NARRATIVES OF COLLEGIATE FEMALE ATHLETES WHO SUSTAINED MULTIPLE INJURIES

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A Thesis

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In a “culture of risk,” injuries are an unintentional consequence of sport, rarely talked about, and intentionally down played. Yet, athletes are constantly exposed to the potential for injury. Two models, Williams and Andersen’s (1998) stress and injury model and Wiese-Bjornstal et al.’s (1998) integrated model of response to sport injury and rehabilitative process, guide much of the research on the psychology of injury. This study built on the models, but focused on the psychological outcomes to multiple injuries rather than a single episode. The purpose was to explore athletes’ psychological response to multiple injuries. Four female, multiply injured collegiate athletes participated in two interviews: the first interview was unstructured and explored their sport injury experiences; the second interview was semi-structured and expanded upon issues raised in the first interview. Data were open and axial coded and a narrative approach and creative writing style were utilized in the presentation of the data. Composite monologues and individual narratives were constructed from athletes’ direct quotes and layered with theoretical and research discussion. The following themes are discussed in the narratives: responses to injuries and rehabilitations, interactions with sports medicine team, changing roles and team responsibilities while being multiply injured, coping strategies, social support, mental states associated with returning to sport participation, lessons learned as multiply injured athletes, advice based on the experience of being multiply injured, and injury status at the end of study. Many findings were consistent with the current literature on psychology of injury. Yet, the athletes’ narratives also revealed experiences unique to multiply injured athletes. Similar to the
literature, the athletes experienced responses to their injuries like shock, anger, and frustration. The athletes also experienced distrust in their body as a result of their multiple injuries. Overtime, all four athletes did learn to cope with their injuries. Social support from their teammates, coaches, and athletic trainers in addition to adopting alternative roles helped them cope with their multiple injuries. Overall, the athletes’ narratives provide an in-depth understanding of their psychological responses to multiple injuries and have practical implications for sports medicine professionals, coaches, and multiply injured athletes.
I dedicate this to my late grandparents who I know are watching over me everyday…
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter I. Introduction and Review of Literature</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequences of Injury</td>
<td>4</td>
</tr>
<tr>
<td>Conceptual Models of Stress and Injury</td>
<td>6</td>
</tr>
<tr>
<td>Stress and Injury Model</td>
<td>7</td>
</tr>
<tr>
<td>Integrated Model of Psychological Response to Sport Injury and Rehabilitation Process</td>
<td>9</td>
</tr>
<tr>
<td>Personal factors</td>
<td>12</td>
</tr>
<tr>
<td>Situational factors</td>
<td>15</td>
</tr>
<tr>
<td>Cognitive appraisal</td>
<td>16</td>
</tr>
<tr>
<td>Emotional response</td>
<td>21</td>
</tr>
<tr>
<td>Behavioral response</td>
<td>24</td>
</tr>
<tr>
<td>Need for Present Study</td>
<td>29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter II. Method</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewing</td>
<td>31</td>
</tr>
<tr>
<td>Developing interview questions</td>
<td>32</td>
</tr>
<tr>
<td>Pilot testing</td>
<td>33</td>
</tr>
<tr>
<td>Thesis Study</td>
<td>34</td>
</tr>
<tr>
<td>Participants</td>
<td>35</td>
</tr>
<tr>
<td>Procedure</td>
<td>36</td>
</tr>
<tr>
<td>Reflexive process</td>
<td>37</td>
</tr>
<tr>
<td>Data analysis</td>
<td>40</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Narrative inquiry</td>
<td>40</td>
</tr>
<tr>
<td>Creative writing style</td>
<td>42</td>
</tr>
<tr>
<td>Data coding</td>
<td>42</td>
</tr>
<tr>
<td>Data presentation</td>
<td>43</td>
</tr>
<tr>
<td>CHAPTER III. RESULTS AND DISCUSSION</td>
<td>45</td>
</tr>
<tr>
<td>Participant Injury Chronology Profiles</td>
<td>45</td>
</tr>
<tr>
<td>Narratives of Multiply Injured Athletes</td>
<td>49</td>
</tr>
<tr>
<td>Response to injuries and rehabilitations</td>
<td>50</td>
</tr>
<tr>
<td>Initial responses to injuries</td>
<td>50</td>
</tr>
<tr>
<td>Being multiply injured</td>
<td>58</td>
</tr>
<tr>
<td>Interactions with sports medicine team</td>
<td>63</td>
</tr>
<tr>
<td>Changing roles and team responsibilities while being multiply injured</td>
<td>69</td>
</tr>
<tr>
<td>Coping strategies</td>
<td>73</td>
</tr>
<tr>
<td>Social support</td>
<td>78</td>
</tr>
<tr>
<td>Social support from teammates</td>
<td>79</td>
</tr>
<tr>
<td>Social support coaches</td>
<td>81</td>
</tr>
<tr>
<td>Mental states associated with returning to sport participation</td>
<td>85</td>
</tr>
<tr>
<td>Lessons learned as multiply injured athletes</td>
<td>90</td>
</tr>
<tr>
<td>Advice based on the experience of being multiply injured</td>
<td>93</td>
</tr>
<tr>
<td>To sports medicine professionals</td>
<td>94</td>
</tr>
<tr>
<td>To other injured athletes</td>
<td>95</td>
</tr>
<tr>
<td>Injury status at the end of study</td>
<td>97</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES/TABLES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Revised Version of the Stress and Injury Model</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Integrated Model of Response to Sport Injury and Rehabilitation Process</td>
<td>11</td>
</tr>
</tbody>
</table>
**CHAPTER I: INTRODUCTION AND REVIEW OF LITERATURE**

Athletes are stronger, quicker, and presumably sturdier than the rest of us. They seem blessed. We forget that what they do is hard. We so rarely see them at their most vulnerable—in pain and out of commission. And we almost never hear, from their perspective, about those injuries that disrupt their existence and play havoc with their futures. (Stein, 1984, p. 64)

In today’s society, a broad consensus exists that “sport is good for you” (Waddington, 2000, p. 22). Waddington reports that rhythmic and regular exercise has a significant positive influence on one’s health status; however, according to Thing (2006) sport requires additional movements involving sharp and intensive bursts of activity, sometimes resulting in injury. Because of this, athletes are constantly exposed to the potential for harm. Daily, they risk injury. Over time, they risk multiple injuries. Thus, sport can be considered a “culture of risk” (Roderick, 1998, p.65).

Across the sporting arena, injuries are unintentional consequences rarely talked about and intentionally down played. Perhaps this occurs because athletic injuries and imperfect bodies are side effects that do not highlight the healthy image of sport (Thing, 2006). As Shuer and Dietrich (1997) pointed out,

Successful elite athletes who reach the ranks of a Division I National Collegiate Athletic Associate (NCAA) program have been heavily socialized in the mores of the sports world. This culture glorifies heroism, strength, speed, and courage. It emphasizes such adages as "no pain, no gain," "hurt is temporary, pride is forever," and "you can't make the club while sitting in the tub.” (p. 104)
Norms or “unspoken rules” of the game also are apparent throughout the sporting environment. A norm is “a standard for behavior that is expected of members of the group” (Eys, Burke, Carron, & Dennis, 2006, p. 165). Norms in sport, for example, include injury is a sign of weakness, pain is to be ignored and tolerated, and no complaining about minor aches unless they disrupt training to the point that coaches and teammates become alarmed (Shuer & Dietrich). Thus, “athletes learn to define sacrifice, risk, pain, and injury as the price one must pay to be a true athlete in competitive sports” (Wiese-Bjornstal, Smith, Shaffer, & Morrey, p. 63).

The majority of research defines injury as an occurrence that produces a time loss from participation and one that alters performance (Noyes, Lindenfeld, & Marshall, 1988). Inherent flaws, however, exist within this definition based on the injury variance among different sports, playing positions, and pain tolerances (Flint, 1998). To assume that all athletes will react to similar injuries in the same manner is incorrect. For example, a wrist injury may negatively affect the performance of a volleyball player while serving and spiking, but may have little to no impact on a distance runner. Similarly, some athletes may have a high pain tolerance or may not feel free to express pain, some will play through pain, while others are more detrimentally affected by the same pain and are unable to continue (Flint). Although time loss seems to be a widely recognized component of injury, there is no scientific way to predict how much time should be lost from practice or performance or whether an injury will negatively impact performance (Noyes et al., 1988). Noyes et al. provide an alternative definition, which states that a sports-related injury “1) keeps a player out of practice or competition on the day following the injury, 2) requires medical attention or dental care of any kind beyond icing and wrapping, 3) includes all concussions, nerve injuries, and eye injuries” (p. S68).
Based on this definition, responsibility is placed on the athlete to recognize and disclose the injury. This can be problematic if the athlete has a high pain tolerance or feels hesitant to divulge the injury. This definition also fails to address pathology or the nature of injury and its causes, process, development, and consequences. The way in which the body responds to tissue trauma follows a recognizable pattern, identifiable by common signs and symptoms (e.g., pain, redness, swelling, and increased temperature); but again, individual differences must be accounted for in the injury and rehabilitative process (Flint, 1998). Further, based on the severity of the sport injury, tissue trauma may not be overtly visible and what is observable may not accurately represent underlying pathology (Flint).

