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Perceptions of the Psychological Rehabilitation of a Student-Athlete with an injury in Sport at the NCAA Division I Level : A Narrative Approach of Student-Athletes and Athletic Trainers

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PERCEPTIONS OF THE PSYCHOLOGICAL REHABILITATION OF A STUDENT-ATHLETE WITH AN INJURY IN SPORT AT THE NCAA DIVISION I LEVEL: A NARRATIVE APPROACH OF STUDENT-ATHLETES AND ATHLETIC TRAINERS

by

HANNAH BENNETT

(Under the Direction of Daniel Czech)

ABSTRACT

How an athlete responds and recovers from an injury varies with each unique situation. One's reaction to their sport injury can be an influential determinant of their return to sport (Ahern & Lohr, 1997; Podlog & Eklund, 2005; Podlog & Eklund, 2009; Podlog, Lochbaum, & Stevens, 2009; Walker, Thatcher, & Lavalley, 2007). Those working directly with injured athletes are in a unique position to administer both physiological and psychological rehabilitation. Research has surfaced regarding the need of athletic trainers to also focus on the mental aspects of recovery (Barefield & McCallister, 1997; Gordon, S., Milios, D., & Grove, J.R., 1991; Grindley, E.J. & Zizzi, S.J., 2005). The objective of this narrative study is to focus and uncover the perceptions of coping with an injury among 4 NCAA Division I athletes and also the athletic trainers with whom they work. Interviews will be transcribed and a thematic structure of the lived experience of an injury will be revealed. With this investigative research, health and sport professionals will be able to approach both the mental and physical sides of rehabilitation with a better understanding of the emotions and thoughts of their athletes.

INDEX WORDS: Injury, Rehabilitation, Athlete, Athletic trainer, Coping, Psychology, Sport, Sport psychology

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A Thesis Submitted to the Graduate Faculty of Georgia Southern University in Partial
Fulfillment
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MASTER OF KINESIOLOGY

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DEDICATION

This thesis is dedicated to my unyielding, loving, remarkable, sometimes annoying, but always encouraging family: Mom, Dad, Josh, Zack, and Khara. You have been the light at the end of the tunnel – always pushing me to be the best version of myself, in academics and in life. You have been the hand to hold and the kick in the butt whenever I needed it, which we all know was more often than not. Thank you for always being my never ending support. Love ya, bub! Ah yuh.

And to all of those along the way who have been there for me in good times and in bad, through sickness and in health – this marriage we call friendship is something I have cherished and will continue to cherish throughout my life. My love for you all runs deeper than my love for Harry Potter, theme parties, Fenway Park, bionic beavers, and Maine summers on the lake. RIP MG.

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TABLE OF CONTENTS

ACKNOWLEDGMENTS	6
LIST OF TABLES	8
CHAPTER	
1 INTRODUCTION	9
2 METHOD	19
3 RESULTS	28
4 DISCUSSION	56
REFERENCES	85
APPENDICES	
A RESEARCH QUESTIONS, ASSUMPTIONS, DELIMITATIONS, LIMITATIONS, AND DEFINITIONS	95
B ANNOTATED BIBLIOGRAPHY	98
C IRB NARRATIVE PROPOSAL.....	105
D INFORMED CONSENT	109

LIST OF TABLES

Table 1.0: Level of Perceptual Continuity - Overall	28
Table 1.1: Level of Perceptual Continuity - Thoughts	29
Table 1.2: Level of Perceptual Continuity - Emotions	33
Table 1.3: Level of Perceptual Continuity - Attitude	39
Table 1.4: Level of Perceptual Continuity – Coping Strategies	43
Table 1.5: Level of Perceptual Continuity – Life Impact	47
Table 1.6: Level of Perceptual Continuity - Relationship	51

CHAPTER 1

INTRODUCTION

According to the NCAA's Sport Sponsorship and Participation Rates Report (2010), there are over 430,000 students-athletes on over 17,800 teams throughout three NCAA divisions in the United States. While participation in competitive collegiate level athletics is increasing, this only suggests that the increased possibility of injuring oneself is also more common. Accordingly, it has been estimated that roughly 17 million athletes in America experience a sport-related injury each year (Ahern & Lohr, 1997).

Injury in sport varies between athletes. In fact, one's reaction to a sport injury can be an influential determinant of one's return to sport (Ahern & Lohr, 1997; Podlog & Eklund, 2005; Podlog & Eklund, 2009; Podlog, Lochbaum, & Stevens, 2009; Walker, Thatcher, & Lavallee, 2007). Because the information regarding the psychological aspects of injury continues to emerge in the field of sport psychology, research examining injury reaction varies amongst different empirical research studies. This initial research only allows for the field to further expand as new studies and experiments surface. The need for psychological skills in order to help cope with and better aide an injured athlete has been noted (Barefield & McCallister, 1997; Gordon, Milios, & Grove, 1991; Grindley & Zizzi, 2005). Researchers have suggested that addressing the psychological aspects of the injury is an important aspect of rehabilitation for those working with injured athletes (Ahern & Lohr, 1997; Hemmings & Povey, 2002). By addressing this mental side, those working with these athletes may be able to better assist in the entire rehabilitation process.

Initially, it was suggested that injured athletes progress through a sequence of emotional stages, known as the five-stage grief model (Kübler-Ross, 1969). These five stages consist of denial, anger, bargaining, depression, and acceptance. However, this model soon became subject to interpretation because there was no clear and definitive research that stated each individual goes through this same emotional sequence (Quinn & Fallon, 1999; Walker, Thatcher, & Lavalley, 2007). Quinn and Fallon (1999) examined the rehabilitation process in four phases with findings supporting the idea that athletes fluctuate between areas of mood, stating that an “increase in positive psychological factors and a decrease in negative psychological factors were not consistent throughout the rehabilitation process” (p. 226). Granito’s (2002) study further uncovered that athletic injury is a subjective and different experience for each athlete, and while some athletes experience similar emotions and produce similar reactions to injury, each case is an individualized experience.

Tunick, Etzel, Lerner, and Leard (2002) further discussed the process of reacting to an injury-related loss with five phases: shock, realization, mourning, acknowledgement, and coping. Occurring initially, shock is experienced within the first few days after injury, if not a few hours after the injury itself. It is in this phase that denial may emerge, potentially creating a patient not open to the immediate help of those around them. Realization then occurs when the athlete begins to realize that there may actually be something wrong with their body, which may incite feelings of anger, anxiety, panic, and/or depression. After realization, mourning ensues. Mourning may consist of emotions such as hopelessness and helplessness. The athlete may now be turning inward, avoiding contact with others as they may feel all hope is lost. The fourth phase in the

process of reaction is acknowledgement. During this phase, although the student-athlete may now acknowledge the limitations and delimitations of their injury, they may still experience depression and anxiety, and furthermore, may now rely on others for help with tasks they can complete on their own. Finally, coping occurs as the last phase. With this phase, the athlete has been actively working through their injury and now turns the focus to moving on from the injury in their life.

Further, while researchers have suggested that there are common emotions athletes report in response to an injury, these emotions are subjective experiences. Although athletes may have similar emotions, no athlete's particular reaction is likely to be exactly the same as another's. Some of the most common emotions and responses include, but are not limited to: fear and anxiety, struggle to return to pre-injury performance levels, frustration, loss of affinity to team, pressures to return in a timely manner, fitness levels, catastrophizing and thought distortion, a loss of identity, and meeting expectations (Cassidy, 2006; Green & Weinberg, 2001; Heil, 1993; Podlog & Eklund, 2005; 2009; Podlog, Lochbaum, & Stevens, 2009; Tracey, 2003; Vergeer, 2006).

When addressing the emotions associated with injury, implementing sport psychology and mental skills techniques can be beneficial in the recovery process (Barefield & McCallister, 1997; Clement & Shannon, 2011; Gordon, Milios, & Grove, 1991; Granito, 2002; Grindley & Zizzi, 2005). Some of the most common coping techniques for injuries in sport are: goal setting, visual imagery, use of social support, relaxation techniques, and positive self-talk (Granito, 2002; Gordon, Milion, & Grove, 1991; Heil, 1993; Paragam, 1993; Quinn & Fallon, 1999; Rees, Mitchell, Evans, & Hardy, 2010; Taylor & Taylor, 1997; Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998).

While the use of coping techniques varies between each injured athlete, athletes must address the psychological side of an injury to return to their highest possible performance level post-injury. In a study conducted on athletes returning from ACL injuries, Kvis, Ek, Sporrstedt, and Good (2005) suggest that athletes put a greater focus on the psychological aspect of injury in order to return to their pre-injury level of activity. Although limited, there is still research expressing different uses of coping strategies and how they affect an athlete's return to sport, their outlook on their injury, and their perceptions of rehabilitation (Barefeld & McCallister, 1997; Fisher & Hoisington, 1993; Granito, 2002; Quinn & Fallon, 1999; Weiss, 2003; Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998).

Among some of the research examined, particular theories and practices have emerged. The self-determination theory (SDT) was introduced as a possible response paradigm for injured athletes (Podlog & Eklund, 2005; 2009). SDT as a response set for injury could be explained through its motivational aspect of using a person's basic needs. Specifically, three basic psychological needs emerged from SDT as the 'necessary' elements to fulfill in order for a positive response to injury rehabilitation: autonomy, relatedness, and competence. Autonomy refers to the idea that the individual is making their decisions as their own person and by their own choice. Relatedness refers to the need to interact and be connected to those around them (a team, family, peers, etc); while competence suggests that the individual feels they are able to complete their assigned tasks successfully (Deci & Ryan, 1985). Although the research done by Podlog and Eklund has shown insight to the topic, the call for further investigation is needed to further describe this phenomenon.

Another model that has emerged is the integrated model of response to sport injury (Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998). This model suggests that the outcome of the rehabilitation process lies within how the athlete appraises their injury and also their response to the injury both emotionally and behaviorally. Because the present study looks at the appraisal of injury from both the perspectives of the athletic trainers and the injured student athletes with whom they work, the comparison of experiences may show an interesting insight with the differences in perspectives.

Though no specific model is founded upon this next area, social support is also seen as a key element that is used to help athletes rehab (Barefield & McCallister, 1997; Evans & Hardy, 2002; Granito, Hogan, & Varnum, 1995; Podlog & Eklund, 2008; Rees, Hardy, & Evans, 2007; Robbins & Rosenfeld, 2002; Walker, Thatcher, & Lavallee, 2007). Social support can be given from other injured-student athletes, teammates, friends, peers, family, and team personnel. One might assume that this, in turn, can increase the motivation and belief in the physical therapy needed. Furthermore, while social support from peers, teammates, family, and coaches may have an effect on the injured athlete's recovery process, the athletic trainer with whom they work is seen to have the most influential role in the realm of social support and recovery (Hedgpeth, & Sowa, 1998; Herring & et al., 2006; Roh & Perna, 2000). This support can have a positive effect on the athlete's emotional and behavioral outlook on the rehabilitation process (Gould, Udry, Bridges, & Beck, 1997).

The rehabilitation process for injured athletes, regardless of severity, involves assistance with a form of physical therapy. For collegiate athletes, each team is provided with a certified athletic trainer (ATC) that not only attends to injuries during games, but

is present for all practices, available throughout the day and night for emergency issues, and also travels with the team to competitions. The importance of ATCs at the collegiate level is not only apparent, but one could argue that it is also necessary to maintain health and wellness of teams at all times.

In recent years, the need to look further than the physiological aspect of injury rehabilitation by athletic trainers has been discussed (Barefield & McCallister, 1997; Hemmings & Povey, 2002; Herring et al, 2006). Moulton, Molstad, and Turner (1997) found that the ATCs perceived that their roles extending beyond the sole attention to injury rehabilitation to include a counselor-based aspect. Aside from the physiological side of injury, the role of the ATC has taken on various aspects that do not specifically pertain to dealings with the physical body of the athlete, such as dealing with support, nutrition, and counseling. Although the training of the athletic trainer may not fall under those specifications, the fact that student-athletes turn to their ATC for these aspects can show a level of trust from the student-athlete toward their athletic trainer. ATCs are in a unique position, as their continuous presence could help facilitate a positive environment for recovery. By examining the mental aspect of injury, athletic trainers can help athletes set goals, establish positive self-talk, encourage injury acceptance and awareness, and provide support, among enacting many other counseling techniques.

Trainers working with injured athletes have accepted a need to address the psychological side of injury, but some feel as though their training is not of great development, as aforementioned. Additionally, many athletic trainers are open to further training in the area to better serve their clients (Hemmings & Povey, 2002; Ninedek, & Kolt, 2000; Moulton, Molstad, & Turner, 1997). This may be because of the seemingly

increased attention to aspects such as psychological skills or mental skills within rehabilitation. Green and Weinberg (2001) suggested that it is important for those working closely with the injured athletes to study both personal and situational factors of their athletes, as to help assess the reactions occurring post-injury. Because ATCs are one of the most consistent sources of support in an athlete's rehabilitation process, their ability to assess both the physical and mental side of injury requires proper training (Barefield & McCallister, 1997; Roh & Perna, 2000). Barefield & McCallister (1997) have suggested a set of techniques for educating student ATCs working with injured athletes. These techniques would begin at an early educational standpoint for athletic trainers who may not have fully completed athletic training education, or are new to the major itself. By implementing a program of set techniques earlier in their education, the utilization of important psychological and counseling skills may provide further advantage to successful rehabilitation processes. The idea is to start developing skills such as building a rapport, educating the athlete about the injury, identifying (and potentially combating) athlete's thought distortions, encouraging progress, goal setting, implementing positive self-talk, and support. By learning these skills while still learning the fundamentals of athletic training, students are able to form solid foundations for future relationships with injured athletes. One may assume that as students become more familiar with the specific processes involved in the physiological side of athletic training, their counseling and psychological skills are already in place for successful use with those injured. That being said, when faced with a question that pertains to the psychological side of rehabilitation, the ATC will not feel underprepared, but adequately able to address the topic with confidence.

Because of the consistent attention given from an ATC to their teams, an athlete's rehabilitation process is seen through both the perspective of the injured athlete and that of the ATC (Barefield & McCallister, 1997; Bone & Fry, 2006; Fisher & Hoisington, 1993; Granito, 2002; Robbins & Rosenfeld, 2002). The interaction between both of the ATC and the injured student-athlete is constant, and one might assume that the relationship established can help or hinder the rehabilitation of an athlete. Washington-Lofgren, Westerman, Sullivan, and Nashman (2004) noted that many student athletes questioned felt as though their ATCs already had an idea of what they were experiencing when they were injured. In addition to this finding, Washington-Lofgren and colleagues (2004) also found a large percentage of the student-athletes stating that they think their athletic trainer should be qualified to help with their coping because "in a way it's part of the rehabilitation process" (p. 99).

