilitation process. Imagery was another process that was used in previous studies and was found to help out a few student athletes with a major injury.

Recommendations for Practice

Based upon the findings and conclusions of the researcher, the following suggestions are presented:

1. Athletic Trainers and Sport Psychologists should familiarize themselves with the grief cycle in order to get a better understanding of what student athletes experience when an injury occurs.

2. Coaches and teammates should be aware of the feelings of student athletes when an injury occurs. Being aware can help them to understand what they are experiencing.

Recommendations for Further Study

Based upon the findings and conclusions of the researcher, the following suggestions are presented:

1. Further studies should be conducted with a larger sample size in order to confirm the findings in this study.

2. Studies could be conducted at more than one school in order to confirm the findings in this study and increase the sample size.
3. This study could be taken further by comparing the emotions of the females and the males after an injury occurred.

4. Studies could be looked at over a longer period of time in order to get more student athletes involved in this study.

5. Studies could be conducted using the athletic trainer and the student athletes in order to get a different point of view from both the athletic trainer and the student athletes.

6. Further studies could be conducted on the reaction of coaches and teammates in handling their player or teammate’s injury.
REFERENCES


*Journal of Sport & Exercise Psychology, 19*, 71-90.


APPENDIX A

Institutional Review Board Approval Letter
January 28, 2009

Danielle Lodics
7 Whyte Drive
Voorhees, NJ 08043

Dear Danielle Lodics:

In accordance with the University’s IRB policies and 45 CFR 46, the Federal Policy for the Protection of Human Subjects, I am pleased to inform you that the Rowan University Institutional Review Board (IRB) has approved your project:

IRB application number: 2009-105

Project Title: Impact of Injury on Division III Student Athletes

In accordance with federal law, this approval is effective for one calendar year from the date of this letter. If your research project extends beyond that date or if you need to make significant modifications to your study, you must notify the IRB immediately. Please reference the above-cited IRB application number in any future communications with our office regarding this research.

Please retain copies of consent forms for this research for three years after completion of the research.

If, during your research, you encounter any unanticipated problems involving risks to subjects, you must report this immediately to Dr. Harriet Hartman (hartman@rowan.edu or call 856-256-4500, ext. 3787) or contact Dr. Gautam Pillay, Associate Provost for Research (pillay@rowan.edu or call 856-256-5150).

If you have any administrative questions, please contact Karen Heiser (heiser@rowan.edu or 856-256-5150).

Sincerely,

Harriet Hartman, Ph.D.
Chair, Rowan University IRB

Office of Research
Bole Hall Annex
201 Mullica Hill Road
Glassboro, NJ 08028-1701
856-256-5150
856-256-4425 fax
APPENDIX B

Student Athlete Consent Form
Dear Student-Athlete,

For my Thesis Project at Rowan University, I would like to conduct an interview to further my education in my graduate studies. A brief questionnaire should also be filled out before the interview is conducted.

The purpose of this study is to investigate the impact an injury has on a Division III Student Athlete. When an injury occurs, student athletes experience many different emotions, whether the injury is minor or season-ending. This study does involve emotions and may cause some discomfort and stress toward you, the student athlete, but your time and information will be beneficial for future student athletes and health professionals.

The questionnaire is designed to take only a few minutes of your time. The interview will take between ten and fifteen minutes but will be beneficial toward furthering my research. Participation in this study is voluntary and you may withdraw at any time. All responses will be kept confidential; no names will be used within this study.

If there is any need for you to talk to someone, the counseling center is aware of the study and is willing to see you, if needed. The phone number of the counseling center is 856-256-4222.

I know your time is precious, but I need as much information as you can give me in order for my study to be valid. I thank you for your time and patience during the questionnaire and interview process of this study.

If you choose to participate in this study:
- Please sign the consent form below
- Complete the questionnaire attached
- Participate in an interview for ten to fifteen minutes

If you have any questions about your rights as a research subject, you may contact the Associate Provost for Research at:

Rowan University Institutional Review Board for the Protection of Human Subjects
Office of Research
201 Mullica Hill Road
Glassboro, NJ 08028-1701
Tel: 856-256-5150

If you have any questions, feel free to contact me at (609) 707-2927 or email me at lodics08@students.rowan.edu. If you have any questions or concerns regarding this thesis study, please contact my thesis advisor, Dr. Burton Sisco, at 856-256-4500 ext. 3717. Thank you for your time and cooperation in this study.

- I, __________________________ give my consent to participate in filling out the questionnaire and participating in the interview.
- I, __________________________ do not give my consent to participate in filling out the questionnaire and participating in the interview.

Sincerely,

Danielle Lodics
APPENDIX C

Demographic Questionnaire
Questionnaire

Please answer all the questions below.

1. Name:__________________________________________

2. Age:_____

3. Sport you play:__________________________

4. Academic year:__________________________

5. Injury:____________________________________

6. How Injury Occurred, Please Explain:

7. Season-ending injury: yes____ no_____

8. Did your injury require surgery? Yes____ no____

9. How far along are in you in your Rehabilitation process?
APPENDIX D

Interview Instrument
Interview Questions

1. What is your injury?

2. How did the injury occur?

3. What emotions did you feel when the injury occurred?

4. Was the injury minor or major?

5. Did your injury require surgery?

6. Did your emotions change after surgery?

7. Have you begun your rehabilitation process? If so, how far along are you?

8. What emotions are you feeling during your rehabilitation process?

9. If injury was minor, how many days were you out of competition and when did you return to competition?

10. Are these emotions affecting your daily life?
11. Are you using anything to help you get through your rehabilitation process? (imagery, peer support, looking ahead etc.)

12. Do you still feel part of the team?

13. Upon return to competition, do you fear re-injury or losing your spot on the team?

14. Overall, How did or are you handling this injury?