According to injury surveillance systems, such as the National Athletic Injury/Illness Reporting System (NAIRS) and the National Collegiate Athletic Association (NCAA), a minor injury is classified as a loss of 1 to 7 days, a moderate injury involved time loss of 8 to 21 days, and a time loss of more than 21 days was considered a major injury (Covassin, T., & Evans, 2007; Thompson, Halpern, Curl, Andrews, Hunter, & McLeod, 1987). Alternatively, many sport medicine practitioners utilize a pathologic definition in which degrees based on pain, strength, range of motion, function, and other signs and symptoms indicate both the potential amount and the severity of tissue damage (Flint, 1998). All in all, the key point, regardless of which injury definition one chooses to follow, is that each time an athlete sustains an injury, a disruption to the athlete’s “normal” exercise or sport routine can occur, which can then lead to further physical injury and/or psychological distress.

For this study in particular, the term multiple injuries, extracts key ideas from various injury definitions and extends those to create an original injury classification. Multiple injuries has yet to be clinically recognized. In general, injuries are classified as either acute or chronic.
An acute injury occurs suddenly during activity; whereas a chronic injury usually results from overusing one area of the body while participating in activity (Starkey & Ryan, 2002). According to Shuer & Dietrich, athletes who experience a constant state of pain or injury can be classified as chronically injured athletes. I am defining multiple injuries in this study, multiple injuries was defined as either separately occurring, independent, injury to the same body part or a variety of injuries sustained over an athletic career, resulting in several bouts of decreased functional ability, treatment, and/or rehabilitation. Multiply injured athletes have diagnosibly different injuries and can have injuries to more than one area of the body. Also, while multiply injured athletes can return to participation with less than 100% ability, at times still experiencing pain, their pain resolves and they viewed their injury as “healed.” Therefore, these athletes train with the premise that they are fully recovered and do not compete with a constant state of pain or injury. Thus, to better distinguish multiple injuries from chronic injuries, more emphasis is placed on the athlete’s injuries and return to participation.

**Consequences of Injury**

Sport injury can result in the sudden removal of what some athletes consider a substantial source of fulfillment and enjoyment in their lives (Taylor & Taylor, 1997). This impact extends far beyond their inability to participate in activities from which they gain satisfaction and pleasure. If athletes display a high level of athletic identity related to their sports, the forced absence from athletic involvement due to injury can have significant negative consequences on their ability to fully recover, and more importantly, to be happy and productive throughout rehabilitation (Brewer, 1993). Numerous studies involving physical therapists (e.g., Brewer, Van Raalte, Petitpas, Sklar, & Ditmar, 1995), athletic trainers (e.g., Brewer et al., 1995; Larson, Starkey, & Zaichkowsky; 1996), sport physicians (e.g., Brewer, Van Raalte, & Linder, 1991),
and athletes (e.g., Gordon & Lindgren, 1990; Rose & Jevne, 1993) have revealed that the most frequent and significant athlete emotions and behaviors associated with unsuccessful rehabilitation or treatment include: fear and anxiety; anger and frustration; denial and bargaining; overdoing rehabilitation; displays of depression; lack of understanding of the injury and recovery process; failing to take responsibility for self-management, noncompliance, and poor cooperation with instructions; and wanting to return to competition before full recovery.

Further, a variety of different psychosocial consequences of injury, such as the disruption of social support networks, a compromised relationship with coaches, and a possible change in playing position and team hierarchy, weigh heavily on the minds of injured athletes (Leedy, Lambert, & Ogles, 1994; Nixon, 1992). Not only does an injury have the ability to temporarily debilitate athletes, but it also can transport them from their comfort zone into a world with no guarantees or predictable outcomes. In a sense, “injured athletes are relegated to a rehabilitative netherworld” (Shuer & Dietrich, 1997, p. 104).

Another potential consequence of injury is fear (Brown, 2005; Faris, 1995; Taylor & Taylor, 1997). All too often when athletes complete their rehabilitation and return to sport activity, they are expected to assume their pre-injury workload in a relatively short period of time. However, these athletes may be reluctant to train with full intensity for fear of re-injuring themselves. They also may protect the site of past injury, and thereby create an overuse injury on the previously healthy side (Thompson, Hershman, & Nicholas, 1990). Specific plays or similar situations that serve as reminders of the initial occurrence of the injury may also be avoided (Shuer & Dietrich, 1997). A fear of re-injury can lead to a considerable stress response, and in so doing, only increase the probability of re-injury (Andersen & Williams, 1988).
Although many of the causes for injury are undoubtedly physical in nature (e.g., body build, level of conditioning, equipment failures, poor biomechanics) psychosocial factors also play a significant role (Brewer, 2007; Williams & Scherzer, 2006). Likewise, the majority of sport medicine professionals have focused themselves primarily on the physical aspects of injury rehabilitation. By definition, rehabilitation means to restore to good health, operation, or ability, through therapy and education (Houglum, 2005). Despite the absence of the term physical in the above definition, practitioners often develop rehabilitation protocols based on the assumption that achieving a certain level of physical healing will be sufficient for a safe and successful return to sport (Williams & Scherzer, 2006). However, this is not the case for all athletes. To effectively meet the demands of sport, injured athletes need to attain both a physical and psychological readiness prior to returning to competition (National Athletic Trainers' Association, 2006).

**Conceptual Models of Stress and Injury**

According to Taylor and Taylor (1997), athletes typically experience cognitive, emotional, and behavioral responses to injury. Although the response to injury is different for each athlete with regard to physical and psychological symptoms, a number of psychosocial factors have been identified to play significant roles in the occurrence of, and recovery from, sport injury (Brewer, 2001; Williams, 2001). Two models about the psychology of sport injury guide much of the research in this area. The stress and injury model (Andersen & Williams, 1988; Williams and Andersen, 1998) focuses predominately on pre-injury risk factors (e.g., personality, history of stressors, and coping resources). This model then was extended to include post-injury responses (e.g., cognitive appraisal, emotional response, behavioral response) and rehabilitation by Wiese-Bjornstal et al. (1998). Williams and Andersen (1998) and Wiese-
Bjornstal et al. (1998) constructed their conceptual models to explain the stress and injury response, to identify at-risk athletes, and to aid the prediction of post-injury responses. The stress and injury model (Williams & Andersen, 1998) and the integrated model of response (Wiese-Bjornstal et al., 1998) both set the stage for the establishment of theory-driven research into the predisposing factors and life experiences that impact sport injury and rehabilitation.

**Stress and injury model.** Williams and Andersen’s (1998) stress and injury model identifies psychosocial risk factors, such as personality and life event stress, which might predispose athletes to injury. They proposed that most psychosocial factors influencing injury outcome do so through a connection with stress and the resultant stress response. According to the revised stress-injury model (see Figure 1), athletes with a history of many stressors, personality characteristics that exacerbate the stress response, and few coping resources will, when confronted with a stressful athletic situation, be more likely to appraise the situation as stressful and to exhibit unproductive physiological and attentional changes. The central feature of this model is the stress response, a bidirectional relationship between an athlete’s cognitive appraisal of a potentially stressful external situation and the physiological and attentional impact of stress (Williams & Andersen, 1998; Williams & Scherzer, 2006). The athlete cognitively appraises the demands of the practice or competition situation, the competency of his or her ability to successfully meet those demands, and the consequences of failure or success in meeting the demands.

Stress results when the athlete makes a negative cognitive appraisal of his or her situation and is preoccupied by the physiological and attentional changes occurring within his or her body. The severity of the stress response, caused by the increased stress reactivity of at-risk athletes, is the proposed mechanism behind increased injury risk (Williams & Andersen, 2007; Williams &
Scherzer, 2006). Williams and Andersen (1998) suggest that an athlete’s history of stressors, personality, and coping resources influence stress and injury. These pre-injury variables may contribute interactively or in isolation to the stress response and, ultimately, to the occurrence and severity of injury. Athletes who are at risk for increased stress and injury possess the pre-injury factors.

Figure 1. Revised Version of the Stress and Injury Model (Williams & Andersen, 1998).

According to stress and injury model (Williams & Andersen; 1998), whether the cognitive appraisal is accurate or distorted by irrational beliefs or other negative thought patterns is irrelevant in the generation of the stress response. What matters is how the athlete interprets the athletic situation. If the athlete perceives her or himself to have insufficient resources to meet the demands of the sport, the stress response activates and manifests itself physiologically, attentionally, and emotionally (e.g., in the perception of higher state anxiety). Andersen and Williams (1988) hypothesized that increases in generalized muscle tension, narrowing of the visual field and auditory cues, and increased distractibility were the primary outcomes of
increased stress. Further, increased stress leads to increased injury risk in the stress-injury relationship.

Situations appraised as stressful trigger physiological changes, increase somatic anxiety symptoms (e.g., muscle tension and heart rate), and cause attentional changes like narrowing and shifting to internal focus. Physiological changes and attentional changes affect one another, and both factors contribute to performance problems. For example, widespread muscle tension can lead to fatigue and reduced flexibility, motor coordination difficulties, and muscle inefficiency. As a result of these responses, an individual has an increased risk for incurring injuries like sprains, strains, and other musculoskeletal injuries. As anxiety symptoms continue to increase, he or she will begin to miss relevant cues and instead attend to the wrong ones (Perry, 2005). If attentional disruptions lead to changes in either the central field of visual fields or periphery (e.g., Easterbrook, 1959), injury could result by not identifying or responding to relevant cues in the timeliest manner.