Research has shown that this support and emotional guidance from the athletic trainer results in a more positive recovery and stronger adherence to the rehabilitation process (Barefield & McCallister, 1997; Grindley & Zizzi, 2005; Hedgpeth, & Sowa, 1998; Herring & et al., 2006; Roh & Perna, 2000). Furthermore, social support from and social interactions with the ATC during the physiological rehabilitation can be seen from the athlete in a positive light, as the ATC can then also provide much needed emotional support for the athlete (Barefield & McCallister, 1997; Bone & Fry, 2006; Granito, 2002). Because of the student-athlete's fluctuations in emotions during the rehabilitation process, it could be assumed the ATC is able to see both the good and bad days of rehabilitation, and how it affects the student-athlete emotionally. Exposure to these emotional fluctuations can help branch into ways that the ATC can address and support

the student-athlete during what could be an emotionally difficult time period in their athletic career. Barefield and McCallister (1997) suggest that ATCs should familiarize themselves with the “psychological aspects of the athletic trainer-athlete relationship” (p. 337) in order to better serve the injured athlete with a more holistic approach, citing that sometimes those injured “need athletic trainers to take the time to listen to them” (p. 336).

The individualistic experience of rehabilitation was also noted from ATCs when speaking about the need to address the psychological side of rehabilitation (Washington-Lofren et al., 2004). One ATCs says that many athletes “have same psychological needs – but each one is an individual so how you handle these needs is different” (p. 101). In addition, another ATC mentioned that each situation is never the same and that each athlete responds to stressors differently, noting that treatment of these stressors be adjusted to each individual. From these statements, it’s clear to see how the ATCs are able to identify the subjective psychological needs of the injured-student athletes with whom they work, but they do not speak to having the appropriate knowledge to address them with accuracy and confidence.

The need of research in this specific area is established, but the importance of the use of qualitative research cannot be stressed enough. Aside from Granito (2002), quantitative research has been the primary source of information within this field. Qualitative research allows for the researcher to fully explore and delve into the experience of the participants, gaining important information regarding their perspectives, emotions, and thoughts. Through examining and analyzing stories and past experiences, richer and deeper meaning was uncovered for the purpose of the present

study. The descriptions provided will allow the researcher to gain a holistic meaning and appreciation for the individual's specific personal events. Because the nature of the present study is to gain important perspectives from both injured athletes and their ATCs, a qualitative narrative approach is the only appropriate method of gaining this information.

Of all the varying research on a topic that clearly needs to be addressed and further investigated, the purpose of the present study was to examine the subjective lived experience of injured NCAA collegiate athletes during their rehabilitation process, how they appraised their injury, and the common emotions and feelings during their rehabilitation. In addition, this study also examined the perceived experiences of the student-athlete from the perspective of the athletic trainer with whom they worked. The present study explored the common emotions, thoughts, and attitudes that accompany both injured athletes and the ATCs working with them. Furthermore, the importance of the relationship between both the student-athlete and the athletic trainer was examined.

Although previous research has supported the idea that social support from the ATC and the relationship of the student-athlete and the ATC is crucial to the rehabilitation process, there is limited research that addresses the varying perspectives of the process from student-athletes and athletic trainers. Research into these areas allows those working with athletes, such as ATCs, a better understanding of how to comprehend and address the mental side to athletes' injuries, not solely the physicality of the injury itself. It delved into the subjectivity of individual's experiences (both the athletes and ATCs), thus tailoring recovery.

CHAPTER 2

METHOD

The purpose of this study was to examine the injury-related perceptions between severely injured student athletes and their athletic trainers on the common thoughts, emotions, and attitudes of the injury rehabilitation, the coping strategies that were employed during the injury rehabilitation, and the life impact of the injury on the student athlete. Furthermore, the relationship between the student-athlete and their athletic trainer was investigated. The goal of this study was to uncover the relationship between a student-athlete and their athletic trainer in hopes to help athletic trainers, and other helping professionals, better understand and handle the psychological rehabilitation of injury.

This study used a qualitative semi-structured interview approach which allowed the researcher to delve into the experiences of the particular participant. Specific questions were asked in order to gain deeper meaning into the participants' thoughts of injury rehabilitation and also to gain perspective on the relationship between the student-athlete and their athletic trainer. The use of the narrative approach in this study rests in the need to accurately relay the stories and experiences being told from the participants' point of view (Moen, 2006). A comparative narrative approach was implemented mainly to focus on the perceptual continuity or lack of perceptual continuity of the student-athlete and their athletic trainer's responses. Furthermore, the narrative approach was used to highlight the relationship between student-athlete and athletic trainer. The details of the relationship between the student athlete and their trainer further aid those in the helping profession to better understand the mental side of injury rather than only the

physiological side. All interviews were recorded and transcribed verbatim. After transcription, the interviews were sent to the participants for member checks and then either edited and sent back to the researcher, or deemed accurate and validated by the participant.

Member Checks

The interviews were transcribed, verbatim, and sent to each participant. The participant had the opportunity to read the transcription and edit anything they felt was unclear, and could change the transcription to more accurately portray their feelings and/or experience.

Bracketing Interview

The primary research used a bracketing interview to become aware of any biases that they might have when analyzing the interviews. Being aware of predisposed biases helps the researcher to maintain a neutral mindset when examining an individual's own experience.

Peer Reviews

After analyzing and identifying the themes from the interviews, the primary research presented the themes to an unbiased group of peers who overlooked the discovered themes. This was done in order to keep the primary researcher's biases from overlooking any pertinent or glaring themes from the interviews.

Participants

Participants in this study were collegiate student-athletes who were currently in the process of rehabbing from an injury, and also the specific certified athletic trainer (ATC) with whom they conduct their rehabilitation practices. Student-athletes' ages

ranged from 20 to 24 years old, all with at least a year of collegiate play. There was one injury that had required surgery, while three participants were non-surgical. All ATCs were certified under the certification requirements of the National Athletic Trainers' Association (NATA). Student-athletes were interviewed from the following sports: soccer, tennis, and volleyball. When interviewed, two athletes were currently out-of-season, while two athletes were in-season. There were two females and two male student-athlete participants, while all ATCs interviewed were female.

Procedure

Through deliberate sampling based upon established intercollegiate relationships, four student-athletes and three certified athletic trainers were contacted to participate in this study. After the approval of the University's Institutional Review Board and informed consent, the researcher interviewed seven participants that include four injured student-athletes and their respective certified athletic trainers (ATCs). The interviews with each participant were conducted in a pre-approved location comfortable to both the researcher and the participant. The interviewees were given and signed a consent form and debriefed following the interview.

Interview Protocol

During the interview process, the researcher investigated the perceptions of athletic injury as a whole through the eyes of both the injured and the ATCs. Interviews were given to each participant separately, as the need to uncover individual views was especially important for this study. Each student athlete was asked the same set of interview questions, while the ATCs were asked a similar, but different set of questions.

Both interview question sets focused on the three research questions previously established.

To probe into each individual's subjective experience, the following questions were established as the present study's research questions:

1. What are the perceptions of a severely injured student athlete and their athletic trainer on the thoughts, emotions, and attitudes of the injury rehabilitation?
2. What are the perceptions of a severely injured student athlete and their athletic trainer on the coping strategies that were employed during the injury rehabilitation?
3. What are the perceptions of a severely injured student athlete and their athletic trainer on the life impact of the student athlete?

Two separate sets of interview questions for each group of participants (the student athletes and their ATCs) were established to gain information for the answering of the three research questions. The following questions were the set interview questions for each student athlete:

1. Demographics
 - a. Can you tell me your name, age, and what sport you play?
 - b. Tell me about your injury.
 - c. How long have you been in rehab?
2. Research Question 1 – Interview Questions
 - a. When you think about the thoughts that you are experiencing or experienced during the rehabilitation process, what comes to mind?

- b. What you think of emotions that you are experiencing or experienced during the rehabilitation process, what comes to mind?
 - c. How would you describe your attitude about or towards your rehabilitation experience?
3. Research Question 2 – Interview Questions
- a. When you think of the specific coping strategies that you used or are using during the rehabilitation process, what comes to mind?
4. Research Question 3 – Interview Questions
- a. When you think of the life impact that this injury has had on you, what comes to mind?
5. How would you describe your relationship with your athletic trainer?

Interview questions for the ATCs are listed as:

1. Background – Base Question
- a. Have you previously taken a course, undergraduate or graduate, in the area of sport psychology?
2. Research Question 1 – Interview Questions
- a. When you think about the thoughts that your athlete is experiencing or experienced during the rehabilitation process, what comes to mind?
 - b. What you think of emotions that your athlete is experiencing or experienced during the rehabilitation process, what comes to mind?
 - c. How would you describe your athlete’s attitudes about or towards their rehabilitation experience?
3. Research Question 2 – Interview Questions

- a. When you think of the specific coping strategies that your athlete used or are using during the rehabilitation process, what comes to mind?
4. Research Question 3 – Interview Questions
 - a. When you think of the life impact that this injury has had on your athlete, what comes to mind?
 5. How would you describe your working relationship with this particular injured athlete?

In order for participants to elaborate on their answers, they have been asked to expand on an answer they gave previously with the question:

- You mentioned _____. Can you elaborate further on that?

Data Analysis

After interviews were conducted, the recordings were transcribed by the primary researcher. Each interviewee received a copy of their interview to ensure accuracy of transcription. After the interviewees accepted transcriptions, the interviews were then reviewed by the primary researcher.

In contrast to quantitative research, it has been suggested that there is no correct way to analyze qualitative data. A crucial element of qualitative research is for the researcher to be as detailed as possible when collecting data through interviews and discussions. A methodological approach developed by Czech et al. (2004) and Patton (2002) was used to analyze the qualitative data. The process is described in the following outline:

1. Approaching the interviews
 - a. *Transcribing the interview*

- b. *Obtaining a grasp of the interview*
- 2. Focusing the data
 - a. *Bracketing the data*
- 3. Phenomenological reduction
 - a. *Eliminating irrelevant, repetitive, or overlapping data*
 - b. *Verifying the elimination of the data*
- 4. Releasing meanings
 - a. *Forming categories*
 - b. *Identifying the themes*
 - c. *Describing the themes*

Approaching the Interviews

As each interview was tape recorded for research purposes only, the information from the interview was carefully and methodically transcribed on a computer. The transcribing of the interview was crucial as this allowed for apparent themes to stand out when coding. After correctly and diligently transcribing the recordings, the digital tape recording of the interview was destroyed. The researcher then listened and read the interview multiple times to understand the experience being described by the participant.

Focusing on the Data

As previously stated, the researcher needed to be aware of the pre-established biases they may have towards the topic of study. In order to address this potential bias in coding, the researcher answered the questions as if they were for themselves. This allowed the researcher to see their own patterns of themes and allowed them to view the

topic more objectively when analyzing other participant's responses. Also known as 'bracketing', the researcher was aware of what he or she may be instinctively looking for.

Phenomenological Reduction

The transcription of each interview consisted of a multitude of information, some pertinent but some that was needed for the investigation of this study. Phenomenological reduction allows for the researcher to eliminate irrelevant, overlapping, or repetitive phrases such as "umm" or "uhh", or unrelated fragments. This pares a lengthy transcript down to a more specific and direct interview transcript.

It was still extremely important to maintain the interviewee's point of view and their experience. In order to do this, the researcher returned the transcription to the interviewee for review and approval of the elimination of the non-essential data. The interviewee was given ample time to go through the new script to agree, disagree, and/or edit their interview. This was a necessary element because the emotions and perspectives of the interviewee needed to be their own. The objective was to understand the experience through the eyes of the injured athlete.

Releasing Meanings

After the interview had been transcribed and approved by the interviewee, the researcher then went through the many pages of interviews and form categories. These categories fell into 'meaning units'. Meaning units are clusters of similar phrases put together from different interviews.

After identifying these meaning units, they were broken down further into distinctive themes. These distinctive themes represent something different and specific from another theme.

As previously stated, the elimination of non-essential data was employed. The researcher broke down the parts of the interview that directly investigate the use of coping skills during injury and the rehabilitation process, and rid the interview of non-essential information.

Reliability

To ensure that the study's results were reliable, they must demonstrate some consistency across time and participants (Patton, 2002). For the purpose of qualitative research, the trustworthiness of the participants' responses was necessary. Furthermore, the following questions were used to ensure reliability: Do the descriptions capture the experience? Does the structure match the co-participant's experience? Does the structure emerge from the data? Do others see the description?

Validity

To increase validity, the researcher used triangulation. Triangulation is the use of 'strategies for reducing systematic bias and distortion during data analysis' (Patton, 2002). In the present study, triangulation was used through a bracketing interview, member checks, and peer reviews.

CHAPTER 3

RESULTS

The seven specific questions allowed the researcher to investigate the actual experience of the injured student-athlete and the perceptions of that athlete's experience through their athletic trainer. Perceptual continuity varied through each of the relationships between athletic trainer and student-athlete. Perceptual continuity is the examining of the relationship's flow and consistency throughout the series of questions. It should be noted that Athletic Trainer 3 was the ATC for both Student-Athlete 3 and Student-Athlete 4.

Table 1.0 – Level of Perceptual Continuity – Overall

	Thoughts	Emotions	Attitude	Coping Strategies	Life Impact	Relationship
SA1-ATC1	Low	Low	Low	High	Low	High
SA2-ATC2	High	Moderate	Moderate	Low	Low	High
SA3-ATC3	High	High	High	Low	Low	High
SA4-ATC3	Moderate	Moderate	High	Low	High	High

Thoughts

The thought process for each individual can vary over the course of rehabilitation. What is transpiring in the mind of the student-athlete can provide insight to how they process rehabilitation, among other things. For this specific aspect, the question asked to each student-athlete was as follows: when you think about the thoughts that you are experiencing or experienced during the rehabilitation process, what comes to mind? The

question for the athletic trainer was: when you think about the thoughts that your athlete is experiencing or experienced during the rehabilitation process, what comes to mind?

Table 1.1 – Level of Perceptual Continuity – Thoughts

Student-Athlete 1/Athletic Trainer 1	Student-Athlete 2/Athletic Trainer 2	Student-Athlete 3/Athletic Trainer 3	Student-Athlete 4/Athletic Trainer 3
Low	High	High	Moderate

Student-Athlete 1 – Athletic Trainer 1 Perceptions

When examining their thoughts on the rehabilitation process, the student-athlete seemed to disassociate from the rehabilitation routine by socializing, but also focus when necessary. Furthermore, thoughts of being “over the injury” became apparent. In contrast, the athletic trainer perceived that the student-athlete she was working with was complaining and second guessing. There seemed to be less perceptual continuity with what the student-athlete was thinking and what the athletic trainer perceived her to be thinking during the rehabilitation process.

Student-Athlete 1

“I actually like to socialize during rehab, so I’ll be doing my exercises and then I’ll talk to people so I get through my rehab faster so I don’t really have to think about it.”