In summary, the stress and injury model (Williams & Andersen, 1998) identifies three pre-injury factors, history of stressors, personality, and coping resources, which interact to influence the stress response. Given a potentially stressful athletic situation, an athlete’s cognitive appraisal and response to stress may either decrease or increase his or her risk for injury due to those pre-injury factors. Ultimately, the severity of the stress response is what leads to increased injury risk.

**Integrated model of psychological response to the sport injury and rehabilitative process.** Wiese-Bjornstal et al. (1998) extended the revised stress and injury model (Williams & Anderson, 1998) to include post-injury factors, and in doing so, created the integrated model of psychological response to the sport injury and rehabilitation process (see Figure 2). The Wiese-
Bjornstal et al. model combined the prediction of injury components (Andersen & Williams, 1988) with response to injury components (Wiese-Bjornstal, Smith, & LaMott, 1995). Similar to the stress and injury model, the integrated model uses a cognitive appraisal approach for understanding the sport injury process. Cognitive appraisal models assign a central role to cognition in determining psychological responses to sport injury (Brewer, 2007). Andersen and Williams (1988) first hypothesized that an athlete's cognitive appraisal of a sport injury is influenced by personal and situational factors. This appraisal, according to Wiese-Bjornstal et al., is followed by behavioral and emotional responses which then influence recovery from injury.

The integrated model (Wiese-Bjornstal et al., 1998) proposes that responses to injury are influenced by both pre-injury variables and post-injury variables. Consistent with Williams and Andersen (1998), pre-injury variables include personality, history of stressors, coping resources, and interventions. Post-injury, the manner in which the injury and the rehabilitation process are appraised affects three interrelated factors: emotional responses, behavioral responses, and recovery outcomes. Personal and situational factors pertaining to the involved athlete are predicted to have a direct effect on cognitive appraisal. For example, personal characteristics (e.g., injury attributes and individual difference variables) and situational factors (e.g., sport-related variables and the rehabilitative social and physical environment) simultaneously influence cognitive interpretation of injury. As posited by Wiese-Bjornstal et al.,

The psychological response can and does change over time in a dynamic way, and that recovery—both physical and psychosocial—is the process outcome. The personal and situational factors outlined in the model are continuously in the background of the dynamic process, and thus continue to exert their effects throughout. (p. 48)
Figure 2. Integrated Model of Psychological Response to the Sport Injury and Rehabilitation Process (Wiese-Bjornstal et al., 1998).
Personal factors. The integrated model (Wiese-Bjornstal et al., 1998) identifies many prospective personal factors that influence cognitive appraisal and emotional and behavioral responses to injury. For example, both the integrated model (Wiese-Bjornstal et al.) and the stress and injury model (Williams & Andersen, 1998) lists several personal factors including history of stressors, personality, mood, and athletic identity.

The stress and injury model (Williams & Andersen, 1998) predicts an athlete’s history of stressors will affect his or her stress response which in turn affects his or her injury risk. Previous stresses may include major life events, daily hassles, and previous injury history. Of these, most research has examined the relationship between major life events and injury occurrence. Examples of major life events are a break-up with a significant other, death of a loved one, and change in location. Sport-related major life events include eligibility difficulties, trouble with a coach, a major change in team responsibility and/or playing status, and receiving an athletic scholarship (Williams & Scherzer, 2006). According to a review by Williams (2001), 30 out of 35 studies assessing life events found a positive relationship between high life stress and injury. Although the majority of studies were conducted with football, similar results have been reported in sports such as race walking, gymnastics, and track and field. Williams and Roepke (1993) reported that the risk of injury tended to increase in direct proportion to the level of life stress. Both Andersen and Williams (1988) and Blackwell and McCullagh (1990) found athletes high in life stress and competitive anxiety, and low in coping resources, to experience a higher amount of injuries compared to those with low in life stress and competitive anxiety.

The stress-injury model (Williams & Andersen, 1998) predicts an influential relationship between personality and the stress response. Wiese-Bjornstal et al. (1998) also specified that personal factors (e.g., injury, individual differences, demographic, and physical) relate to how an
According to the research, post-injury emotional disturbance has been positively correlated with athletic identity (Brewer, 1993; Manuel et al., 2002), current injury status (Alzate Saez de Heredia, Ramirez, & Lazaro, 2004; Brewer, Linder, & Phelps, 1995), and injury severity (Alzate Saez de Heredia et al.; Smith, Scott, O’Fallon, & Young, 1990). In contrast, McDonald and Hardy (1990) reported a negative correlation for post-injury response and recovery progress in their analysis of the affective response patterns of injured athletes.

The presence of positive personality characteristics (e.g., high self-confidence optimistic, positive attitude) can lower athletes’ risk for stress and injury by helping them to appraise fewer situations as stressful (Williams & Scherzer, 2006). Ford, Eklund, and Gordon (2000) found that athletes high in optimism and hardiness experienced less injury time-loss when positive stress occurred compared to athletes low in those same attributes. In a study by Fields, Delaney, and Hinkle (1990), runners scoring high on a Type A behavior (e.g., more aggressive, hard-driving) experienced significantly more injuries, especially multiple injuries, compared to runners scoring lower on this measure. Similarly, Nigorikawa et al. (2003) found that college athletes with a high Type A behavior pattern incurred more injuries than those with a low Type A pattern. Thus, the lack of productive personality attributes, or the presence of unproductive ones, can put those athletes at risk for higher stress and resulting injury.

Mood states also have been shown to be related to injury risk (Williams & Scherzer, 2006). Williams, Hogan, and Andersen (1993) reported that intercollegiate football, volleyball, and cross-country athletes who experienced positive states of mind (e.g., ability to stay focused, keep relaxed, share with others) early in the season sustained significantly fewer injuries during their athletic season compared to athletes who had less positive states of mind. Whereas positive
states of mind might buffer and/or reduce the effects of potentially stressful athletic situation, thus leading to less stress and fewer injuries; the presence of negative states might do the opposite.

Another personal factor found within the integrated model (Wiese-Bjornstal et al., 1998) is athletic identity, a component of the self that obtains validation and meaning from participation in sports (Taylor & Taylor, 1997). Athletes who are seriously involved in their sports often have athletic identities that comprise substantial and influential portions of their self-identities. This amount of investment is not usually problematic because participation in their sport satisfies their athletic identity. However, issues may arise when these highly invested athletes are no longer able to fulfill their athletic identity needs. According to Faris (1985), the instant an athlete is injured, much of what he or she has worked for is taken away. This has a devastating impact, because, for athletes, physical condition and athletic ability are the major components of their identity (Faris).

If injury occurs, a substantial part their self identity may be threatened and, as a result, the remaining part may not be able to obtain sufficient validation and meaning from other aspects of life (Taylor & Taylor, 1997). This absence of athletic validation can trigger psychological reactions such as a sense of inadequacy, feelings of worthlessness, and a general inability to gain fulfillment from life (Brewer, Van Raalte, & Linder, 1993). Further, the more narrowly focused an injured athlete’s sense of self is, the more threatened he or she will be and the more likely he or she will appraise the injury as a threat or loss. This type of athlete also has a greater chance of experiencing feelings of anxiety, depression, or hopelessness in response to injury.
Although there are notable benefits of athletic identity including a strong sense of self, athletic performance, and commitment to long-term involvement, it also can prove to be somewhat of an “Achilles’ heel” (Brewer et al., 1993). For instance, individuals with a strong athletic identity often display increased signs of anxiety, depression, and low self-esteem when their body is disrupted by a traumatic event such as a career-threatening injury (Brewer et al.; Collinson & Hockey, 2007). In addition, the outcome of this response to rehabilitation is typically negative. Athletes who suffer an injury along with a loss of athletic identity may lack confidence in themselves and their abilities to recover, lose motivation, experience significant anxiety, and focus their attention solely on the debilitating aspects of injury (Brewer et al., 1993). As a whole, athletes with a sense of threatened athletic identity feel that they are incapable of meeting the challenging demands of rehabilitation and are unable to proactively take control of their recovery and return to sport (Taylor & Taylor, 1997).

Situational factors. The integrated model (Wiese-Bjornstal et al., 1998) identifies many prospective situational factors that can influence cognitive appraisal and emotional and behavioral responses to injury. Most of these factors are consistent with what is predicted in the stress-injury model. In particular, much research has focused on injured athletes’ use of social support as a coping resource.

Based on both the stress-injury model (Williams & Andersen, 1998) and the integrated model (Wiese-Bjornstal et al., 1998), the availability of coping resources, pre-injury, may positively impact the stress response, thus reducing the risk of injury. Athletes who cope more effectively with stress have a decreased risk for injury (Williams & Scherzer, 2006). On the other hand, a lack of coping resources may predispose athletes to higher stress, increasing their level of vulnerability and risk for injury. Social support is one coping mechanism often examined in
research. Studies have consistently found that athletes’ social support is related to positive injury outcomes (i.e., recovery outcomes) and can lessen the negative effects of high life-event stress (e.g., Hardy, O’Connor, & Geisler, 1990; Petrie, 1992; Williams, Tonymon, & Wadsworth, 1986). These findings suggest that strengthening athletes’ social support from family, friends, and others such as coaches and teammates is one possibility for reducing risk of injury.

From the time of injury to the conclusion of the rehabilitation protocol, athletes typically interact with a number of different people, all of whom vary in closeness to the rehabilitation environment (e.g., athletic trainers, doctors, fellow injured athletes, coaches, teammates, friends, family members). Wiese-Bjornstal et al. (1998) hypothesize that relationships with significant others serve as moderating factors influencing the response to injury. Likewise, research has recognized the role of social support within the sport injury and rehabilitation process and has identified the social environment as a critical situational aspect of the athlete’s post-injury response. Available literature has documented the influence of individuals such as athletic trainers (Fisher, 1999; Walk, 1997), teammates (Shelley, 1999; Udry, Gould, Bridges, & Tuffey, 1997b), coaches (Bianco, 2001; Granito, 1999), and family members (Udry et al., 1997b; Zimmerman, 1999) can have on the injury rehabilitation process. Udry et al. found that family members and teammates have been perceived as more supportive than coaches and medical professionals. Also, friends, family members, and significant others seem to be the most prevalent providers of emotional support, while medical professionals and coaches are the most frequent providers of informational and technical support.

**Cognitive appraisal.** A critical factor in response to injury is cognitive appraisal, which can be influenced by an athlete’s personal and situational factors (Wiese-Bjornstal et al., 1998). Wiese-Bjornstal et al. define cognitive appraisal as the recognition and evaluation of a stressor to
assess the demand, the size of the threat, the resources available for dealing with it, and the appropriate coping strategies. Athletes appraise or interpret injury in a variety of different ways. For example, where injury is viewed as a relief by some, others might view it as an opportunity to improve and/or strengthen a weakened area of their body. Similarly, some see it as a disaster, while others see it as a chance to display mental toughness (Zinsser, Bunker, & Williams, 2006). Jones, Hanton, and Connaugton (2002) defined mental toughness as “the natural or developed psychological edge…that enables you to cope better than your competitors with the demands of performance…and to remain more determined, focused, confident, and in control.” The mentally tough athlete is ultimately steadfast in his or her own subsequent abilities; their goals are approached with an air of certainty with respect to impending achievement (Zinsser et al., 2006).

The core of the integrated model (Wiese-Bjornstal et al., 1998) suggests that cognitive appraisal is important because mental abilities, such as evaluation and recognition of an injury situation, can influence an athlete’s emotional and behavioral response to that injury. Following sport injury, personal components (e.g., history of injury, self-perceptions, athletic identity) combine with situational components (e.g., type of sport, social influences, rehabilitation environment) to influence cognitive appraisal. The majority of research on cognitive responses has identified four significant areas of influence: (a) self-perceptions following injury, (b) attributions for injury, (c) coping strategies, and (d) perceived benefits of injury.

Decreased self-perceptions play a large role in the recovery outcomes of an injured athlete (Taylor & Taylor, 1997). Self-perception is the view one has of oneself (Wiese-Bjornstal et al., 1998). Wiese-Bjornstal et al. suggest that self-perceptions can be viewed as both moderators of response and as dynamic responses in and of themselves. According to Brown
(2005), “the impact of injury is far more than physical; it can jeopardize an athlete’s confidence, self-efficacy, and sense of identity” (p. 217). Athletes may experience decreased self-perceptions, which in turn, could negatively affect motivation and exercise performance (Brown, 2005).

Research has assessed the self-perceptions of athletes with injuries both over time following injury and in comparison to athletes without injury. A number of studies have investigated self-esteem, defined as the individual’s assessment of her or his own worth (Weiss & Ebbeck, 1996). Findings are varied with respect to global self-esteem. A few studies have documented no pre to post-injury differences (Smith et al., 1993) or injury status differences (Brewer & Petrie, 1995) in global self-esteem. In contrast, other studies have reported decreases in global self-esteem after injury (Leddy, Lamber, & Ogles, 1994). For example, Leddy et al. found a decrease in total and physical self-esteem in athletes with injury compared to athletes without injury. Their study revealed that injured athletes had significantly lower total and physical self esteem scores than non-injured and recovered athletes. Similarly, Chan and Grossman (1988) studied self-esteem changes in runners and reported self-esteem was significantly lower in injured runners (i.e., those unable to run for two weeks) than in non-injured runners.

Three studies in particular, Connelly (1991), Flint (1991), and Shaffer (1991), examined the influence of injury rehabilitation on athlete self-efficacy. Self-efficacy is a belief in oneself as competent and effective in specific situations; whereas, self-confidence is a generalized belief in oneself (Wiese-Bjornstal et al., 1998). Self-efficacy is a situation-specific construct; and as a result of this, the effect of injury on perceived efficacy is dependent on the situation being observed. Connelly examined football skill efficacy pre-injury and post-injury. He found a
decrease in football skill efficacy following injury. Flint revealed that both self-confidence and self-efficacy improved following a peer modeling session among female athletes who underwent anterior cruciate ligament (ACL) reconstruction. In her study, ten athletes assigned to watch a video of fellow athletes participating in ACL rehabilitation had greater self-confidence, self-efficacy, and adherence to rehabilitation than those in the control group. Shaffer found injury history related to athletes’ rehabilitation efficacy for a current injury. Athletes with present moderately severe ankle sprains, and previous rehabilitation experience had higher levels of self-efficacy for rehabilitation during the first week post-injury compared to those not injured before.

As suggested by the integrated model of response (Wiese-Bjornstal et al., 1998), the occurrence of an unanticipated, and at times, traumatic sport injury produces attributional cognitive activity (i.e., beliefs and attributions). Following injury, athletes may engage in cognitive activity (i.e., cognitive appraisal) to determine what caused their injury to occur. In several studies, athletes have had little difficulty generating causal attributions for their injuries (Brewer, 1999b; San Jose, 2003; Tedder & Biddle, 1998). Participants in both the San Jose (2003) and Tedder and Biddle (1998) studies tended to attribute their injuries to behavioral factors whereas those involved in Brewer’s study tended to list mechanical or technical factors as responsible for their injuries. With respect to the model (Wiese-Bjornstal et al.), it is likely that personal factors (e.g., attributional style) as well as situational factors (e.g., social context) contribute to athletes’ causal explanations for injury, rate of perceived recovery, and belief in rehabilitation.

To deal with the physical and psychological trauma that can accompany sport injury (Brewer, 2007), the integrated model of response (Wiese-Bjornstal et al., 1998) proposes that athletes may use a variety of coping efforts. Although the cognition of injured athletes is
frequently characterized by appraisals of threat or loss (Ford & Gordon, 1999; Gould et al., 1997b), injury may produce less detrimental thought content in some instances. The most consistent finding to emerge from early research on coping with sport injury involved the use of cognitive processes to combat intrusive thoughts (Newcomer & Perna, 2003). Studies conducted predominately with skiers offered evidence that the utilization of cognitive coping strategies by injured athletes was common with emergent themes including accepting injury, focusing on getting better, thinking positively, and using imagery (Bianco et al., 1999; Gould, Udry, Bridges, & Beck, 1997a; Rose & Jevne, 1993; Tracey, 2003; Udry, Gould, Bridges, & Beck, 1997a).

Despite the psychological distress that can accompany sport injury, studies indicate that perceptions of benefit associated with injury occurrence and rehabilitation can develop (Ford & Gordon, 1999; Rose & Jevne, 1993; San Jose, 2003; Tracey, 2003; Udry et al., 1997a). Among the studies, common benefit themes found in athletes with injuries include challenge (e.g., test of character), sport performance enhancement (e.g., improved mental strength, increased motivation, physical lessons learned), and personal growth (e.g., opportunity for reflection, development of interests outside sport, self-discovery). In particular, Udry et al. examined elite skiers’ responses to season-ending injuries and found that 95.2% of the athletes reported one or more benefits associated their injury. Personal growth benefits included: gained perspective, personality development, developed aspects of non-skiing life, and learned better time management. The benefits related to psychologically based performance enhancement included: efficacy/toughness, enhanced motivation, and realistic expectations. Physical/technical benefits consisted of: ski technically better, physical health, and awareness improvements. Based on these findings, Udry et al. concluded that athletes did grow from their injury experience in a positive way.
Emotional response. The integrated model of response (Wiese-Bjornstal et al., 1998) suggests that some type of emotional reaction from the athlete in response to his/her injury can be expected. Emotion has been defined as a state of mind in which feeling, sentiment, or attitude is predominant (Izard, Kagan & Zajonc, 1988). In response to the sport injury and rehabilitation process, a variety of different emotions can occur and some impact other behavioral and cognitive responses (Wiese-Bjornstal et al.). Fear, anxiety, depression, stress, and anger are among the most commonly reported emotions accompanying athletic injury (Brown, 2005; Faris, 1995; Taylor & Taylor, 1997).

In a study by Quakenbush and Crossman (1994), injured athletes reported negative responses such as being irritable, miserable, and unhappy on the day following the injury compared to positive emotions like cooperative, optimistic, good, happy, and enthusiastic reported during rehabilitation. A comparison of the emotions of athletes with injuries to those without injuries indicates that sport injury is associated with emotional disturbance (Brewer & Petrie, 1995; Leddy et al., 1994; Pearson & Jones, 1992; Smith et al., 1993). Thus, injured athletes experience a variety of negative emotions and, to a lesser extent, positive emotions.

In some instances, injury results in irrational thinking (Beck, 1970). Rotella and Heyman (1986) found that when athletes think irrationally, they may exaggerate the meaning of the injury; disregard particularly important aspects of the injury; oversimplify the injury as good or bad, right or wrong; over-generalize from this single event; or draw unwarranted conclusions when evidence is lacking or contradictory. Crossman and Jamieson (1985) compared the perceptions of athletes and their athletic trainers on the seriousness and disrupting effects of injury. They found that athletes often perceive injury as more serious compared to their athletic trainers. A group the athletic trainers categorized as “overestimators” experienced even greater
pain, anger, apathy, and loneliness than expected in relation to their illness. Athletes who were defined as “overestimators” made too high of appraisals of the seriousness of their injury.