“But you have to be controlled sometimes if the exercise hurts, you have to really think about the exercise you’re doing, make sure you’re doing it right, because if you’re doing it wrong it could not benefit you at all, or it could completely mess up your shoulder.”

“...and I just love the sport so much, you get to a point where you’re just like, ‘I don’t care if it hurts, just put me back in.’”

“So, everyone around me is antsy and it starts to build up, and I’m like, ‘I just want to be on the court.’”

Athletic Trainer 1

“I think this person thinks about how hard everything is – she likes to say how hard everything is, and that she doesn’t know that what we’re doing is going to get her back on the court. She questions a lot of things.”

Student-Athlete 2 – Athletic Trainer 2 Perceptions

Within this relationship, there seemed to be more perceptual continuity in the thought process. Although not able to accurately pinpoint the same definitive thoughts, the student-athlete and the athletic trainer seemed to have an understanding of where the student-athlete was in her thought process at this given time. The student-athlete described a variety of thought, while the athletic trainer pinpointed first acceptance and then frustration.

Student-Athlete 2

“‘Oh I’m seeing improvement’; ‘I’ll get there. This rest is good for my body’; ‘I’ll be able to last longer come fall when season is’.”

“‘The negative is just more the now, not the long term. It’s more overwhelming than anything, not really that negative.’”

“‘...at this point right now, I think the most common thought is like, ‘I’m so over this’.”

Athletic Trainer 2

“– I think she recognized the severe nature and that it is going to take some time.”

“I think this time she realized, ‘okay, I need to take time.’”

“...at least recently, getting a bit more frustrated because she has been given some leeway so I think she feels and she can do more, and she wants to be able to do more.”

Student-Athlete 3 – Athletic Trainer 3 Perceptions

For this relationship, the thoughts that the student-athlete focused on were geared toward progression and getting back onto the court. The athletic trainer perceived the student-athlete’s thoughts to be cycling through the five stages of grief, and most recently into getting back onto the court, which was on the same mark as the student-athlete.

Student-Athlete 3

“I think just rehabilitation.”

“...getting back to doing every day activities and then progress to being able to perform on the tennis court – get back to my sport.”

“It’s like, “Oh my goodness, can I hurry up and get this rehab going and get cleared by the doctors” and stuff like that so I can go back and play.”

Athletic Trainer 3

“Frustration at the beginning definitely.”

“I could definitely see like the five stages of grief going on with him. So definitely saw him in denial in the beginning, frustrated, and now he’s at the point of acceptance because it’s been going on so long.”

“Right now, I think he’s just ready to be back on the court.”

“...now I think it’s just being ready to be back on the court. So he has high hopes of getting clearance soon.”

Student-Athlete 4 – Athletic Trainer 3 Perceptions

While the student-athlete was portraying more of a varied response in his thoughts during rehabilitation, the athletic trainer seemed to perceive the student-athlete to have more of negative thought process in terms of rehabilitation. There was perceptual continuity in the negativity of thoughts, but no perceptual continuity within the positive thoughts. A moderate level of perceptual continuity was found within this relationship. This disparity will be further discussed in the discussion section.

Student-Athlete 4

“It’s a surprise per day. It goes up and down.”

“So it’s hard.”

“One day, you’re like ‘okay come on’ positive – ‘it’s going to be quick, and we’re going to do it right and its feeling better and better’. And other days you’re like, ‘this feels awful’ and ‘how long is this going to take’ and ‘when am I able to run?’”

Athletic Trainer 3

“Very much angry, very much ‘why me?’”

“He’s definitely having trouble understanding the reasoning behind it and why he can’t get a quick fix like a pain relief shot or something like that. And he doesn’t understand – like he takes good care of his body, ‘why is this happening to him’...”

“...he’s just really frustrated with the whole process.”

Emotions

Emotions for injured athletes are subjective to each individual and to each injury. It is necessary in this study to understand the complex emotions being experienced through the student-athlete and to see if there is any perceptual continuity with the athletic trainer. To gain a deeper understanding of the emotions that the student-athlete was experiencing throughout their rehabilitation process, the following question was asked: when you think of the emotions that you are experiencing or have experienced during the rehabilitation process, what comes to mind? For the athletic trainer, their perceptions of the student-athlete's emotions were answered through the following question: when you think of the emotions that your athlete is experiencing or experienced during the rehabilitation process, what comes to mind?

Table 1.2 – Level of Perceptual Continuity – Emotions

Student-Athlete 1/Athletic Trainer 1	Student-Athlete 2/Athletic Trainer 2	Student-Athlete 3/Athletic Trainer 3	Student-Athlete 4/Athletic Trainer 3
Low	Moderate	High	Moderate

Student-Athlete 1 – Athletic Trainer 1 Perceptions

There was very little perceptual continuity, or flow, within emotions in this particular relationship. There was such separation between the responses that the athletic trainer used the word 'frustration' in their description. The student-athlete stated that there was no frustration at all in rehabilitation. The student-athlete touched upon emotions such as pressure, motivation, antsy, and being a complainer. The athletic trainer spoke of an up and down cycle, the student-athlete second guessing, and also frustration.

Student-Athlete 1

“Sometimes I just like to complain to annoy her (*laughs*). I mean, whether it actually hurts or not.”

“I never have frustration.”

“Like you just get fed up with not being able to do it, sometimes you get frustrated that you’re injured and you’re like I wish I was better now. But normally that’s only during practice, I don’t usually get frustrated during rehab, but definitely antsy during practice. You just want to get back in because you’ve been out for so long – and I just love the sport so much, you get to a point where you’re just like, ‘I don’t care if it hurts, just put me back in.’”

“– and sometimes my coach, he’ll be like, when are you going to be back, like we need you soon, we need you to get cleared soon.”

[Question: So do you feel that pressure to come back at a certain time?] “Yes, I definitely feel pressure.”

[in response to pressure to return] “It makes me want to work harder. Because if I come back too early and completely mess it up then I’m going to be out for even longer, so if I work harder on my rehab maybe I’ll be a little stronger.”

Athletic Trainer 1

“But I think she’s frustrated that it’s taking so long to get back, but then other times it seems like she doesn’t really mind as much that she’s not doing some of the team activities either because it’s kind of a break and she can rest, so she kind of goes back and forth with how she feels about it. Sometimes it’s not as bad and other times it’s really frustrating.”

“I also think she second guessed the decisions we made some”

“She questions a lot of things. I think she just thinks that because it’s hard it might not be beneficial.”

“I think she gets frustrated a lot with not being able to do something that the rest of the team’s doing, like hitting.”

“But I think she’s frustrated that it’s taking so long to get back.”

“Sometimes it’s not as bad and other times it’s really frustrating.”

Student-Athlete 2 – Athletic Trainer 2 Perceptions

This student athlete and athletic trainer were more on the same page from an emotional standpoint. Although not explicitly utilizing the same emotions in their responses, the emotions given could be in relation with one another: overwhelmed, frustrated, motivated, optimistic, resilient, emotionally down, and antsy. A moderate level of perceptual continuity was seen within this specific area.

Student-Athlete 2

“I’m pretty tough for the most part I think.”

“... soccer’s usually been my outlet, so when I don’t have that release, it just gets so overwhelming.”

“And I’ve broken down a couple times but I mean, it’s just because everything’s accumulating.”

“And the negative is just more the now, not the long term. It’s more overwhelming than anything, not really that negative I guess.”

“But I’m definitely more optimistic now than I was back then [during season, onset of injury] cause I kind of had the ‘why me’ mentality, but I mean, it’s getting better, it’s easier to see the perspective of both sides.”

“...you just want to be like, ‘yeah okay, I’ll handle the pain, let me go play on the field’ type thing.”

Athletic Trainer 2

“Definitely frustration, just wanting to be better.”

“...if there’s something going on with her school life or personal life it does carry over into rehab because it just makes her a little more frustrated.”

“A big one I think would be frustration.”

“...they do have the motivation to do whatever is necessary, but it depends on what’s going on.”

“I don’t know if I’d go as to say depressed because you’re not as involved with the team ‘cause you’re not really participating.”

“At times she can get down on herself with sarcastic comments about always being hurt.”

Student-Athlete 3 – Athletic Trainer 3 Perceptions

This student-athletic expressed a variety of emotions when questioned. Most of these emotions were in line with the perceptions of their athletic trainer. The student-athlete only touched upon emotions such as disappointed, frustrated, antsy, and motivated, while the athletic-trainer also included the emotion ‘happy’ in their perceptions.

Student-Athlete 3

“A lot of emotions.”

“I think the biggest thing is watching my teammates right now, we’re not having a really great season and so just being on the sidelines – emotions are just kinda like sometimes I get down a little bit because I wish I could be out there helping them.”

“It also helps me to motivate myself to push harder in rehab to get back out there.”

“It’s completely frustrating. It’s like, “Oh my goodness, can I hurry up and get this rehab going and get cleared by the doctors” and stuff like that so I can go back and play.”

Athletic Trainer 3

“I think he’s happy the progress he’s made with his injury. I don’t know how to explain it. He’s not in pain anymore so I think he’s just happy about that.”

“Right now, I think he’s just ready to be back on the court.”

“...just high hopes of getting back soon”

“...now I think it’s just being ready to be back on the court. So he has high hopes of getting clearance soon.”

“...now he starting to become more positive but sometimes that’s somewhat hard for him to do because his team is not doing so well so I think he’s mentally preparing to be back on the court even sooner than what he might even need to be.”

“I think he’s just ready to get back out there and help his teammates.”

Student-Athlete 4 – Athletic Trainer 3 Perceptions

While the student-athlete pinpointed a variety of emotions that they experienced, the athletic trainer focused solely on the negative emotions they perceived the student-athlete they were working with to be experiencing. Although negative emotions show perceptual continuity in the responses, the fact that the athletic trainer did not touch upon any other emotions showed moderate perceptual continuity.

Student-Athlete 4

“Like I said, some days when it feels good, positivity. You’re looking towards playing again in a few weeks and you’re working hard on it.”

“And some days, you’re a bit angry because you’re not able to run. You’re not able to move around and do the things you’re supposed to”

“...it’s a bit sad, but I have to deal with it.”

[in response to the word ‘frustrated’] “Yeah, that’s definitely something you have – and especially on match days. Right now I’m just watching and I’m sitting there and just watching them play while I’m injured. So that’s hard.”

“It’s hard enough for me, and I’ve already had an awful year so it’s on top of it. So that makes it a little bit hard for me, personally.”

Athletic Trainer 3

“Angry, frustrated, depressed – well you can’t classify as depressed, but he’s very sad about the whole situation.”

Attitudes

In order to gain more information regarding the student-athlete’s attitude toward their rehabilitation process, the following question was asked of them: how would you describe your attitude about or towards your rehabilitation experience? For the athletic trainer, to gain more insight on their perceptions of the student-athlete’s attitude, they were asked: how would you describe your athlete’s attitudes about or towards their rehabilitation experience? Learning more about the perceptual continuity of attitude

toward rehabilitation between student-athlete and athletic trainer can help one to possibly adjust or continue the prescribed rehab if warranted.

Table 1.3 – Level of Perceptual Continuity – Attitudes

Student-Athlete 1/Athletic Trainer 1	Student-Athlete 2/Athletic Trainer 2	Student-Athlete 3/Athletic Trainer 3	Student-Athlete 4/Athletic Trainer 3
Low	Moderate	High	High

Student-Athlete 1 – Athletic Trainer 1 Perceptions

The relationship between these two participants lacked perceptual continuity when question of attitude was asked. The student-athlete viewed their attitude in a positive, upbeat manner, whereas the athletic trainer perceived the student-athlete’s attitude to change from onset to present time and more frustrated.

Student-Athlete 1

“I’m pretty sure I have an upbeat attitude throughout the entire rehab just because there’s no point to just get frustrated over it because you’re going to be in there [AT room] every day. I just stay upbeat. I just stay happy, make other athletes happy, by just talking to them. I normally always have a smile on my face when I’m in there.”

Athletic Trainer 1

“At first I think she was totally content with being in with me while the rest of the team was doing individual practices, and just rehabbing with me, but then as the time has gone on, I think she’s become more frustrated with that – that she wants to be with the team.”

“...we’re getting ready for games and she wants to be on the court so she’s definitely working harder and I think you can tell that she’s a little bit more frustrated that she’s not playing.”

Student-Athlete 2 – Athletic Trainer 2 Perceptions

In this relationship, the student-athlete and the athletic trainer had a good understanding of what the student-athlete was actually experiencing in terms of the student-athlete's attitude toward the rehabilitation process. Although the student-athlete expressed a 'neutral' attitude, the athletic trainer described the attitude as 'good', but also with stipulations which could then alter the attitude (to where it could be deemed neutral, when encompassing all aspects).

Student-Athlete 2

“Neutral I guess... I think the only annoying part and frustrating part is when I personally get really angry is when the answers are constantly changing – so to one week I can do this, but then the next week they'll sit me out of that.”

Athletic Trainer 2

“...she definitely comes in and does what she needs to do. She understands why – I mean, overall she's compliant to an extent.”

“She does have a good attitude. She's a good kid and she does come in and do what she needs to do.”

“Overall, she has a good attitude.”

“...but also at times she can get frustrated as well.”

“She does get frustrated easily when things are not going well and can lose her patience.”

“This week is a little bit different because of wanting to get back and trying to do too much versus too little.”

Student-Athlete 3 – Athletic Trainer 3 Perceptions

The student-athlete and athletic trainer showed a high level of perceptual continuity when examining their responses toward the student-athlete's attitude toward rehabilitation. Both participants used words such as: good, positive, motivated.

Student-Athlete 3

“I think everything's good.”

“Sometimes we do two-a-days. I come in the morning and then in the afternoon to do rehab.”

[in response to AT and two-a-days] “so she's been there just pushing and stuff, so it's really good.”

Athletic Trainer 3

“He's always had a very high positive attitude toward it.”

“And he has a positive attitude while doing it.”

“Yeah, he's really motivated. Very motivated to get back on the court, very motivated.”

“I've never had to ask him to come in. He's always wanting to set up the times for rehab. I think he understands the purpose behind it and the reason behind it and it's never me begging him to come in. He's always taking the initiative and he'll come in, like today, twice. He's very adamant about doing rehab.”

Student-Athlete 4 – Athletic Trainer 3 Perceptions

This relationship showed a good level perceptual continuity within the responses about the student-athlete's attitude toward rehabilitation. Both participants touched upon positive and negative attitudes that the student-athlete was experiencing.

Student-Athlete 4

“I guess during my rehab I give everything I can. I think my attitude is great when I’m in rehab, maybe not when I’m out of rehab because I could be a little more positive outside of the court, outside of the rehab room because I’m not really that positive.”

“I’m frustrated.”

Athletic Trainer 3

“Some days it’s positive, some days it’s really negative.”