Emotional responses may continue to be experienced throughout rehabilitation (Quakenbush & Crossman, 1994; Wiese-Bjornstal et al., 1998). Immediately following injury to the time of return to play, athletes may experience feelings ranging from separation and loneliness to guilt and a loss of identity and independence (Lewis-Griffith, 1992). According to Lewis-Griffith (1982), these emotions occur because athletes feel like they are no longer able to vitally contribute to the team and that they are dependent upon others throughout rehabilitation. If athletes are required to stop exercising, they may also experience withdrawal symptoms such as increased irritability, depression, decay of personal relationships, fatigue, anxiety, insomnia, and muscle tension (Morgan & Goldston, 1987). Both Lynch (1988) and Smith et al. (1990) found that emotions like depression, anger, fear, tension, disgust, anxiety, and panic create psychophysiological reactions that can contribute to and exacerbate the pain of the injury. Identifying the feelings connected to the injury is important because of the relationship between an athlete’s emotional and behavioral response to rehabilitation adherence (Brewer, 1994). Certain attitudes and psychological factors can either hold back or promote the effectiveness of rehabilitation; and with that, influence an injured athlete’s coping ability (Brown, 2005).

Overall, research findings suggest that negative emotions generally decrease and positive emotions generally increase over the course of rehabilitation (Crossman, Gluck & Jamieson, 1995; Dawes & Roach, 1997; Leddy et al., 1994; Macchi & Crossman, 1996; Mainwaring et al., 2004; Manuel et al., 2002). For example, Quackenbush & Crossman (1994) reported that negative emotional responses like frustration, anger, and discouragement decreased from the onset of the injury to returning to play, while positive emotional responses of being
hopeful and optimistic increased through the stages. Athletes in a number of studies consistently reported that, in the beginning phases of rehabilitation, they experience negative emotions such as depression, frustration, confusion, anger, and fear (Bianco et al., 1999; Johnston & Carroll, 1998; Udry, Gould, Bridges & Beck, 1997a). During the middle phases, depression and frustration have been regularly identified responses, with the source of the dysphoria (i.e., abnormal depression and discontent) shifting from injury-related change in functioning to rehabilitation-related issues (Bianco et al.; Johnston & Carroll). As injured athletes draw near to full recovery and a return to sport, researchers propose that depression and frustration will remain salient, while fear of re-injury also arises as a prominent emotion (Bianco et al.; Johnston & Carroll).

Udry (1997) conducted a study to examine the coping strategies used over the course of post-operation knee rehabilitation and found that two emotion-focused coping strategies (i.e., negative emotion coping, palliative coping) varied depending on the particular stage of rehabilitation. Negative emotion coping involves a preoccupation with the emotional consequences of a health stressor, such as feeling anxious about activities that can be accomplished or worrying that the injury may worsen. Palliative coping involves a variety of self-help activities and responses employed to alleviate the unpleasantness of an injury, such as making one’s surrounding as quit as possible or getting additional sleep. Similarly, Johnston and Carroll (2000) reported that athletes participating in rehabilitation following an acute musculoskeletal injury decreased their use of 9 out of the 10 coping strategies being assessed. Coping varied as a function of the stage in rehabilitation, with patients utilizing strategies more at the beginning of rehabilitation. Rather than switch coping strategies over the course of rehabilitation, athletes appeared to simply do less of everything.
Furthermore, Quinn and Fallon (1999) discovered temporal differences in sport self-confidence over the sport injury rehabilitation period, with athletes starting rehabilitation high in confidence, experiencing a decline in confidence during rehabilitation, and increasing in confidence on attaining recovery. Morrey, Stuart, Smith, and Wiese-Bjornstal (1990) found that negative emotions have been found to increase slightly and positive emotions to decrease slightly as athletes near the completion of their rehabilitation program following reconstructive knee surgery. Results of this nature are perhaps a reflection of apprehension about their return to sport activity (Morrey et al.).

Behavioral response. The integrated model of response (Wiese-Bjornstal et al., 1998) proposes that sport injury can prompt behavioral responses juxtaposed with cognitive and emotional reactions. Behavioral responses are the actions or reactions of an athlete following injury (e.g., rehabilitation adherence, behavioral coping, use of psychological skills). The behavior of the involved athlete can exert a significant influence on the rehabilitation process. Personal factors, situational factors, and, more directly, cognitive and emotional responses are suggested to be associated with the behavioral response. Consistent with this suggestion, research studies have examined a number of behavioral responses to injury such as adherence to sport injury rehabilitation and coping behaviors (Brewer, 2007).

According to Brewer (2007), “depending on the nature of the injury and the rehabilitation protocol, adherence to sport injury rehabilitation may involve a variety of behaviors in multiple settings” (p. 411). Classic adherence behavioral responses include participating in clinic-based activities (e.g., exercises, therapy), modifying physical activity (e.g., resting, cross-training), taking medications, and completing home-based activities (e.g., exercises, therapy) in accordance with rehabilitation practitioner recommendations (Brewer, 1999a). The most
common measures of adherence to sport injury rehabilitation are patient attendance at clinic-based rehabilitation sessions, practitioner ratings of adherence during rehabilitation sessions, and patient self-reports of home exercise completion (Brewer, 1999a).

The integrated model of response (Wiese-Bjornstal et al., 1998) indicates a direct relationship between cognition and behavior. In line with this projection, several cognitive responses have been linked to sport injury rehabilitation adherence. For example, Daly et al. (1995) found that athletes who adhere to their sport injury rehabilitation programs have a tendency to report a high ability to cope with their injuries. Similarly, athletes who adhere to rehabilitation tend to express high rehabilitation self-efficacy (Brewer et al., 2003b; Milne, Hall, & Forwell, 2005; Taylor & May, 1996), have high self-esteem certainty (i.e., do not perceive a threat to their self-esteem; Lampton, Lambert, & Yost, 1993), and attribute their recovery to stable and personally controllable factors (Laubach et al., 1996).

Negative psychological responses can influence behavioral outcomes and lead to a lack of rehabilitation adherence or prolonged recovery rates (Hamson-Utley, Martin, & Walters, 2008; Ievleva & Orlick, 1991; Taylor & Taylor, 1997). According to Faris (1985),

any comprehensive rehabilitation plan will want to interface the proper external rehabilitation procedures with proper internal state of mind of the patient. When these two factors come together, successful results are tremendously enhanced. A positive state of mind promotes better attendance and attentiveness to, and more intensity toward the external rehabilitation procedures, which yield successful results. (p. 546)

Factors that have been positively associated with sport injury rehabilitation adherence include perceived injury severity (Taylor & May, 1996), pain tolerance (Bylerly, Worrell, Gahimer, & Domholdt, 1994), self-motivation (Duda, Smart, & Tappe, 1989), and tough
mindedness (Wittig & Schurr, 1994). Bylerly et al. found that the more pain the athlete experienced in the rehabilitation process, the less adherent the person was. Based on their results, Bylerly et al. concluded that pain should be controlled to achieve better adherence to rehabilitation programs. Studies by Alzate Saez de Heredia et al. (2004) and Daly et al. (1995) found that mood disturbance is inversely related to sport injury rehabilitation adherence. Pizzari et al. (2002) investigated adherence to anterior cruciate reconstruction and discovered that fear of re-injury was identified as a barrier to rehabilitation adherence among the post-operation individuals.

Another behavioral response is the use of coping strategies such as instrumental behavioral efforts to cope with their injuries (Wiese-Bjornstal et al., 1998). Gould et al. (1997a) interviewed elite skiers who had sustained season-ending injuries and found that the most common coping behaviors were: avoiding others or isolating oneself, distracting oneself (e.g., keeping busy, seeking a change of scenery), “driving through” (e.g., doing things normally, working hard to achieve rehabilitation goals), and seeking or using social resources (e.g., seeking social support). Similarly, Bianco et al. (1999) discovered that skiers with a history of injury admitted that they had engaged in instrumental behaviors such as adopting an aggressive rehabilitation approach, building physical strength, learning about their injuries, resting when tired, trying alternative treatments, and working or training at their own pace. In a study examining the use of coping by injured athletes following knee surgery, Udry (1997) found that instrumental coping was the most frequently employed coping method over the course of rehabilitation. Instrumental coping is the attempts made by the injured individual to alleviate the source of stress or discomfort through behaviors such as finding out more about a health condition listening to the advice of healthcare professionals, or both. Udry observed that athletes
who adhered well to rehabilitation tended to report using instrumental coping behaviors (e.g., asking for additional information about the injury or rehabilitation program) to a greater extent than those who adhered poorly to rehabilitation.

Similar to instrumental coping, active coping strategies involve behavior or cognition in an attempt to deal directly with a stressor or its effects (Brewer, 2007). Albinson and Petrie (2003) found that intercollegiate football players who appraised their injury as highly stressful and difficult to cope with were less likely to use active behavior coping strategies than those who viewed their injury as less stressful and less of a burden. The use of active behavioral coping was strongly and positively associated with simultaneous mood disturbance, the findings of which suggest that distress may serve as a trigger to action in rehabilitation (Albinson & Petrie).