“Some days he feels great and he’s more positive about the rehab we’re doing and then other days it’s hurting, so it went from a day of being non-painful to a day that is painful so he’s back to being frustrated and back to being mad about his rehab and mad that it’s not getting better.”

“...if we do something that causes pain, we’re going to take a step back for a day, but he thinks that step back from a day is taking him all the way back to the beginning of his injury. He doesn’t understand the steps of progression and why I do things the way I do.”

Coping Strategies

Employing the use of mental skills such as coping techniques has been viewed as a positive factor of the rehabilitation experience (Ahern & Lohr, 1997; Barefield & McCallister, 1997; Gordon, Milios, & Grove, 1991; Grindley & Zizzi, 2005; Hemmings & Povey, 2002). To determine which techniques, if any, the student-athlete was employing, they were asked: when you think of the specific coping strategies that you used or are using during the rehabilitation process, what comes to mind? The athletic trainer’s question regarding their perceptions of the student-athlete’s coping strategies

was: when you think of the specific coping strategies that your athlete used or is using during the rehabilitation process, what comes to mind?

Table 1.4 – Level of Perceptual Continuity – Coping Strategies

Student-Athlete 1/Athletic Trainer 1	Student-Athlete 2/Athletic Trainer 2	Student-Athlete 3/Athletic Trainer 3	Student-Athlete 4/Athletic Trainer 3
High	Low	Low	Low

Student-Athlete 1 – Athletic Trainer 1 Perceptions

The student-athlete and athletic trainer had high levels of perceptual continuity when asked about coping strategies being used by the student-athlete during rehabilitation. Both participants discussed positive self-talk, a positive outlook, and a drive or motivation to work hard and return to sport. The athletic trainer also mentioned goal setting.

Student-Athlete 1

“I’ll be like, ‘okay, I’ve got two more weeks of this rehab and then I can see the doctor and hopefully I can get cleared cause then I can get back to playing.’”

[Reframed statement: Sounds like you pretty much keep a positive outlook for the future] “Yes, definitely.”

“I have an upbeat attitude throughout the entire rehab just because there’s no point to just get frustrated over it because you’re going to be in there [AT room] every day. I just stay upbeat.”

Athletic Trainer 1

“We just talked about staying positive and focusing on the goals we have for the day or for the rehab process – keeping those in mind while we’re doing everything, staying focused on what we’re trying to do.”

“So I think it helps that we make the short term goals for the week, and she can say, ‘okay by the end of the week I want to do this exercise with this much weight or do this many reps of this exercise without it being uncomfortable’”

“...and I think just her telling herself over again that she wants to get back on the court is helping her work harder in her rehab.”

Student-Athlete 2 – Athletic Trainer 2 Perceptions

The perceptual continuity between the student-athlete and the athletic trainer was lacking when questioned about specific coping strategies employed by the student-athlete. The student-athlete talked about controlling the controllables and staying positive, whereas the athletic trainer spoke to the use of social support and the athletic trainer’s active listening to the student-athlete.

Student-Athlete 2

“...and really focus on what I am able to do rather than what I can’t do.”

“Usually I kinda go through the motions and try to stay positive about it.”

Athletic Trainer 2

“I think she does rely on her teammates a lot. They’ve all been there for her, especially a couple on the team that really are close and they talk about it and everything like that.”

“To some extent, you try to pick up on if she’s having a bad day, or a bad week, take the time to talk her through it a little bit more.”

Student-Athlete 3 – Athletic Trainer 3 Perceptions

With this student-athlete and athletic trainer, the student-athlete looked at being able to see progression as his main coping mechanism, while the athletic trainer also discussed other aspects of coping such as staying positive, supportive, and involved with the team, and also seeing a mental coach.

Student-Athlete 3

“I think the biggest thing is being able to see progression each and every day – like having that pain-free.”

“So just seeing that progression from my knee from before the surgery to after my surgery where I couldn’t even like walk up the stairs.”

“And now we’re trying to progress to a little bit of footwork stuff and see that there’s no pain.”

Athletic Trainer 3

“...now he’s starting to become more positive but sometimes that’s somewhat hard for him to do because his team is not doing so well so I think he’s mentally preparing to be back on the court even sooner than what he might even need to be.”

“But he is dedicated to being at every single practice, even though he can’t practice. He’s very good about being there for them mentally too”

“...now I know that he does go to a mental coach so that helps him a lot.”

Student-Athlete 4 – Athletic Trainer 3 Perceptions

There was very little perceptual continuity within the responses given by the student-athlete and the athletic trainer when questions regarding coping strategies were asked. The student-athlete spoke to supporting his teammates – helping him minimally – and also about using other areas of life to cope. However, the athletic trainer talked about very different methods of coping not addressed by the student-athlete. Reasoning for this is further discussed within the discussion section.

Student-Athlete 4

“Support them [teammates]. I’m kind of an active supporter right now – just screaming, trying to pump them up. That’s the only thing I can really do.”

“...just supporting my team and helping them with what I can do.”

“I have my school, I have other things so –”

“I try to put my private life and my working life as a – like try to describe them like apart. But I always try to that because otherwise it just gets too hard.”

Athletic Trainer 3

“I know that he has been drinking, so alcohol. He’s been turning to alcohol as a coping mechanism.”

“He is a very outgoing person, so I think him becoming more internal has been one of his coping mechanisms.”

“But also at the same time, he has sought out help from coach, talking to the coach, but not talking to his friends as much and being as social. So I think him talking to more higher personnel about his injury, and myself, I feel like that’s one of the ways he has been coping.”

Life Impact

The life impact of the student-athlete's injury was also an important area to gain perspective on. This allows one to see how they appraise and view their injury on a life spectrum. The student-athlete was asked the following: when you think of the life impact that this injury has had on you, what comes to mind? The athletic trainer's perceptions of the life impact of the injury were found through the following question: when you think of the life impact that this injury has had on your athlete, what comes to mind?

Table 1.5 – Level of Perceptual Continuity – Life Impact

Student-Athlete 1/Athletic Trainer 1	Student-Athlete 2/Athletic Trainer 2	Student-Athlete 3/Athletic Trainer 3	Student-Athlete 4/Athletic Trainer 3
Low	Low	Low	High

Student-Athlete 1 – Athletic Trainer 1 Perceptions

The responses given from the student-athlete regarding the life impact of the injury mainly touched upon a physiological impact. The athletic trainer's response indicated that there they were uncertain if the injury did have an impact, mentally.

Student-Athlete 1

“I’ve definitely lost a lot of muscle mass, and in turn, that made me lose weight. I don’t feel as strong as I normally do.”

“I’m not able to do certain arm exercises and in turn, it kinda makes me feel like I’ve lessened a little –”

Athletic Trainer 1

“She hasn’t said anything about the injury having an effect on schoolwork or making her depressed or not getting as

much sleep from it so I don't know if it really has had an effect on her everyday life."

Student-Athlete 2 – Athletic Trainer 2 Perceptions

Within these responses, there was very limited perceptual continuity between the student-athlete and the athletic trainer. The student-athlete commented on being mentally stronger both on and off the field and becoming more optimistic. The athletic trainer mentioned that they believed there was no indication that the injury affected the student-athlete outside sport. Furthermore, the only impact the athletic trainer discussed was frustration, but that it was common to all individuals in life.

Student-Athlete 2

"I really think it's going to help me mentally because before it's like you're always complaining about what you have to do but then when it's taken from you, you want it back."

"...when you physically can't participate in them, it kind of puts things into perspective more."

"...off the field, it should mentally strengthen. Everything is not going to go perfect."

"But I'm definitely more optimistic now than I was back then [during season, onset of injury] cause I kind of had the 'why me' mentality, but I mean, it's getting better, it's easier to see the perspective of both sides."

Athletic Trainer 2

"I've never had any indication that her personal life or her school work was in trouble because of necessarily an injury. I think she gets stressed and has personal issues just like anyone else would."

“She has never given any indication of having difficulty coping with injury or having it affecting life outside of soccer.”

“Her teammates have also not given me any indication that she was having difficulty coping.”

“...if there’s something going on with her school life or personal life it does carry over into rehab because it just makes her a little more frustrated.”

“I think she gets stressed and has personal issues just like anyone else would.”

Student-Athlete 3 – Athletic Trainer 3 Perceptions

There was little perceptual continuity in the responses given by the student-athlete and the athletic trainer when asked about the life impact the injury had on the student-athlete. The student-athlete talked about life after sport and how the injury prompted them to look past their sport, whereas the athletic trainer discussed how the injury only affected the student-athlete by not being on the court.

Student-Athlete 3

“...it’s kind of just made more focused on what I need to get done after.”

“So it’s made me realize that I’m almost done and I gotta go to the next thing. I’m preparing for after I graduate. It’s made me look at more of the outside instead of what’s current right now.”

Athletic Trainer 3

“...now after the surgery I think it impacted his life just not being on the court. And then all his friends – like I said, his teammates are his friends so therefore he doesn’t feel like he can be there for his teammates.”

Student-Athlete 4 – Athletic Trainer 3 Perceptions

There was more perceptual continuity within this student-athlete and athletic trainer when questions of life impact were asked. Both expressed how the injury was frustrating to the student-athlete. However, the student-athlete does also mention the separation of ‘private life’ and ‘work life’ (the sport) when discussing the impact the injury had over their life.

Student-Athlete 4

“...but with your feet, you cannot – I cannot even step two steps on the court, so within tennis – it affects me a lot.”

“... on the court, like I said, it’s frustrating.”

“I have my school, I have other things so –”

“I try to put my private life and my working life as a – like try to describe them like apart. But I always try to that because otherwise it just gets too hard.”

Athletic Trainer 3

“In his day to day life, tennis was his life. So right now, he feels like I’ve pretty much taken away his life by not letting him play...”

“...it’s affecting his life totally because he doesn’t have another outlet. He just has tennis.”

Relationship

Research has shown that the relationship between the injured student-athlete and their athletic trainer has had an influence on the rehabilitation process as a whole for the student athlete (Barefield & McCallister, 1997; Bone & Fry, 2006; Granito, 2002;

Grindley & Zizzi, 2005; Hedgpeth, & Sowa, 1998; Herring & et al., 2006; Roh & Perna, 2000; Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004). To gain insight into the relationship of the student-athlete and the athletic trainer, the following question was asked to the student-athlete: how would you describe your relationship with your athletic trainer? The athletic trainer was questioned with: how would you describe your working relationship with this particular athlete?

Table 1.6 – Level of Perceptual Continuity – Relationship

Student-Athlete 1/Athletic Trainer 1	Student-Athlete 2/Athletic Trainer 2	Student-Athlete 3/Athletic Trainer 3	Student-Athlete 4/Athletic Trainer 3
High	High	High	High

Student-Athlete 1 – Athletic Trainer 1 Perceptions

In terms of the working relationship between the student-athlete and the athletic trainer, there was perceptual continuity between the responses given by both participants. The student-athlete and athletic trainer both touched upon having a positive, good relationship, and working well together.

Student-Athlete 1

“a very positive relationship”

“we have a really good relationship, I think”

“[AT] and I are very close because I literally live in the training room just because of practice and weights and rehab, so I’m in there all the time.”

Athletic Trainer 1

“I think we work well together. She understands that I’m trying – I have the same goal in mind as she has – which is to get back on the court – so when I’m hard on her, I think

sometimes she takes it personally but she knows I'm hard on her so she can get back, not because I'm trying to be mean to her."

"I think because we both have the same goal, and we're both trying to accomplish that, that we work fine together."

"I don't think she feels like she can't come to me with anything, or with concerns with her injury – because she does."

Student-Athlete 2 – Athletic Trainer 2 Perceptions

When asked about the working relationship between the student-athlete and the athletic trainer, both participants discussed communication as their strength and also their flaw. Furthermore, both participants stated that the relationship, overall, is good, honest, and trusting.

Student-Athlete 2

"We have a good relationship."

"I just let her know how I'm feeling, but I'd say overall it's really good."

[In response to the comment: It sounds really honest]

"Yeah, I mean, I don't hold anything back."

"I have no problem communicating to her what hurts, what doesn't hurt, how I feel."

"So I think recently that's why we've started butting heads [playing it safe vs. trial and error] because she'll pull me out, but I'm not in pain and then partially it's my fault because I don't have that filter anymore."

"I don't hold anything back. I just I tell her if I'm pissed, I tell her if I'm sore, I tell her if things hurt, don't hurt."

Athletic Trainer 2

“I think it’s good. I think we’ve definitely been pretty close.”

“I think she can trust me.”

“And one of the things we talked about was communication, and that we both need to do better. If there’s something she’s frustrated with, instead of just coming in and being like, ‘yeah, okay, whatever,’ tell me. Are we not moving fast enough? Are we moving too slow? Are we progressing too fast? Do you feel you can do more?”

“There is a reason why we’re doing things. But I want her to tell me that. Is there a different way that I need to explain it? Cause we talked in my office after practice for 30 minutes, and we went just it a circle kind of back and forth.”

“She wants to play through pain, but due to the nature of where her injury is, it can turn very bad very fast. It’s not like an extremity injury. It’s something that can be problematic. Just trying to explain that to her.”

“I think she realizes it to some extent but she might not always outright say it.”

Student-Athlete 3 – Athletic Trainer 3 Perceptions

There was a high level of perceptual continuity when questioned about the working relationship between the student-athlete and the athletic trainer. The relationship was deemed as open, honest, collaborative, and positive.

Student-Athlete 3

“It’s pretty good. It’s very professional. I wish she would lighten up a little bit. She tries to loosen up a little bit but she tries to keep its professional.”

“But I trust her 100%. She’s really good and I enjoy being with her, working with me and working with other athletes.”

“She’s very passionate about being an athletic trainer. I mean some of the athletic trainers on the team before – they just didn’t really care and she’s pretty passionate about it.”

Athletic Trainer 3

“We have a very positive working relationship.”

“...for the most part we get along very well and work well together.”

“He always listens to me and sees me as a superior, but also as a friend, so it’s always been a good working relationship.”

Student-Athlete 4 – Athletic Trainer 3 Perceptions

As described by both the student-athlete and the athletic trainer, the working relationship between the participants has high perceptual continuity in their responses. Both participants stated that the relationship was positive, open, and trusting. However, as will be further discussed in the discussion section, the athletic trainer mentioned feeling like they were taking on their student-athlete’s burdens at times and not feeling as qualified to address them.

Student-Athlete 4

“We have a very good relationship. I’m very open about everything with her – what’s happening on court, off court. What I did, if I did something wrong, if I did something right. She knows everything about me towards the injury and what has to do with tennis.”

“Yeah, I have a good relationship with her.”

[in response to confiding in her] “Yeah, yeah absolutely.”

Athletic Trainer 3

“I do think that we have a really good working relationship. He trusts me. He understands what I’m doing to an extent. He knows that in the long run I’m here to make him better and not to punish him or anything like that – so we have a positive working relationship.”

“He calls me his ‘American Mommy’ (*laughs*) so I feel like very much – sometimes I do feel like his mom the way I’m having to treat him because it’s hard for him to come into the athletic training room. He doesn’t necessarily have that positive outlook on rehabilitation, so it’s not just looking out for him and his injury but also him and his well-being at the moment just because of his coping strategies and everything like that.”

“Sometimes I feel like I’m trying to take on his burdens, sometimes – just like letting him talk to me because sometimes, I feel like as an athletic trainer, even though we do encompass different aspects of health – one of them being mental, sometimes I don’t feel like I’m one to be talking to it, and I’ve had to turn to my boss because he also has had – I wouldn’t necessary say an eating disorder but he has – his health had gone downhill since the start of the injury – losing weight, things I’ve noticed. So our protocol here is different, so our protocol is to talk to my boss, ‘cause I’m not trained in that area at all. So I feel like him talking to me about things like that, sometimes I know that I can’t help him so it’s kind of frustrating on my end because I want him to get better and I want him to be okay.”

CHAPTER 4

DISCUSSION

The term “perceptual continuity” was established through this study’s findings. Perceptual continuity refers to the examination of the relationship between the student-athlete and athletic trainer in terms of flow and consistency. This term can be loosely tied to a study based on patient satisfaction done Hjortdahl and Laerum (1992). This study found that patient satisfaction with their practitioner was based upon a connection with personal satisfaction and continuous care. In this study, perceptual continuity highlights the consistency of flow and congruency between the actual experience of the student-athlete and the perceptions of that experience from the athletic trainer with whom they work.

The findings yielded mixed levels of perceptual continuity when examining all aspects of the relationships established through the student-athletes and the athletic trainers with whom they work. This suggests that the athletic trainers, as a unit, had a variety of perceptions of the student-athlete experience which ranged from extremely accurate to inaccurate. Surprisingly, however, regardless of the overall mixed levels of perceptual continuity, there was a high level of perceptual continuity found when asked about the overall relationship between the student-athlete and the athletic trainer. Based on Hjortdahl and Laerum (1992), this strong connection between the student-athlete and the athletic trainer should have increased the student-athlete’s chance of satisfaction. In contrast, this high level of perceptual continuity suggests that, although there was a strong relationship described by both the student-athlete and the athletic trainer, it did not necessarily contribute to the level of perceptual continuity in the other areas in question.

Further findings speak to the role of support the athletic trainer in the rehabilitation process (Barefield & McCallister, 1997) and the relationship established and maintained throughout a student-athlete's time in rehabilitation (Moulton, Molstad, & Turner, 1997).

This study's findings provided an insight into the relationship created and sustained during the rehabilitation process. This discussion is to depict the perceptual continuities that were discovered through the interview process, to examine the reasoning behind levels of perceptual continuity through previous literature, to determine any alternative explanations to the findings, and to discuss further research implications and practical applications.

Athletic Trainer, Sport Psychology Education

While research shows that student-athletes felt that their athletic trainers should be qualified to help with their coping because "it's part of the rehabilitation process" (Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004), one athletic trainer expressed that "even though we do encompass different aspects of health – one of them being mental, sometimes I don't feel like I'm one to be talking to it" (Athletic Trainer 3). In addition to this, athletic trainer 3 discussed that "sometimes I know that I can't help him so it's kind of frustrating on my end because I want him to get better and I want him to be okay." This is a prime example of how necessary these skills are within the profession of athletic training. Although professional limitations and competencies must be recognized by ATCs (Henderson & Carroll, 1993), many practitioners have expressed the desire for further training in these areas to better understand and serve their clients (Gordon, Potter, & Ford, 1998; Hemmings & Povey, 2002; Moulton, Molstad, & Turner, 1997; Ninedek, & Kolt, 2000).

Thoughts

Low Levels of Perceptual Continuity

There was very little perceptual continuity between student-athlete 1 and athletic trainer 1 (ATC 1) when questioned about the thoughts that the student-athlete is experiencing. The student-athlete spoke of “socializing during rehab... so I get through my rehab faster so I don’t really have to think about it”, seemingly deprioritizing the process. In contrast to this, ATC 1 commented on how they believed the student-athlete “thinks about how hard everything is. She questions a lot of things”. These participants appeared to demonstrate divergent thoughts.

A probable explanation of the low level of perceptual continuity could be associated with trust, or a lack thereof. At the onset of injury, student-athlete 1 inquired about an MRI, which was deemed unnecessary by ATC 1 and their superior. ATC 1 and their superior created a plan of action that would address the diagnosed injury so that the student-athlete would be back to their sport within a timely manner. However, the student-athlete sought out a second opinion regardless of their diagnosis and the opinion of ATC 1. It seemed apparent that ATC 1 felt that the student-athlete questioned the ATC’s ability within the physiological side of rehabilitation and wanted to actively seek the opinion of someone who they felt had more experience.

A strong rapport between the student-athlete and athletic trainer is essential in the rehabilitation process (Clement & Shannon, 2011; Fisher, Scriber, Matheny, Alderman, Bitting, 1993), especially when trying to establish trust with a newly injured student-athlete. ATC 1 may not have provided the necessary measures of reassurance to the

student-athlete, which could have made the student-athlete less apt to place their trust in the ATC's rehabilitation plan.

Moderate Levels of Perceptual Continuity

The relationship between student-athlete 4 and athletic trainer 3 (ATC 3) showed a moderate level of perceptual continuity. ATC 3 only touched upon the negative thoughts that the student-athlete was experiencing, while the student-athlete explained both sides of their thought process. It seemed apparent that student-athlete 4 was struggling with their internal thoughts, which was also seen when research investigated internal thoughts of injured athletes (Tracey, 2003).

It seemed that, because the ATC had a negative perception as a whole – which is seen throughout their responses – it may have overshadowed the ability to see any positive thoughts the student-athlete was experiencing. Furthermore, the sole focus on the negativity could cause the ATC to not give credit to the student-athlete on days when the student-athlete is in a positive mindset and looking at rehabilitation in a better light. Fisher and Hoisington (1993) found that “ATCs did not seem to give athletes quite enough credit for the amount of motivation they bring to the rehabilitation process”. This could blind the athletic trainer from recognizing real motivation and determination during rehabilitation, which could help explain the low level of perceptual continuity.

High Levels of Perceptual Continuity

The level of perceptual continuity was high between student-athlete 2 and ATC 2. This relationship showed flow, although the same exact words were not necessarily employed by both participants. From onset of injury to current rehabilitation time, the actual thought process and the perceived thought process was fairly intact.

Communication, both non-verbal and verbal, needs to be a well-developed two-way street where “both parties listen to what the other has to say” (Fisher, Scriber, Matheny, Alderman, & Bitting, 1993). Moreover, when examining this relationship as a whole, this pair of participants mentioned that communication was both a strength and sometimes a weakness for them; it is something they had actively been working on. Therefore, although the words are not specifically the same when looking at a response level, this could be an explanation for that.

Within the relationship between student-athlete 3 and athletic trainer 3 (ATC 3), the student-athlete had been in rehabilitation for four months and was consistently partaking in two-a-day rehabilitation exercises. The persistence in rehabilitation is apparent when examining the responses throughout the other questions. Within the thought process, student-athlete 3 mentioned that they think about “just rehabilitation”, which is consistent with the statements made by ATC 3. Furthermore, thoughts of frustration were apparent and acknowledged by both participants.

The high level of perceptual continuity could be explained by the increased amount of time the student-athlete spends with their ATC. It has been seen that the time an injured athlete spends with an athletic trainer who is supportive and a positive increases their adherence to rehabilitation (Fisher & Hoisington, 1993). Because of the length of rehabilitation and the increased sessions of rehabilitation, the working relationship had time to grow into one with a high of trust and open communication. Because of this, the ATC may have been able to more accurately assess the thought process of this particular student-athlete.

Emotions

When looking at the overall relationships (1-4), each relationship showed a high level of perceptual continuity, which suggests a positive, open, and trusting working relationship between the injured student-athlete and the athletic trainer with whom they work. In addition, based on the research, it can be assumed that the support given from the athletic trainer toward the student-athlete would positively affect the student-athlete's emotional and behavioral outlook on rehabilitation (Gould, Udry, Bridges, & Beck, 1997). Additionally, when the student-athlete feels that ATC is providing listening support, which is defined as a behavior "that indicates people listen to you without giving advice or being judgmental" (Hardy, Burke, & Crace, 1999), it can allow student-athletes to openly discuss their emotions (Lynch, 1988). During the rehabilitation process, being able to key in on both verbal and non-verbal cues is essential for ATCs to gain a stronger knowledge of emotional responses and reactions to rehabilitation (Henderson & Carroll, 1993).

Based upon the aforementioned research, it brings into question why student-athletes 1 and 4 were experiencing emotions not consistent with the perceptions of athletic trainers 1 and 3, respectively. Because both student-athletes felt supported and expressed a positive relationship with their athletic trainer, it could have been assumed that the perceptual continuity would be high in regards to the emotional experiences. A red flag of low levels of perceptual continuity was the fact that student-athlete 1 expressed that they have no frustration: "I have no frustration" and the athletic trainer with whom they work explicitly stated that "I think she's frustrated that it's taking so long to get back", among other similar statements.

The negative emotions expressed by student-athlete 4 were strengthened through the perceptions of ATC 3. However, ATC 3 neglected to mention any positive emotions that accompanied the student-athlete. This moderate level of perceptual continuity could be explained by the fact that ATC 3 focused the majority of their answers in a negative manner, depicting a hard and enduring process for the student-athlete, and not acknowledging any possible positive emotions they may have been feeling.

Consistent with past research (Ahern & Lohr, 1997l; Gordon, Milios, & Grove, 1991; Heil, 1993; Quackenbush & Crossman, 1994; Quinn & Fallon, 1999; Taylor & Taylor, 1997; Tracey, 2003; Walker, Thatcher, & Lavalley, 2007; Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998) and across the relationships, frustration was one of the most common emotions expressed. All athletic trainers and three of the four student-athletes, whether showing high or low levels of perceptual continuity, expressed frustration: “it’s completely frustrating” (student-athlete 3), “definitely frustration, just wanting to be better” (athletic trainer 2), and “you just want to be like, ‘yeah okay, I’ll handle the pain, let me go play on the field’ type thing” (student-athlete 2). From onset of injury to the present rehabilitation experience, frustration seemed to be apparent at in sections: onset of injury was high, the beginning and middle of rehabilitation lessened, but frustration grew again toward the end of rehabilitation. This fluctuation could be due to the amount of time the student-athlete is spending away from their team, the competitive aspect of athletics, and the connection with the sport.

Furthermore, student-athlete 1 expressed feeling a pressure to return when they stated that: “...and sometimes my coach, he’ll be like, when are you going to be back, like we need you soon, we need you to get cleared soon,” and then further confirmed that

they felt pressure to return., consistent with findings (Ievleva & Orlick, 1999). This pressure, according to student-athlete 1, is pushing her to try harder in rehabilitation, to return at a quicker rate, which is not uncommon with student-athletes who feel pressure to return by their coaches (Bianco, 2001; Gould et al., 1997; Podlog, Lochbaum, & Stevens, 2010; Taylor & Taylor, 1997).

Loss of identity was also seen for student-athlete 4 through the perceptions of their athletic trainer: “in his day to day life, tennis was his life. So right now, he feels like I’ve pretty much taken away his life by not letting him play.” Because student-athlete 4 has associated himself as an athlete first and foremost, it could be argued that being injured had more of a detrimental effect on their psyche, especially when one feels that connected to their sport.

An interesting observation made from athletic trainer 2 pertained to student-athlete 2 and the potential loss of affinity to the team: “I don’t know if I’d go as to say depressed because you’re not as involved with the team ‘cause you’re not really participating.” In addition, athletic trainer 3 stated that “you can see the withdrawal from his friends, and you can see him withdrawing from the team, and with the coach, and myself” when speaking about their perceptions of student-athlete 4. And although student-athlete 4 did not mention this withdrawal, further implications are explored at the conclusion of the discussion.

Another observation was the emotion of anxiety and anxiousness. Tracey (2003) found that the feeling of letting the team down was a struggle for those returning to sport. Athletic trainer 3 stated that the student-athlete is “just ready to get back out there and help his teammates” and “...now I think it’s just being ready to be back on the court. So

they have high hopes of getting clearance soon” and “right now, I think he is ready to get back on the court”. In congruence with this perception, student-athlete 3 was expressive in saying “it’s like, “Oh my goodness, can I hurry up and get this rehab going and get cleared by the doctors” and stuff like that so I can go back and play”.

An interesting observation made from the perceptual continuity of “thoughts” and “emotions” was that those relationships that showed high levels of perceptual continuity with one (thoughts or emotions), showed high levels of continuity with the other. This is seen with student-athlete 2, athletic trainer 2, student-athlete 3, and athletic trainer 3. In addition, the perceptual continuity between student-athlete 1, athletic trainer 1, student-athlete 4, and athletic trainer 3 was low in both areas (emotions and thoughts). Reasoning for this could be explained by the closeness thoughts and emotions may have with one another. An emotion is defined as “a conscious mental reaction subjectively experienced as strong feeling usually directed toward a specific object or typically accompanied by physiological and behavioral changes in the body” (Merriam-Webster, 2012). A thought is defined as “something (as an opinion or belief) in the mind” (Merriam-Webster, 2012). Because both of these terms have direct influence on the body and mind, the instance of one may result in the instance in the other. For instance, when an athletic trainer perceives a thought process, they may also see the emotions that mirror that thought process, even if it is inaccurate to the actual thoughts and emotions of the student-athlete.

Based on the previously discussed models and frameworks of coping and emotional sequences that past researchers have established in the field, it is not uncommon to see the subjectivity in the experiences of the interviewed student-athletes in the present study. When examining the specific techniques used and in comparing them

to the aforementioned coping models and frameworks, certain aspects of two models could be used to further explain the results found. Both the four phase framework founded by Quinn and Fallon (1999) based upon emotional fluctuations through rehabilitation and the five-phase framework designed by Tunick, Etzel, Lerner, and Leard (2002) could be used in conjunction with one another as a possible explanation of the coping techniques used and the emotional process through which the student-athletes went through during rehabilitation. Quinn and Fallon (1999) suggested that injured athletes may go through a similar emotional process but that each injury is a subjective experience for each athlete. Furthermore, while it was found that some of the injured athletes interviewed decreased in their negative psychological factors consistently throughout the rehabilitation process, it was not the same with all injured athletes. An array of fluctuations in mood states were seen between different phases of rehabilitation based upon setbacks or advances in progress. Therefore, like the injured student-athletes in this present study, it is not uncommon to see this throughout the rehabilitation timeline.