Research indicates that psychological skills are not only important but are essential during the rehabilitation of injured athletes (Ievleva & Orlick, 1999; Taylor & Taylor, 1997). Most notably, goal-setting, healing mental imagery, and positive self-talk have been shown to benefit the injured athlete by promoting a positive mind set, focusing healing within the injured body part, and decreasing stress and anxiety (Ievleva & Orlick, 1991). Likewise, mental skills have been linked to increases in athletes’ motivation to adhere to rehabilitation, speed of recovery, and enhanced self-confidence (Garza & Feltz, 1998; Ievleva & Orlick, 1991; Scherzer, Brewer, Cornelius, Van Raalte, Petitpas, Sklar, et al., 2001). For example, Duda et al. (1989) found self-motivation or goal direction as a factor related to adherence to rehabilitation plans.

Scherzer et al. (2001) investigated the relationship between psychological skills and adherence to rehabilitation after reconstruction of the anterior cruciate ligament and found that positive self-talk and goal-setting were positively correlated with home exercise completion. Ievleva and Orlick (1991) reported that athletes who recovered faster from ankle and knee
injuries, compared to athletes who healed more slowly, had a significantly higher frequency of goal-setting, imagery, and positive self-talk concerning the process of their recovery. Further research has shown that psychological interventions involving goal setting (Theodorakis, Benec, Malliou, Goudas, 1997), imagery/relaxation (Cupal & Brewer, 2001), and positive self-talk (Theodorakis et al.) can positively affect sport-injury-rehabilitation outcomes.

In a study examining the effectiveness of goal-setting for increasing patient understanding and compliance, Penpraze and Mutrie (1999) discovered that athletes who were assigned explicit rehabilitation goals had greater understanding of, and adherence to, their injury rehabilitation programs than athletes who were given non-explicit rehabilitation goals. Evans and Hardy (2002a) also reported that athletes who received a goal-setting intervention adhered better to their injury rehabilitation than athletes who received social support or no treatment at all. In a follow-up study, Evans and Hardy (2002b) identified potential explanations for the success of the goal-setting intervention in their initial goal-setting intervention study (Evans & Hardy, 2002a). Athletes in the goal-setting intervention group exhibited increases in self-efficacy, attention to the rehabilitation program, and attribution of progress to internal, controllable factors compared to those in the social support and not treatment groups (Evans & Hardy, 2002b).

In summary, the integrated model of response (Wiese-Bjornstal et al., 1998) extends the stress and injury model (Williams & Andersen, 1998) to include post-injury responses (e.g., cognitive appraisal, emotional response, behavioral response) and rehabilitation. The findings of one study in particular best highlight the concepts illustrated in the integrated model (Wiese-Bjornstal et al.). Granito (2001) interviewed both injured athletes and athletic training students and asked them to describe their personal experiences with injury. He conducted semi-structured interviews with four focus groups: two groups of athletic training students and two groups of
injured intercollegiate athletes. Granito utilized open-ended questions, such as "describe your experience of being injured" and "how has the injury affected your life," and based on participant comments, identified seven categories of responses and reactions to injury: (a) personal factors, such as the personality of the athlete and role on the team; (b) effects on relationships (e.g., with coaches, parents, teammates); (c) sociological aspects (i.e., gender differences, athletic sub-culture); (d) physical factors, such as pain and use of painkiller; (e) daily hassles (i.e., stress); (f) feelings associated with injury (e.g., frustration, depression, tension); and (g) rehabilitation (i.e., adherence, ease of receiving treatment). All in all, the results from this study support the integrated model of response to the sport injury and rehabilitation process (Wiese-Bjornstal et al., 1998) and the notion that many factors contribute to an athlete’s response to injury.

The Present Study

Considerable empirical support has been compiled for the stress-injury model (Williams & Andersen, 1998) and the integrated model of response to the sport injury and rehabilitation process (Wiese-Bjornstal et al., 1998). According to the available research, sport injury is a significant source of stress. Studies also have indicated that personal and situational factors are associated with psychological responses to sport injury. The integrated model of response to sport injury (Wiese-Bjornstal et al.) often is used to explain the relationship between an athlete’s response to injury and his or her cognitive appraisal. The model suggests that the response to injury is different for each athlete, with a number of factors contributing to the overall experience.

Although support does exist for both the stress and injury model (Williams & Andersen, 1998) and the integrated model of response (Wiese-Bjornstal et al., 1998), limitations can still be found from research and clinical (i.e., practical application) standpoints. For example, available
literature is very broad based and focuses predominately on a single bout with injury. Yet, some athletes have multiple bouts of injury, which may include more difficult psychological reactions.

Research shows that sport-related injury can be one of the most difficult experiences in an athlete's career. A survey of 482 certified athletic trainers revealed that 47% of them believed every injured athlete suffers negative psychological effects (Larson, Starkey, & Zaichkowsky, 1996). To fully understand the athletes’ psychological responses, medical professionals could benefit from learning more about the injury experience from the injured athletes themselves (Granito, 2001; Udry & Gould, 1997). In addition, the psychological responses of athletes, more specifically those with multiple injuries, have not been adequately addressed by either medical or athletic communities. Therefore, the purpose of this study is to understand athletes’ psychological responses to multiple injuries from the athletes’ perspectives. Two research questions guided this investigation:

1. What psychological responses are experienced by collegiate female athletes who sustained multiple injuries?

2. How do collegiate female athletes who sustained multiple injuries interpret and describe their experiences with multiple injuries?
CHAPTER II: METHOD

The response to injury is different for each athlete, with a number of factors contributing to the overall experience (Granito, 2001). The stress and injury model (Williams & Andersen, 1998) and the integrated model of response (Wiese-Bjornstal et al., 1998) suggest the influence of several psychosocial factors on the response to injury. To capture the richness of athletes’ diverse experiences, multiple in-depth interviews were utilized. One direct avenue for learning about the psychological responses following injury is to listen to the “lived stories of athletes” (Waldron, Quinn, & Krane, in press) who sustained injuries while competing in athletics. Through interviews, I explored and uncovered the subjective experiences of injured athletes, permitting an insight into the way they appraise injury episodes and the responses they experience (Johnston & Carroll, 1998).

Interviewing

Interviews are a great tool for obtaining the descriptions of the participants’ world with respect to their interpretations of their meaning (Kvale, 1996). Data emerging from interviews are descriptive and reported in words (primarily the participant’s words) (Creswell, 2009). Fontana and Frey (2000) note the importance of conducting multiple interviews. This allows the interviewer time to review the first interview, identify any answers that are not clear, and create additional questions for use in a future interview. Interviews can be structured, semi-unstructured, or unstructured. In a structured interview, the researcher asks a standard set of questions to all candidates (Fontana & Frey). A semi-structured format uses an interview guide written before the interview; the researcher asks the same primary questions of each participant, but there also is latitude for individual variation on topics important to each person (Amis, 2005). Thus, questions can be omitted or added depending on the flow of the dialogue. In an
unstructured interview, the researcher does not have a list of specific questions to ask; rather, he or she has plans to discuss several topics (Krane & Baird, 2005). An unstructured interview “provides greater breadth of data than the other types” (Fontana & Frey, p. 652) and allows the participants the opportunity to openly discuss in detail his or her experience. This structure is flexible and both the participant and the interviewer are free to explore a variety of topics.

**Developing interview questions.** Asking good questions is essential to gaining meaningful data. According to Kvale (1996), when developing interview questions, it is important the questions are written relevant to the area of inquiry. In general, four types of questions make up the composition of the interview guide: (a) rapport building questions, (b) essential questions, (c) extra questions, and (d) probing questions (Berg, 2001). Rapport building questions typically are located at the beginning of the interview and may include demographic questions or unrelated questions to initiate conversation (e.g., chit-chat, small talk) and develop rapport between the interviewer and athlete. As a researcher, it is important to establish rapport with the participants to gain their trust and confidence (Taylor & Bogdan, 1998). Icebreaker questions, which are general yet related to the topic, may be used to further increase the comfort of the participant and to ease the transition from rapport building to essential questions (Krueger, 1998).

Essential questions comprise the majority of the interview and are associated with the central purpose(s) of the study (Berg, 2001). Extra questions ensure the credibility of the participants’ responses by confirming if the answers or perspectives given throughout the interview are consistent. For instance, an extra question can be an essential question rephrased to verify if a participant responds in a similar way. Probing questions offer the researcher an avenue to draw out more complete stories from participants. Questions like “how,” “why,” “what do you
mean by that,” and “can you give me an example” give the athletes a chance to elaborate on what they had already answered in response to a previous question.

Of equal importance to the types of questions that are asked during the interview are the questions that should not be asked. Every attempt should be made to avoid double-barreled questions, leading questions, and long, complex questions (Amis, 2005; Berg, 2001; Shensul, Shensul, & LeCompte, 1999). Double-barreled questions ask the participant to respond simultaneously to two issues in a single question (Berg) and may cause the athlete to become confused or result in a failure to answer one of the questions presented. Similarly, leading questions and long, complex questions may influence the participants’ responses, either by cueing certain answers or by prompting confused responses (e.g., responses that fail to answer the question asked) (Berg). Further, the arrangement of the interview questions is critical to the efficacy of the interview (Berg). To bolster the effectiveness of the interview, the interview should begin with non-threatening rapport building questions followed by questions about the major focus (i.e., essential questions, extra questions). Probing questions should be interjected as needed.