Tunick, Etzel, Lerner, and Leard's (2002) framework examines the injury process in five phases: shock, realization, mourning, acknowledgment, and coping. When looking at the student-athletes in the present study, there are clear instances that could be seen in congruence with the phases in this framework. ATC 2 mentioned that the student-athlete with whom she works was finally able to take a step back and realize that this injury recovery was going to take some time. In addition, when given leeway during practice as requested and then feeling more pain than normal the following day, it could be argued that student-athlete 2 had reached the acknowledgement phase, which is categorized as finally recognizing the actual limitations of their injury. After that specific practice, it

was a realization for the student-athlete that the process may require more attention and time.

Furthermore, when speaking about student-athlete 4, ATC 3 mentioned that this particular student-athlete's first reactions were "denial, frustration, anger", common to those discussed in the shock phase of this framework. Furthermore, the emotional fluctuation between good and bad days within rehabilitation speaks to the four phase framework of Quinn and Fallon (1999), which is one place where a combination of these two frameworks can be seen. Student-athlete 3's outlook toward the future after the injury and the plans to move past what has been a debilitating sport injury shows strong connection with the coping phase, which is categorized as having the injured athlete actively work through and move past the injury. In addition, the adamant behavior to complete rehabilitation and take initiative to set up all appointments by student-athlete 3, as described by ATC 3, shows how the athlete is actively taking the steps necessary to become better and return to life after injury.

While there may be arguments for the use of other frameworks and models based upon the responses of this study's student-athletes and ATCs, it is strongly believed that these two emotion and coping frameworks are the two that best describe the rehabilitation process. It should be noted that each injury to an athlete is a new and subjective experience; although these frameworks worked in conjunction with a number of these student-athletes' experiences, they may not be appropriate for all experiences of sport injury.

Attitude

Low Levels of Perceptual Continuity

The relationship between student-athlete 1 and athletic trainer 1 was described as positive and open, but the perceptual continuity between the two participants appeared to be low. The student athlete described an attitude of positivity, while the student-athlete perceived a fluctuation of attitudes: “at first I think she was totally content... as time has gone on, I think she’s becoming more frustrated”. Moreover, the student-athlete clearly stated that they do not have frustration, while the athletic trainer stated the exact opposite based on their perception. Based upon the upbeat and positive attitude that was described by the student-athlete, speculations as to why the athletic trainer did not perceive the same attitude require the need to look more at their relationship.

The student-athlete received a second opinion on the injury and an MRI, against the recommendation of the athletic trainer and the medical staff at the institution. It could be suggested that there lacks a sense of trust within this relationship, especially toward the athletic trainer and their ability to accurately diagnose and treat this student-athlete’s injury. This lack of trust would be contradictory to the research that states that the athletic trainer is commonly viewed as the most trusted individual within the athletic community (Etzel & Ferrante, 1999) due to the amount of time spent with the injured athlete. Furthermore, due to the length of the rehabilitation process – based also upon the additional prescribed rehabilitation from a second opinion – the athletic trainer may have felt the stress of performing their duties and could have been describing their personal attitude at this point, rather than their perceptions of the student-athlete’s attitude. Reed and Giacobbi (2004) found that a common stress in graduate student ATCs was the desire

to please others. The stress that the athletic trainer may have induced from this particular situation could have affected the perceived attitude throughout rehabilitation.

Moderate Levels of Perceptual Continuity

Although student-athlete 2 and athletic trainer 2 discussed positivity, the student-athlete mentioned more of a neutral outlook while the athletic trainer found neutralism through a combination of positive and negative statements: “she does have a good attitude” and “she does get frustrated easily when things are not going well and can lose her patience”. It should be noted that communication was an aspect of this relationship that both the student-athlete and the athletic trainer felt was a strong and weak point. Based on the research, effective communication has been acknowledged as important within the rehabilitation process (Fisher & Hoistington, 1993; Fisher, Mullins, & Frye, 1993; Gordon, Milios, & Grove, 1991; Wiese, Weiss, & Yukelson, 1991). From the limited research strictly focused on patient-practitioner communication in the sport setting, qualitative findings have yielded poor relationships of communication with major discrepancies between injured athletes and athletic trainers, or health care professionals (Kahanov & Fairchild, 1994).

High Levels of Perceptual Continuity

The high levels of perceptual continuity may be due to other aspects of rehabilitation that are easier for athletic trainers to perceive. For the athletic trainer, who is with the student-athlete one-on-one during these times, inferring attitudes may be easier because of other including body language, initial responses to exercises, or facial expressions. While this argument is speculation, there is a reason for why attitude toward rehabilitation shows higher levels of perceptual continuity throughout the majority of the

relationships, even if not explicitly depicted here. Further investigation as to why should be looked at in future study designs.

Two relationships show high levels of perceptual continuity, and because the overall relationship was deemed as positive, open, and trusting, it can be assumed that the support the student-athletes receive from their athletic trainer influences the positive outlook the student-athlete may have toward rehabilitation (Bone & Fry, 2006; Granito, 2002; Smith & Milliner, 1994).

Although high levels of perceptual continuity were shown, student-athlete 4 expressed some qualities of negativity when discussing their attitudes. These qualities discussed were perceived accurately through their athletic trainer as well, showing a strong understanding of the fluctuation of attitudes throughout rehabilitation.

Student-athlete 4 and athletic trainer 3 have a higher level of perceptual continuity, even though it consists of negative attitudes as well. Student-athlete 4 explained that “I think my attitude is great when I’m in rehab, maybe not when I’m out of rehab because I could be a little more positive outside of the court”, and the athletic trainer explains that “some days he feels great and he’s more positive about the rehab we’re doing and then other days it’s hurting... so he’s back to being frustrated and back to being mad about his rehab and mad that it’s not getting better”. Because the student-athlete appeared to be outcome-focused, the athletic trainer had the ability to see the student-athlete’s attitude through the progress being made or the setbacks being experienced.

An observation that was made was how three of the athletic trainers were able to accurately perceive the student-athlete’s attitude toward rehabilitation, regardless of

whether it was positive or negative. It has been found that injured student-athletes have been known to downplay their injuries and response during rehabilitation for a quicker return (Nixon, 1994), but that athletic trainers are readily capable to accurately judge the actions and responses of the injured athlete during the rehab process (Flint & Weiss, 1992). This high level of perceptual continuity found speaks to the athletic trainer's ability to observe and accurately assess the student-athlete in a habitat that may be unfamiliar to or uncomfortable for them.

Coping Strategies

Research has shown that there is a need for psychological skills to help injured athletes better cope with their injury (Barefield & McCallister, 1997; Bianco, 2001; Etzel, Ferrante, & Pinkney, 2002; Gordon, Milios, & Grove, 1991; Grindley & Zizzi, 2005; Henderson & Carroll, 1993; Yang et al., 2010). Some of the most common coping techniques were seen to be employed by some of the student-athletes. The athletic trainer perceptions of the student-athletes' coping techniques showed much lower levels of consistency, as only one athletic trainer (ATC 1) provided any high level of perceptual continuity.

Student-athlete 2 mentioned focus and controlling the controllables as two coping mechanisms: "...really focus on what I am able to do rather than what I can't do" and "try to stay positive about it". While this coping technique is consistent with previous studies (Ievleva & Orlick, 1999), the athletic trainer with whom the student-athlete works, ATC 2, pinpointed the use of social support rather than a mental coping skill of the student-athlete. It should be noted that ATC 2 had no prior sport psychology training in any undergraduate or graduate courses during their athletic training education;

therefore this particular athletic trainer may not be privy to the knowledge of specific coping techniques. However, this does show a low level of perceptual continuity between the student-athlete and the athletic trainer. Although the athletic trainer mentioned social support, which is seen as a common coping technique (Barefield & McCallister, 1997; Bone & Fry, 2006; Evans & Hardy, 2002; Granito, Hogan, & Varnum, 1995; Green & Weinberg, 2001; Podlog & Eklund, 2008; Rees, Hardy, & Evans, 2007; Robbins & Rosenfeld, 2002; Walker, Thatcher, & Lavalley, 2007), ATC 2 seemed unaware of the mental coping that the student-athlete was employing.

ATC 2 also mentioned that they “try to pick up on if she’s having a bad day, or a bad week, take the time to talk her through it a little bit more” (ATC 2). ATC 2 appeared to be making an attempt at communication, expressing interest and empathy toward student-athlete 2. In terms of injury rehabilitation adherence, it has been shown that this is an effective strategy for ATCs to employ (Fisher, Scriber, Matheny, Alderman, & Bitting, 1993). However, as previously mentioned, qualitative findings have shown discrepancies in communication between injured athletes and athletic trainers (Kahanov & Fairchild, 1994).

Student-athlete 3 noted their method of coping by stating: “I think the biggest thing is being able to see progression each and every day”. Being able to see progression and reach set goals through rehabilitation is consistent with previous research (Ievleva & Orlick, 1999). The athletic trainer working with this student-athlete provided much different perceptions of the coping strategies used by the student-athlete: “he’s starting to become more positive”, “he is dedicated to being at every single practice”, and “I know that he does to a mental coach so that helps him a lot”. Because a stigma has been seen

with male athletes seeking professional help (Martin, 2005), the student-athlete may not have felt comfortable speaking about working with a sport psychology consultant or a mental skills coach, especially if this is his first experience. Furthermore, athletic trainer 3 expressed coping techniques not mentioned by the student-athlete, which could be explained by the athletic trainers past education with sport psychology. ATC 3 was the only athletic trainer to receive an entire course relating to sport psychology, as described previously. Furthermore, ATC 3 may have been able to pick up on the non-verbal cues from the student-athlete during the rehab process, which has been seen as a natural skill the ATC processes (Naylor, 2007).

The perceptual continuity was extremely low when examining student-athlete 4's response and the perceptions of athletic trainer 3. Despite knowledge of coping strategies and discussion of these strategies, student-athlete 4 neglected to mention anything further than support for his teammates ("support them. I'm kind of an active supporter right now"), and separating his private and work life ("I try to put my private life and my working life as a – like try to describe them apart"). It could be argued that, in spite of low overall perceptual continuity with coping strategies, athletic trainer 3 and student-athlete 4 both spoke to a sense of withdrawal, which is commonly found in injured athletes. While student-athlete 4 sought to separate private and work life, athletic trainer 3 mentioned that the student-athlete had become "more internal". Furthermore, athletic trainer 3 stated alcohol as a coping technique, which could have been too sensitive or uncomfortable a topic to discuss for the student-athlete. Also, the student-athlete might not realize that turning to recreational drug use, such as alcohol is a form of emotion-focused coping (Mcleod, 2009).

Moreover, Hardy, Burke, & Crace (1999) noted that teammates can provide emotional and informational support to the injured student-athlete, if provided appropriately. This particular student-athlete was withdrawing from any type of support from their teammates and seeking it elsewhere, such as in the coach or the ATC, negating any possible positive outcome from teammates' support. However, Fisher and Hoisington (1993) stated that "because coaches and ATCs are in leadership roles, athletes expect them to offer support as part of their responsibilities". Consistent with this, athletic trainer 3 mentioned that student-athlete 4 has searched for help from the coach but avoiding help from his teammates/friends, stating that "I think him talking to more higher personnel about his injury, and myself, I feel like that's one of the ways he has been coping". This observation is consistent with past research (Clement and Shannon, 2011; Robbins and Rosenfeld, 2002), which states that injured athletes feel more comfortable and satisfied with the social support from their ATC. Although specific coping strategies were mentioned by ATC 3, and taking into account that the student-athlete's knowledge of coping strategies may have been limited, the fact that the student-athlete failed to mention the same techniques shows a low level of perceptual continuity.

In addition, consistent with the findings of Chan and Grossman (1988), which found that injured runners showed more signs of depression, anger, and confusion, ATC 3 consistently mentioned that student-athlete 4's life was tennis. Not having the ability to play tennis, after playing continuously for the past 15 years (as stated by the student-athlete), may have disrupted a natural coping strategy of the student-athlete. Student-athlete 2 also mentioned that "soccer's usually been" her "outlet", so it could be argued that not having that outlet has interrupted a coping strategy used frequently pre-injury. It

has been seen that the playing of the sport itself was a stress-reliever from outside sources, and that the loss of this outlet can be difficult to accept (Tracey, 2003).

Although all of the athletic trainers have mentioned some form of coping strategy that they believed their student-athlete to be employing during rehabilitation, the only responses that showed a high level of perceptual continuity were student-athlete 1 and athletic trainer 1. Both participants mentioned the use of positive self-talk. Positive self-talk has been seen as a motivator for rehabilitation (Gould et al., 1997), which was consistent with the perceptions of ATC 1 when they mentioned that the self-talk was “helping her work harder in rehab”. Furthermore, the use of goal setting was seen as a technique for rehabilitation, which was also observed as a positive coping technique for elite skiers (Gould et al., 1997). In a study conducted by Evans and Hardy (2002), a goal-setting intervention group was seen to have a higher level of self-efficacy and also levels of adherence. This adherence could speak to use of “short term goals for the week” (ATC 1) within this specific rehabilitation protocol, goals that help both the student-athlete and ATC stay “focused on what we’re trying to do” [return to play] (ATC 1).

Life Impact

Because recovering from an injury can be a long and emotional process (Ahern & Lohr, 1997; Evans & Hardy, 2003; Fisher & Hoisington, 1993; Gould et al., 1997; Hardy, 1992; Ninedek & Kolt, 2000; Quinn & Fallon, 1999; Tracey, 2003), the impact the injury has on an individual is idiosyncratic. An observation made was that discussing the life impact of an injury with an athlete who is currently injured could be difficult for an athletic trainer. The life impact of an injury may not be a topic that is explicitly discussed when partaking in rehabilitation exercises. Moreover, if the topic is sensitive to the

injured student-athlete, the athletic trainer may not possess the necessary skill set to address this topic. In conjunction with possessing a necessary skill set, some injured athletes have been turned inwards and isolated themselves and their emotions (Gould et al., 1997), which may make it difficult to infer any life impact.

Low Levels of Perceptual Continuity

The perceptual continuity between student-athlete 1 and athletic trainer 1 showed a very low level of perceptual continuity. The student-athlete mentions more of a physiological impact, speaking to an impact affecting their physique, touching upon a fear of not being strong enough once rehabilitation is complete. The athletic trainer does not mention any impact, mental or physical. This could be attributed to a relationship issue. Although the relationship was described as positive, it could be a “surface” relationship, where it avoids specific conversations or the communication stops when a deeper topic arises. Furthermore, the non-verbal cues that the athletic trainer is exerting could affect the student-athlete not wanting to disclose something more important. Research has shown that the non-verbal cues sent by the athletic trainer can influence the injured student-athletes responses to rehabilitation (Naylor, 2007).