**Pilot testing.** I performed three pilot individual interviews. These pilot interviews gave me the opportunity to test my potential questions, determine if I was communicating effectively, and practice interviewing (Berg, 2001). The participants for the pilot interviews were three former female collegiate athletes who had sustained injury while involved on their sport teams. All of the women were currently in college (i.e., undergraduate and graduate school) and removed from athletic participation. They had participated in cross country, track and field, and softball. The selection criteria for these interviews were: (a) inactive participation on a collegiate
team, (b) a history of sport injury that occurred during their collegiate experience, and (c) willingness to participate in the study.

The interviews were semi-structured and guided by an interview guide. The face-to-face interviews occurred in the participants’ homes and lasted approximately 30 minutes. The former athletes were asked to describe their experiences with injury and their reactions and/or responses to being injured. To practice analyzing data and writing narratives, a monologue of their similar experiences was then created directly from their interview transcripts.

As a result of the pilot testing, I re-evaluated the personal background information I shared with my participants. At first I thought informing the athletes that I was a Certified Athletic Trainer would help to establish credibility; however, the pilot interviews revealed divulging this credential might actually hinder the responses given. All three of my participants for the pilot interviews were aware of my background in athletic training, and because of that, I got the impression that they tailored their answers accordingly. For instance, it seemed they were afraid I would judge or scold them for any behaviors or responses that were “unhealthy” (medically speaking). The athletes in my thesis will be current collegiate athletes and could experience the same hesitation as my pilot interview participants. In an attempt to avoid this dilemma, I did not discuss my status as a Certified Athletic Trainer with the athletes in my thesis study.

**Thesis Study**

Athletes seek understanding of their injury experiences in the sporting environment in which they live and participate, and as a result, develop subjective meanings of their experiences. Thus, the goal of my research study was to rely as much as possible on the athletes’ views of the situation, focusing on their injury experiences and the subsequent psychological and emotional
responses. The interview guides (see Appendix A) were based on the literature about psychological response to sport injury and rehabilitation and my pilot testing. Given the lack of qualitative research available on response to multiple injuries, questions were broad and open-ended to allow the athletes ample opportunity to explore and describe their injury experiences.

Another goal was to make the interviewing process as comfortable and relaxed as possible by always situating the athletes’ best interest and well-being at the center of consideration. Interviews were conducted face-to-face to increase my likelihood of gaining trust, building rapport, and capturing non-verbal cues, all of which were important for my understanding of the athlete’s injury experience.

Participants. Four female student-athletes participated in this study. In particular, these athletes were members of a varsity team, at a Midwestern NCAA Division I institution, for at least one full year (i.e., this excluded incoming and first year athletes, but included redshirts). Each athlete self-reported a history of frequent, repetitive athletically-related (i.e., as a result of the athlete’s sport) musculoskeletal injuries that kept her out of practice or competition, decreased her activity level or functional ability, and required medical attention of some kind (e.g., treatment and rehabilitation by sport medicine staff). Their injuries were either non-isolated or not body part specific or included a variety of injuries in terms of types, classifications, or assessments. The key for identification of multiple injuries was the athlete herself. Thus, she perceived herself to have sustained multiple injuries over the course of her collegiate athletic career. In summary, the selection criteria for this study were: (a) one year involvement on a collegiate team, (b) self-reported history of multiple injuries which affected their college participation, and (c) willingness to participate in the study.
Procedure. Prior to conducting the thesis study, approval was received from the University Human Subjects Review Board (HSRB). Participants were recruited via personal contacts. Initially, I asked athletes I knew had sustained multiple injuries to participate in this study. At that initial contact, I presented an overview of the study, summarized the procedure and expectations of participants, and described the inclusion criteria. I then scheduled interviews with interested athletes who met the criteria.

Prior to beginning the interviews, I imparted informed consent information, assured confidentiality, and described the study procedure. I briefly explained my rationale for the study as well as my role as a researcher. Time was allocated to confidentiality assertion due to the sensitivity of the topic and to address all possible concerns of athletes divulging this information. I carefully explained that the audio-recording was for transcription and analysis purposes. Once transcribed, all names and potentially identifying information was coded before the transcripts were printed. Pseudonyms were used in reporting the findings. Participants also were reassured that only my advisor and I would have access to the transcripts. I informed them that all tapes, notes, and transcripts were kept in a secure location to prevent a breach in confidentiality. After I fully addressed the above information, I answered any questions the participants had and then asked them to read and sign a consent form (see Appendix B).

After obtaining consent, I established rapport with the athletes by sharing background information about myself. I informed the athletes of my history with cross country and track and field, both as a former high school injured runner and as an assistant for a collegiate women’s cross country and track and field team. Potentially, the above information allowed the athletes to sense my ability to understand their perspective and because of that allowed them to speak freely about their injury experiences.
Next, I conducted two interviews with each athlete, both of which were face-to-face at a time and place convenient around the athletes’ availability. The first interview was unstructured and the second was semi-structured (Fontana & Frey, 2000). First, demographic and background questions were asked as part of the first interview. Then, I asked the athlete to “talk to me about your experiences while injured” and “how has your history of multiple injuries affected your life?” Probing questions were used to gain additional details when needed. After the first interviews, I transcribed and reviewed the transcripts. A participant injury chronology profile was created based on interview responses and emailed to the participants for their feedback. Participants were asked to read the profile and verify that all the information was accurate. If any information was missing from the profile or incorrect, I asked that they insert the needed information or provide comments about the particular section.

The second interview was used as a follow-up to the first interview to provide additional detail. Unclear or incomplete responses served as the basis for the generation of the questions asked in interview two. Also, if not discussed in the first interview, the following topics were addressed in the second interview: initial reactions to injury, changes in mental states overtime, interactions with sport medicine professionals, and current views about injury experiences (e.g., lessons learned, current mental state).

**Reflexive process.** According to Lincoln and Guba (2000), “reflexivity is the process of reflecting critically on the self as researcher, the ‘human as instrument’” (p. 183). Reflexivity is the continuous process of reflection by the researcher on his or her values, preconceptions, and behavior or presence, which can affect the interpretation of the participants’ responses (Parahoo, 2006). Reflexivity improves the quality of research by extending our understanding of how our positions as researchers affect all stages of the research process (Primeau, 2003). Additionally, as
noted by Jooton, McGhee, and Marland (2009), “awareness of the reciprocal influence of
participants and researcher on the process and outcome is a vital part of ensuring rigour in
qualitative research” (p. 45). Qualitative findings are derived from the participants’ perspective,
but interpreted by the researcher.

According to Richardson (2000), reflexivity can be assessed by asking the following
questions: Is the researcher cognizant of epistemology? How was the information gathered? Is
there adequate self-awareness and self-exposure for the reader to make judgments about the
point of view? Does the researcher hold his or herself accountable to the standards of knowing
and telling of the people they have studied? The following text is my reflexive process, aimed at
addressing those questions.

Reflecting on and acknowledging my epistemological stance enables readers to
understand my beliefs, how I construct knowledge, and the perspective from which I interpret the
data (Krane & Baird, 2005). I am a researcher working from a social constructivist perspective
(Creswell, 2009). “Social constructivists hold assumptions that individuals seek understanding of
the world in which they live and work” (Creswell, p. 8). Individuals create subjective meanings
of their experiences which are both varied and multiple. Social constructivist based research
relies as much as possible on the participants’ views of the phenomenon being studied. Also, a
social constructivist researcher recognizes that her own personal experiences and background
shape interpretation, and she positions herself in the research by gathering information
personally. As Krane and Baird pointed out,

researchers do not approach a field setting as a blank slate or from an objective position;
they bring into the setting personal histories, conceptual dispositions, and epistemological
perspectives. Researchers socially construct the data (i.e., interpretations of what is
important will guide data collected and how it is analyzed). Thus, the researchers should not be separated from the data and the researchers’ influence on the setting and data should be considered. (p. 100)

Furthermore, from August 2005 to June 2008, I served as an athletic training student for a variety of women’s and men’s teams at a Midwest university. Currently, I am a graduate student studying kinesiology with a specialization in sport psychology. As part of my academic program, I have been working with athletes as a sport psychology consulting student. I believe this understanding of the athletic context and sport medicine enhanced my awareness, knowledge, and sensitivity to the issues associated with the sport injury and rehabilitations process. For my study, I felt my athletic training and sport psychology experiences gave me an advantage by providing me with a connection to the social world of the injured athletes. At times, it allowed me to ask targeted probing questions and better understand the psychological as well as the physical components of injury.

Experience in the sports medicine environment also had its disadvantages during the interviews and data analysis. Throughout the research process, I found that it was hard not to be influenced by my experiences. While my previous experiences provided me with an insight into the athletes’ experiences that might not be evident to outsiders, I also had to be careful not to allow them to be projected onto the athletes. For instance, my experiences as an athletic training student led me to this research this topic. Also, due to previous experiences working closely with injured collegiate athletes, I viewed the overall response to repetitive sport injury and subsequent rehabilitations as problematic and difficult; filled with negative cognitive, emotional, and behavioral reactions. Also, unfortunately, I did not recall many positive responses to sport injury, and the majority of the athletes who I worked with displayed negative responses. Because of this,
I had to be careful not to draw premature conclusions for the multiply injured athletes in this study. The use of probing questions was one way I avoided misinterpreting their experiences.

It is critical that a researcher produce an account of how participants perceive the situation or phenomenon in question, which requires the analysis to transcend the meanings of the participants (Schatzman & Strauss, 1973). While staying true to, and founded in, the athletes’ responses, became more than description and relied ultimately on my interpretation. Individual narratives and, in particular, composite monologues were constructed using my judgment of elements such as flow, injury chronology, and common injury experiences. Using my knowledge of sport psychology and athletic training, I pieced together the athletes’ quotes into flowing stories. Thus, to a large extent, the production of the athletes’ narratives depended on my knowledge and experiences.