The relationship between student-athlete 2 and athletic trainer 2 (ATC 2) showed a very low level of perceptual continuity between the student-athlete and the athletic trainer. The student-athlete spoke a great deal about the impact the injury had on them, mentally, and having a more optimistic mentality. In contrast, ATC 2 failed to see an impact outside of sport. Because communication was an area of weakness that they both spoke to, passive verbal and non-verbal communication may hinder the ability to see an impact. Gordon, Potter, & Ford (1998) have examined the need for “well developed

interpersonal and communication skills” to facilitate an open communication line between the ATC and the student-athlete with whom they work.

There was a low level of perceptual continuity observed between student-athlete 3 and athletic trainer 3. The student-athlete was in their last season, and found that they were looking toward the future or life after sport and school. The emotions were still disappointment and frustration as previously noted, but the injury seemed to help the athlete prepare for the future, in a life without the sport as a main component. It was apparent that academics and life after injury moved to the forefront of this student-athlete’s priorities, which is common among injured student-athletes (Etzel & Ferrante, 1999; Tracey, 2003).

The athletic trainer, in contrast, failed to notice or mention the impact the injury had on the student-athlete other than how it related to the sport itself. The athletic trainer may not possess the skills to infer a life impact of the injury, which could contribute to the low level of perceptual continuity. Moreover, as previously stated, student-athlete 3 sees a mental coach, who could assess life impact more accurately.

High Levels of Perceptual Continuity

This high level of perceptual continuity between student-athlete 4 and athletic trainer 3 was the only relationship that depicted any congruency within answers. The student-athlete expressed immense frustration of not being able to play, consistent with past research (Ahern & Lohr, 1997; Gordon, Milios, & Grove, 1991; Heil, 1993; Quackenbush & Crossman, 1994; Quinn & Fallon, 1999; Taylor & Taylor, 1997; Tracey, 2003; Walker, Thatcher, & Lavalley, 2007; Wiese-Bjornstal, Smith, Shaffer, & Morrey,

1998). ATC 3 strengthens this feeling by stating that student-athlete 4's life is being completely altered because the sport was his life, suggesting his entire life is in disarray.

This particular athlete was a highly competitive and crucial player within the institution's tennis team. Knowing this, it could be proposed that the student-athlete might have felt disappointed that they were unable to help the team, especially in a struggling season. The impact could have been more mental than expressed, and the student-athlete may not have felt comfortable digging deeper in them to discuss this.

Relationship

Low Levels of Perceptual Continuity

There were no responses that were indicative of low levels of perceptual continuity regarding relationships between the student-athletes and their athletic trainers. Because of the nature of the interview, and possibly because of the consistent amount of time all student-athletes were spending with their ATC at the time of the interview, this could have influenced their answers. Research has supported the finding that because of the amount of time spent together, a strong rapport is created and the positive relationship maintained between the injured student-athlete and athletic trainer influences rehabilitation (Barefield & McCallister, 1997; Bone & Fry, 2006; Etzel, Ferrante, & Pinkney, 2002; Fisher & Hoisington, 1993; Green & Weinberg, 2001; Moulton, Molstad, & Turner, 1997; Rees, Mitchell, Evans, & Hardy, 2010; Robbins & Rosenfeld, 2002; Washington-Lofgren, Westerman, Sullivan, & Nashman, 2004). Further implications are discussed in the following section.

High Levels of Perceptual Continuity

All of the student-athlete and athletic trainer relationships were viewed in a positive and open manner. The relationship created between the injured student-athlete and the athletic trainer has been seen as one of the most important within rehabilitation (Etzel & Ferrante, 1999). With this, the level of perceptual continuity was extremely high. Each relationship expressed a sense of honesty and trust, strengthening the statement made by Etzel and Ferrante (1999) that ATCs are arguably “the most trusted people within the athletic community”. In addition to the words of the student-athlete, the perceptions of the athletic trainer were congruent with those of the injured student-athlete. Both the student-athletes and athletic trainers used words such as “positive”, “no problem communicating”, “very open”, “honest”, and “trust”. These words suggest a strong, supportive relationship for working in close proximity of one another. The [social] support provided by the athletic trainer is a positive element to the student-athlete’s rehabilitation (Bone & Fry, 2006; Clement & Shannon, 2011; Green & Weinberg, 2001; Heil, 1993; Nixon, 1994; Rees et al., 2010; Robbins & Rosenfeld, 2002; Wiese, Weiss, & Yukelson, 1991; Yang et al., 2010), which can influence the recovery process.

The only relationship to mention any specific topic was student-athlete 2 and athletic trainer 2. The topic of communication was brought up by both participants. Although they both see their working relationship in a positive manner, both participants are not blind to areas that can cause them problems. They actively looked to address and attack the communication barrier, and had been working on the area consistently at the time of the interview. This relationship showed more of a realistic side, disclosing an area

of struggle. The participants chose not to hide the reality of their relationship, which other participants may have done. Student-athlete 2 mentioned that they “have no problem communicating her [ATC 2]”, suggesting that she trusts herself and the ATC to speak openly, regardless of what she may need to communicate.

Because all of the injured student-athletes and the ATC with whom they work describe the relationships in a positive manner, one would assume that the levels of perceptual continuity would be high across the other responses. This was not the case. There was a higher amount of low levels of perceptual continuity, suggesting that the relationship was not as open and honest as the participants led to believe. What’s more, research shows that the support given from the ATC to the injured student-athlete is seen from a positive light (Barefield & McCallister, 1997; Bone & Fry, 2006; Granito, 2002; Yang, Peek-Asa, Lowe, Heiden, & Foster, 2010). Because the student-athlete may have sensed a high level of support from the ATC during the rehabilitation process, it may have overshadowed any negative aspects of the relationship, making it uneasy for the student-athlete to explore and discuss that possibility.

Another implication that can be drawn from these responses would be the lack of trust in the primary researcher. Because this was a single interview, building a strong rapport in a limited amount of time can be challenging. It was important for the primary research to be aware that both the interviewee and the interviewer brought their own personal biases and attitudes with them (Merriam, 2009), which could have influenced answers and reactions to questions. The participants could have felt apprehensive giving any negative information during the interview due to the fact that they did not know the interviewer for an extended period of time. Another reason could be due to the fact that

they did not want to acknowledge any negativity within their relationship, suggesting that they needed to fix or critique any current activity. In addition, participants could have feared the repercussions of divulging negative aspects of the relationship, despite confidentiality.

It is very hard to assume that every relationship is positive and open at all times, and although some athletic trainers expressed that there may have been minor setbacks within the relationship, the lack of anything negative suggests that there may be something not expressed within the interview process. Although not able to pinpoint those exact reasons for non-disclosure, future study designs should take this limitation into consideration.

CONCLUSION

From this study, several things were observed by the principal investigator regarding the relationship established and held between an injured student-athlete and their athletic trainer. The relationship seems to be fluid throughout the rehabilitation process, on somewhat of a spectrum between positive and negative. As an athletic trainer, being assigned to a specific team throughout the season allows one to build rapport and create stable foundations for positive relationships. When working with an individual from that team, the time spent grows exponentially. The student-athlete and athletic trainer are together more consistently than any other member on the treatment team, allowing more time for communication. All of the injured student-athletes in this study had been working consistently with their athletic trainer for two months or longer, participating in individual rehabilitation and seeking treatment before and after practices and games. Despite the amount of time spent with the athletic trainer, the perceptual

continuity between the student-athlete and the athletic trainer was more mixed and variable throughout the four relationships. It was observed that the relationship between the two parties is more fluid than they lead on during the interview.

When questioned about the relationship with one another, all individuals provided answers that suggested that the relationships are positive, that they work well together, and that the relationships are open, honest, and contain a level of trust. However, throughout the other questions in the interview, each relationship had more instances of low levels of perceptual continuity than high levels of perceptual continuity. One interesting point that surfaced was how a relationship could be termed 'positive', 'good', and 'honest', but still lack accurate knowledge of true emotions, thoughts, and attitudes. Depending upon the injury, the rehabilitation experience is a long and enduring process. The amount of time an injured student-athlete spends with their athletic trainer is immense. Maintaining a relationship of honesty and trust without having an accurate understanding of the actual experience of the student-athlete is difficult to comprehend.

Should this study be mirrored in the future, the limitations presented should be examined and taken into account. Because the ATCs were in graduate school and flooded with obligations outside of athletic training, such as school work, one may want to take into account the stress management and coping of these individuals; furthermore, an ATC without the obligation of graduate studies may have provided different responses. In addition, a single interview may not have accurately accounted for the entire rehabilitation process, negating any possible initial negative feelings or outlooks at the onset of injury and rehabilitation. Regardless of a bracketing interview, because the primary research had a background with injuries and rehabilitation processes, a non-bias

interviewer may recognize a broader range of reactions and emotions. More in-depth questions regarding the relationship between the student-athlete and the athletic trainer would also provide more insight to major elements of the relationship.

A post-hoc test would also prove advantageous to the study. This test would be able to see the progression from the time of the interview to the actual return to sport and the timeline of the student-athlete. An interview that would evaluate the responses from the initial interview would be an interesting comparison to view. Furthermore, it would give weight to the initial responses and could help to explain the reasons behind progression or setbacks in the rehabilitation process.

Future Study Recommendations

This study provides the athletic profession with some consistency through previous studies and also sheds light on other areas that should be examined in future studies.

Longitudinal Studies

Because this study was based off of a single interview, the perceptions and actual experiences cannot be viewed from the beginning of rehabilitation to the completion of rehabilitation. Future studies could be based around a longitudinal study, looking at the entire process from onset to completion of rehabilitation. This might provide the more insight into the fluidity of the relationship and how it may fluctuate over time.

Case Study

This study focuses on four different injured student-athletes and their athletic trainers. While observing and appreciating the perceptual continuity of four different relationships was beneficial for this study, a case study that details and depicts the entire

relationship could prove more advantageous. A case study would be able to delve deeper than the surface level of individuals, really evoking what the injured student-athlete is experiencing. The perceptual continuity could be examined more closely than with a one-time interview. In addition, a number of case studies over a series of time would provide a closer look at the most consistent thoughts, the fluctuations in an individual's attitude, the employing of mental skills at different stages, and the rollercoaster of emotions being experienced.

Mixed Methods

Although qualitative research does not require a high number of participants and is focused on the essence of the participant's experience, a mixed methodology consisting of both qualitative and quantitative measures would be interested to view. This methodology would incorporate more injured student-athletes and the athletic trainer with whom they work. Rather than individual interviews, a focus group might allow the student-athletes to relate, compare and differ with fellow injured student-athletes. In addition, it could allow athletic trainers to do the same with other athletic trainers. Although it would not be able to look at specific relationships, this framework would provide an overall insight across all areas.

Other Implications

Guidelines

Barefield & McCallister (1997) first created a six item set of guidelines that could improve relationships between athletic trainers and injured student-athletes from the athletic trainer's onset of undergraduate studies. These guidelines outline steps such as stressing that, along with injuries and treatments, conversations are confidential; also, it

suggests learning how to build rapport and a foundation with student-athletes as an undergraduate student, while still in the early educational phase of athletic training. The steps provide an overall guideline, but a more detailed set could help future athletic trainers when faced with some of the topics handled with the psychological side of rehabilitation. Fisher et al. (1993) also discussed aspects needed to help increase rehabilitation adherence, which should be examined when creating guidelines for the athletic trainers. Furthermore, providing each athletic training room with a handbook that has strategies that are easy to incorporate and simple to understand might be beneficial.

Workshops on Psychological Rehabilitation of Injured Athletes

Workshops led by Certified Consultants with the Association for Applied Sport Psychology (CC-AASP) for both newly certified athletic trainers and those who have been in the field for many years could be advantageous. These workshops would consist of red flags to look for, include a focus on active listening, empathy, models of coping, role playing, and an introduction to the use of simple mental skills. Workshops would consist of handouts and presentations that are specific to issues the athletic trainer may encounter when working with their injured athlete. Because the workshops would be led by an CC-AASP, attendees could be certain that the presentation is supported by research and that is it also educationally based from the work the consultant has experienced. This could be a practical application based on fact that many practitioners are open to further training to better their skills and better serve their clients (Hemmings & Povey, 2002; Ninedek & Kolt, 2000; Moulton, Molstad, & Turner, 1997).

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APPENDIX A

RESEARCH QUESTIONS, ASSUMPTIONS, DELIMITATIONS, LIMITATIONS,
AND DEFINITIONS

Research Questions

1. What are the perceptions of a severely injured student athlete and their athletic trainer on the common thoughts, emotions, and attitudes of the injury rehabilitation?
2. What are the perceptions of a severely injured student athlete and their athletic trainer on the coping strategies that were employed during the injury rehabilitation?
3. What are the perceptions of a severely injured student athlete and their athletic trainer on the life impact of the student athlete?

Assumptions

1. Participants will answer questions regarding their experience fully and honestly.
2. Because of a humanistic approach, participants will be able to openly and honestly express their own beliefs, feelings, and thoughts about coping strategies during injury, and will not feel pressured or judged by norms and standards of coaches or other individuals.
3. Participants will be able to give an accurate retrospective account of their coping strategies during injury.

Limitations

1. Accurate retrospective information.
2. Participants will be from a recognized NCAA establishment and cannot be used to express opinions of other levels of sport.
3. Researcher biases; however, measures will be taken to eliminate such biases through research team and triangulation.

Delimitations

1. Deliberate sampling technique.
2. Participants are those severely injured who are within four weeks of returning to their respective sport and therefore cannot express experience of those with less or more severe injuries.
3. Limited to NCAA athletes and are not representative of all levels of competition.
4. Participants will have at least one year of collegiate sport experience.
5. Athletic trainer participants will be certified in athletic training.

Definitions

1. Triangulation
 - a. Strategies for reducing systematic bias and distortion during data analysis (Patton, 2002)
2. Narrative Research
 - a. “the study of how human beings experience the world, and narrative researchers collect these stories and write narratives of experience (p. 2, Gudmundsdottir, 2001),” as cited in Moen, 2006.
3. Coping
 - a. “a process of constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands or conflicts appraised as taxing or exceeding one’s resources” (Lazarus & Folkman, 1984, p. 210).

APPENDIX B
ANNOTATED BIBLIOGRAPHY

Ahern, David K. & Bethany A. Lohr. (1997). Psychosocial Factors in Sports Injury Rehabilitation. *Clinics in Sport Medicine*, 16, 755-768.

Ahern & Lohr (1997) investigated the psychological aspects of the sports injury rehabilitation in different areas of sport. This article came about when there was very little research done on the investigative properties of psychology of injury in athletes. Their material identified different risk factors, stressors in different sports at different ages, and furthermore, included some possible approaches to performance enhancement of these injured athletes.

Given this articles information, it does help to see what some of the initial findings expressed. In terms of the present study, this will help me to see possible areas to investigate with various individuals and to see if they employed any of the techniques explained by Ahern & Lohr. It shows where they've been and also, explains where psychological effects on injured athletes should be headed in the future. This is hopefully something I'll be able to unfold and further develop in my study.

Mitchell, K. (2004). Managing the psychological side of injury and illness: becoming a "coping coach." *Athletic Therapy Today*, 9, 52-54.

Mitchell's article explored the coping process, and focused more on teaching how to become a "coping coach" for those injured athletes. He explained the different and common emotions injured athletes tend to experience, while also stating that the coping process will be driven by the athlete's determination of success. Mitchell focused more

on the ways in which someone can help with the coping process, which is an area that will be necessary as a future sport psychology consultant.

This article will help me not only in my present study to help probe the individuals further regarding their emotional response to their injury, but also in my future career path. With tips about how to approach the psychological mindset of an injured athlete, the interview process of my thesis will flow smoother.

Podlog, L., & Eklund, R.C. (2005). Return to sport after serious injury: a retrospective examination of motivation and psychological outcomes. *Journal of Sport Rehabilitation, 14*, 20-34.

Podlog & Eklund investigated the rate of return to sport after a serious injury and the different emotional responses one used in their return to sport. Along with many of the other articles that identified with the common emotions that individuals cycle through, but also they focused on both elite and subelite athletes. They looked at athletes' motivations to return to sport and how that affected their actual rehabilitation and return to sport.

For the present study, I'll be looking at coping skills and this article identifies motivation as an aide to return to sport and for rehabilitation. Motivation can have other underlying elements used by athletes, which is what I'll be examining and hopefully identifying. Although I won't be giving any surveys to participants, the use of motivation as a coping skill will be questioned.

Podlog, L. & Eklund, R.C. (2009). High-level athletes' perceptions of success in returning to sport following injury. *Psychology of Sport and Exercise, 10*, 535-544.

In this particular study, Podlog & Eklund continued their investigation of high-level athletes' return to sport after injury. This article specifically mentions and further develops the use of the self-determination theory constructs. The three elements in particular are competence, autonomy, and relatedness. By fulfilling these three basic psychological needs, the athlete had a higher perception of recovery from injury.

This article not only looked at a particular theory, but it also further specified within that theory three basic needs the athlete needs fulfilled. This framework will help me with my interview process to possibly see if the athletes feel these three things are important in their return. This knowledge is useful because, when transcribing information, I may be able to see these themes arise, should it be apparent.

Podlog, L., Lochbaum, M., & Stevens, T. (2010). Need Satisfaction, Well-Being, and Perceived Return-to-Sport Outcomes Among Injured Athletes. *Journal of Applied Sport Psychology, 22*, 167-182.

Podlog, Lochbaum, & Stevens investigated the self-determination theory and its affect on return to sport perceptions through various athletes. They found that an SDT framework, specifically in the area of relatedness, needed to be further developed in future research.

As stated in the previous study, the use of an SDT framework will hopefully be apparent in my thesis findings. However, should varying results present themselves, it will allow me to explore a new framework within the injured athletes. Their study suggests a longitudinal design for SDT, but with the limited time frame of my study, I may not see the same SDT results. However, as previously mentioned, their findings may help me in determining themes, should these themes arise in my own study.

Rees, T., Hardy, L., Evans, L. (2007). Construct Validity of the Social Support Survey in Sport. *Psychology of Sport and Exercise*, 8, 355-368.

This article focuses on the use of social support in sport and the different constructs in which social support can be used. The researchers looked at eight different dimensions: listening support, task appreciation, task challenge, emotional support, emotional challenge, reality confirmation, tangible assistance, and personal assistance.

This study identifies with the use of social support, which has been shown through research to have a promising effect on the return of injured athletes to sport. Even though this particular study doesn't necessary dive into the aspect of an injured athlete, it does, however allow one to see the positive effects of social support in overall sport areas. With this information, I'll be able to see if social support is a common theme amongst injured athletes, and in particular, which of the eight dimensions, if present, are part of the social support employed by these athletes.

Vergeer, I. (2006). Exploring the mental representation of athletic injury: A longitudinal case study. *Psychology of Sport and Exercise, 7*, 99-114.

In this longitudinal study, Vergeer used a case study to examine the different themes of recovering from injury. The interesting aspect of this case study was that it brought into play the different aspects of life that occur during rehabilitation of an injury, not just physical therapy and meeting with doctors. It took into account school, life style changes, and also how the individual responded to these different elements. It was a realistic view into one person's own interpretation of their emotions and the responses given by their doctors and by their support systems.

This case study will be extremely beneficial to me in my study, even though it was a longitudinal case study. I will be able to see different themes within my short interview time frame that could correlate with the ones found in this 156-day study. It will be interesting to see if the interviewees will have different responses given the shorter time frame of the present study as compared to 156 days post-injury.

Walker, N., Thatcher, J., & Lavalley, D. (2007). Psychological responses to injury in competitive sport: a critical review. *The Journal of The Royal Society for the Promotion of Health, 127*, 174-180.

Walker, Thatcher, & Lavellee discuss and critique the integrated model of psychological response to the sport and injury rehabilitation process. One of the biggest

critiques was that there was very little research, if any at all, supporting a uniform sequence of stages that a person goes through when they are injured.

This critique will help me with look past the five-stage grief model that many people have used in the past, and will allow me to explore what hasn't been discovered yet or to elaborate on the more current research in the sport injury field.

APPENDIX C
IRB NARRATIVE PROPOSAL

Instructions: *Please respond to the following as briefly as possible, but keep in mind that your responses will affect the actions of the Board. Clearly label your responses in sections that correspond to the specific information requested. The Narrative should include a step by step plan of how you will obtain your subjects, conduct the research and analyze the data. Make sure the narrative clearly explains aspects of the methodology that provide protections for your human subjects. You may insert your responses in each section on this page in bold text, leaving a space between the question and your answers. Narrative should not exceed 5 pages.*

*The application should be submitted electronically (email attachment) or sent to the Office of Research Services and Sponsored Programs, at P. O. Box 8005, Statesboro, GA 30460, fax (912) 478-0719, and should contain, in this order: a signed cover page (fax, pdf or mail), the project proposal narrative, signed copy of certification of investigator responsibility (CIR) (fax, pdf or mail), human subject training certificate (within the last 3 years), and the informed consent that you will use in your project., the informed consent checklist (optional) Additional information, such as copies of survey instruments, letter of cooperation from institutions where subjects will be accessed (e.g., public schools), advertisements, or any instruments used to interact with participants should be attached at the end of the proposal clearly designated as an Appendix. **For electronic submission:** First complete the proposal narrative in entirety and “Save As” a word document to your computer or disk named “lastname, First initial _propnarr_Year_Month_Date.doc”. Open and complete cover page. Email all documents to IRB@georgiasouthern.edu. Documents that require signature may be faxed to 912-478-0719, mailed or uploaded in PDF. (Electronic submission is not required.)*

Personnel. Other than the primary research and the advisor, there will be a research team comprised of graduate students in the Health and Kinesiology department at Georgia Southern University. They will be knowledgeable and experienced in the analysis of qualitative data. The use of the research team will be to recognize biases the primary researcher might have, and to assist in the analysis of the data collected.

Purpose. The purpose of this research is to investigate and uncover the perceptions of coping with an injury among NCAA Division I athletes and also the athletic trainers with whom they work. This investigation will help both sport and health professionals address the mental and physical side of rehabilitation with a better understanding of the athlete’s emotions and perceptions during this time. In this study, the questions being answered are as follows: What are the perceptions of a severely injured student athlete and their athletic trainer on the common thoughts, emotions, and attitudes of the injury rehabilitation? What are the perceptions of a severely injured athlete and their athletic trainer on the coping strategies that were employed during the injury rehabilitation? What are the perceptions of a severely injured student athlete and their athletic trainer on the life impact of the student athlete? Because of the nature of the qualitative approach, no hypotheses are needed for this investigation. Current research states that one’s reaction to their sport injury can be an influential determinant of their return to sport (Ahern & Lohr,

1997; Podlog & Eklund, 2005; 2009; Podlog, Lochbaun, & Stevens, 2009; Walker, Thatcher, & Lavallee, 2007). Furthermore, research has surfaced regarding the need of athletic trainers to also focus on the mental aspects of recovery (Barefield & McCallister, 1997; Gordon, Milios, & Grove, 1991; Grindley & Zizzi, 2005). In order to answer the research questions established, it is necessary to question and probe injured athletes and the athletic trainers with whom they work. These discovered perceptions will allow the primary research to address the need of mental rehabilitation during an injured athlete's rehabilitation process.

Outcome. From this study, the primary results will help both health and sport professionals approach rehabilitation, both mentally and physically, when working with injured athletes. The results may help to understand the emotional aspect of injury, and how to better address this aspect during rehabilitation. Indirectly, injured athletes may benefit from the psychological recovery of injury if their athletic personnel is aware and well-prepared to address their specific needs.

Describe your subjects. There will be eight (8) participants within the study with ages ranging from 18-30, depending upon the age of the athletic trainer of the injured student athlete. There are no gender requirements. Recruitment will be based on a purposeful sample, based on knowledge of injuries and relationships with team members. Data will be collected through one-on-one interviews, with a recorder used for transcription and accuracy purposes. Names will not be used, as the participants will be given identification numbers. Each identification number of the student athlete and their athletic trainer will be the same (ie. Joe, from the soccer team, will become 'Participant 1'. Joe's athletic trainer will become 'Athletic Trainer 1'). Because of the sample used, this study cannot be generalizable to other levels of sport, nor to other levels of injury within sport (based on the set parameters).

Methodology (Procedures). The methodology will be based upon a narrative approach, using a recording device to record interviews. Please see attached questionnaire for interview questions. Data analysis will be based upon an already established methodology for qualitative research developed by Czech et al. (2004) and Patton (2002). The analysis will consist of four sections: approaching the interviews, focusing the data, phenomenological reduction, and releasing meanings. Approaching the interviews focuses on the accurate transcription of tape recorded interviews and the reading and rereading of these interviews. Focusing the data works towards addressing the primary researcher's pre-established biases through answering the questions as if they were an actual participant. Phenomenological reduction consists of the elimination of unnecessary, irrelevant, overlapping or repetitive phrases within the transcriptions. Finally, releasing meanings will consist of accurately depicting the themes that occurred throughout the study. These four stages will be completed by the primary researcher with help from the PR's advisor. Along with this analysis, the software NVivo will be utilized to aid validity and also to categorize specific themes the research and research team deems as present and important.

Special Conditions:

Risk. The risks from this study are that minor discomfort when answering questions is a possibility, while also there may be minor mental disturbance as injury rehabilitation may be a sensitive and emotional subject for participants to share. However, it is with this investigation that athletic personnel will be able to better aide their injured athletes during the rehabilitation process. Addressing the psychological recovery may improve the athlete's ability to return to sport at a sooner than projected time. Therefore, the benefits will outweigh the risks of this study.

Cover page checklist. None of the items listed on the cover page checklist apply. *Please provide additional information concerning risk elements checked on the cover page and not yet addressed in the narrative. If none, please state "none of the items listed on the cover page checklist apply." The [cover page](#) can be accessed from the IRB forms page. (Note – if a student, make sure your advisor has read your application and signed your cover page. (Your advisor is responsible for the research you undertake in the name of GSU.)*

Reminder: No research can be undertaken until your proposal has been approved by the IRB.

APPENDIX D
INFORMED CONSENT

College of Health and Human Sciences
Department of Health and Kinesiology

1. My name is Hannah Bennett, and I am a second year master's student within the Health and Kinesiology Department in the College of Health and Human Sciences. I am conducting this study in partial requirement for the master's program at Georgia Southern University.
2. Purpose of the Study: The purpose of this research is to focus and uncover the perceptions of coping with an injury in sport among NCAA Division I athletes and also the athletic trainers with whom they work.
3. Procedures: The participant will be given basic background information regarding the nature of the study. After introductions, the participant will be asked a series of questions pertaining to the study at hand. Following the interview questions, the participant will be debriefed and thanked for their participation.
4. Discomforts and Risks: The risks from this study are that minor discomfort when answering questions is a possibility, while also there may be minor mental disturbance as injury rehabilitation may be a sensitive and emotional subject for participants to share. I understand that medical care is available in the event of injury resulting from research but that neither financial compensation nor free medical treatment is provided. I also understand that I am not waiving any rights that I may have against the University for injury resulting from negligence of the University or investigators. Those wishing to seek assistance may call the Counseling Center at 912-478-5541.
5. Benefits:
 - a. The benefits to participants include the knowledge that they will be helping to provide necessary information that will benefit the future mental rehabilitation of injured athletes and the health and sport professionals with whom they work.
 - b. The benefits to society include the results that will acknowledge of the importance of mental recovery during an injured athlete's rehabilitation process. Furthermore, the information received will help researchers to develop and critique methods of mental rehabilitation based on the data given from this study's participants.
6. Duration/Time required from the participant: 10-20 minutes
7. Statement of Confidentiality: The primary researcher will be the only person to have access to any form of recording from the interviews and also transcriptions of the interviews. Furthermore, the research team, comprised of the primary researcher's advisor and two to three graduate students experienced in qualitative research, will have access to transcriptions only for the purpose of analysis. The transcriptions and recording will be in the possession of the primary research at all times, and will be secured in a locked cabinet when not being utilized. At completion of the study, interviews and transcriptions will remain in the possession of the primary research until the allotted three year timespan has expired.
8. Right to Ask Questions: Participants have the right to ask questions and have those questions answered. If you have questions about this study, please contact the researcher

named above or the researcher's faculty advisor, whose contact information is located at the end of the informed consent. For questions concerning your rights as a research participant, contact Georgia Southern University Office of Research Services and Sponsored Programs at 912-478-0843.

9. Voluntary Participation: If at any time you feel uncomfortable within this study, you may exit the study at any time and not continue. You may end your participation at any time by telling the primary researcher. Furthermore, you do not need to answer any questions you do not feel comfortable answering.
10. Penalty: There is no penalty for deciding not to participate within the study, and you may withdraw at any given time.
11. You must be 18 years of age or older to consent to participate in this research study. If you consent to participate in this research study and to the terms above, please sign your name and indicate the date below.

You will be given a copy of this consent form to keep for your records. This project has been reviewed and approved by the GSU Institutional Review Board under tracking number **H12258**.

Title of Project: Perceptions of Coping with an Injury in Sport at the NCAA Division I Level: A Narrative Approach of Student Athletes and Athletic Trainers
Principal Investigator: Hannah Bennett, 431 South Main Street, Statesboro, GA 30458.
Telephone: 207-745-1711. E-mail: hb01090@georgiasouthern.edu
Faculty Advisor: Dr. Daniel Czech, Department of Health and Kinesiology, PO Box 8076, Statesboro, GA, 30460. Telephone: 912-478-5267. E-mail: drczech@georgiasouthern.edu

Participant Signature

Date

I, the undersigned, verify that the above informed consent procedure has been followed.

Investigator Signature

Date