To assist in my attempts at being reflexive during the research, I relied upon a critical friend (Ely, 1991). Dr. Krane, my advisor, served as a critical friend, who is someone who the researcher looks to for advice and constructive criticism. My critical friend encouraged alternate explanations of the findings and acted as the auditor of the research process (Ely). Dr. Krane critiqued my decision-making, data collection and analysis, and overall presentation of my data. When the narratives were created from the interview data, Dr. Krane questioned me to ensure I represented each athlete consistent with her experience and as accurately and completely as possible. However, as a reflexive researcher, ultimately, I must acknowledge that any finding is the product of my interpretation.

Data analysis. I conducted the analyses through coding and writing. The approaches I used were narrative inquiry and creative writing.
**Narrative inquiry.** I used a narrative approach to my data analysis, which by definition is constructed from stories and includes interpretation of the stories (Smith & Sparkes, 2009). Thus, narrative inquiry takes the story itself as its object of inquiry (Smith & Sparkes). Narrative analysis refers to “a family of methods for interpreting texts (e.g., oral, written, and visual) that have in common a storied form” (Riessman, 2008, p. 11). This technique seeks to interpret the ways in which people perceive reality and perform social behaviors. The purpose is to see how participants in various settings, such as when playing a sport and becoming injured, impose order on the flow of experience to make sense of events, reactions (e.g., thoughts, emotions, behaviors), and relationships in their lives (Jowett & Frost, 2007). Narrative analysis also focuses largely on context, for instance like the *wheres* (e.g., place) and the *whens* (e.g., time) of the story (Holstein & Gubrium, 2004).

Denzin (1994) described a narrative as attention-grabbing; "it grips the reader (and the writer) and invites readers to engage with the author's subject matter" (p. 504). According to Duncan (1998), one of the main goals of a narrative is to “evoke the vividness of the experience” (p. 95). Narratives represent the voices of those whose experience is being constructed; that is, the voices of the participants (Bruce, 1998). They use the everyday language of the world rather than relying upon more abstract concepts (Denzin, 1989). Thus, the narratives in my analysis stayed close to the voices of the injured athletes and avoided describing their experiences as abstract concepts. Furthermore, by accessing, knowing, and sharing multiple narratives, those in the athletic setting (e.g., coaches, athletic trainers, doctors) may prepare for different, anticipated, or unexpected experiences (Smith & Sparkes, 2009). For example, when working with a multiply injured athlete, knowing many stories (i.e., narratives) could allow a
sports medicine professional to hear what story this athlete feels part of and to imagine how other stories might lead to aspects of care that the present story may not be providing (Frank, 2007).

**Creative writing style.** Through narrative inquiry, I portray the complete injury experiences of these collegiate athletes (Smith & Sparkes, 2009). A creative writing style (Caulley, 2008) allowed me to depict the stories shared by the participants and to describe their experiences holistically (Waldron, Quinn, & Krane, in press). Composite monologues and individual narratives were constructed using the athletes’ direct quotes. These narratives then were layered with discussion in the research voice linking the narratives to previous research. This varied creative writing style allowed me to tell the participants’ stories using a variety of the techniques known for their compelling qualities and emotional vibrancy. If successful, the narratives will create a "deep emotional understanding" where readers live their way into the experiences, emotions, and interpretations presented (Denzin, 1994, p. 506).

**Data coding.** The first step in the data analysis was transcription of each interview. Next, I read and reread the transcripts to familiarize myself with the data (Markula & Denison, 2005). I then created a participant injury chronology profile for each athlete from their interview transcripts. This profile combined information, but not direct quotes, from both interviews to create a complete chronological history of each athlete’s injuries. The profiles then were emailed to the participants for their feedback. The athletes were asked to read the profile and verify that all the information was accurate. If necessary, participants provided additional information about their injuries to supplement the profiles. After adding their information, I then made minor grammatical and sentence structure revisions before finalizing their injury chronology profiles. Next, I created a master narrative for each athlete by reorganizing information from both interviews into a single document. Using direct quotes from the transcripts, the information was
ordered chronologically. These master narratives were composed almost entirely of each athlete’s own words. I then used open and axial coding to reveal patterns and common experiences. Open coding is the process of breaking down, examining, comparing, conceptualizing, and categorizing data (Corbin & Strauss, 2007). I attached code names to each meaningful segment of the data during open coding. Axial coding is the process of reassembling the data in new ways by making connections between and among open coded categories (Corbin & Strauss). I organized the open coded categories into clusters that produced a hierarchy of higher level themes ultimately resulting in distinct primary themes (cf. Krane et al., 2009). All of the athletes’ experiences were considered meaningful. Thus, regardless of how many of them discussed a topic, related data were coded. As Krane, Andersen, and Strean (1997) expressed, rare experiences are no less meaning, useful, or important than common ones.

**Data presentation.** The athletes’ experiences are represented in individual narratives and composite monologues. Individual narratives represent a single person’s experience. They highlight unique stories and are composed of direct quotes from an athlete’s reorganized master narrative. That is, they are direct quotes, but the content of the presented narrative may have been drawn from different sections of the interview transcript. When the experiences of two or more of the athletes were similar, composite monologues were assembled. These monologues blended the voices of multiply injured athletes (cf. Waldron et al., in press). In both the individual narratives and composite monologues, most of the text was direct quotes from the interviews.

A layered approach was utilized in the final presentation of the analysis and interpretation of the narratives (Caulley, 2008; Rambo-Ronai, 1995). In this approach, narratives are followed by theoretical and research discussion to guide the reader with my interpretation of the
aforementioned information. Thus, to simultaneously provide the athletes’ stories as well as theoretical and empirical knowledge, layering included the voice of the participants through their narratives as well as the voice of the researcher through theoretical discussion.
CHAPTER III: RESULTS AND DISCUSSION

Detailed descriptions of the participants’ experiences with multiple injuries emerged from the interviews. In the following, first I present injury chronology profiles of each participant, providing the context for the athletes’ narratives. In particular, the sequence of their injuries as they occurred over time is highlighted within these profiles. Second, I present the primary component of my data, the athletes’ stories, in varied narrative formats. The individual narratives are composed entirely of one specific athlete’s direct quotes whereas the composite monologues may be composed of multiple athletes’ quotes. Thus, an individual narrative tells the story of one athlete’s unique experience, while a composite monologue integrates the voices of several athletes’ who had similar experiences. Using a layered approach, I surrounded the narratives with sections of discussion (e.g., explanations based on previous research) to provide the reader with theoretical background and the researcher’s interpretation of the athletes’ stories. The following themes are discussed in the narratives: responses to injuries and rehabilitations, Interactions with sports medicine team, changing roles and team responsibilities while being multiply injured, coping strategies, social support, mental states associated with returning to sport participation, lessons learned as multiply injured athletes, advice based on the experience of being multiply injured, and injury status at the end of study.

Participant Injury Chronology Profiles

Charlotte is a senior on the varsity cross country and track and field teams. She has used 2 years of her eligibility. Typically, a student's athletic eligibility in a given sport is four seasons, a number derived from the four years of academic classes that are normally required to obtain a bachelor's degree. A student-athlete, however, may be offered the opportunity to redshirt which
would allow those four years of eligibility to be spread out over five years\(^1\). Charlotte’s first injury occurred at the end of her senior year of high school and lingering symptoms of that injury forced her to red-shirt her first year of college. She sustained her second and subsequent injuries during her sophomore and junior years of college.

Charlotte first became injured at the sectional track and field meet (near the end of the season) during her senior year (2006) of high school. With about 500 meters to go (i.e., a little over a lap left in the race), she broke her left ankle while running the 1600 meter race. Charlotte limped for 100 meters before realizing that she was not going to be able to finish the race. As a result of this injury, Charlotte had surgery and went to physical therapy for 6 weeks. She also missed 2 months of practice upon arriving in college, and in the end, was forced to redshirt her entire first year of college (which included three separate seasons: cross country, indoor track, and outdoor track). In the fall of 2007 during cross country season and her first year of eligibility, Charlotte then injured her hip while running at practice. She was unaware of what caused the injury, she only recalled that the pain just started while running. Due to her hip pain, Charlotte dropped out of her first race that season. After taking a short amount of time off from running, she was able to compete again, but not at full intensity. Before and after practices and races, she saw her athletic trainers for treatment (e.g., ice, electrical stimulation, heat, stretching).Upon returning for her second year of eligibility (2008), Charlotte began to experience hip pain again while running cross country. Once more, she saw her athletic trainers for treatment (e.g., ice, electrical stimulation, heat, stretching). For indoor and the majority of her outdoor track seasons, Charlotte was able to compete without pain in her hip up until about two weeks before the championship meet. Near the end of her outdoor season, her hip started hurting again while

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\(^1\) Redshirting refers to delaying or suspending an athlete's participation to lengthen his or her period of eligibility (NCAA, 2009). A medical redshirt, also referred to as a "medical hardship" by the NCAA, can be obtained for a season lost completely or almost completely to injury (NCAA, 2009).
running a workout. Although she was able to run through the pain and compete at the championship meet, the hip strain prevented her from racing at 100%.

Amanda is a junior and a student-athlete on a varsity cross country team and track and field team. Her first injury occurred during her senior year of high school. Amanda sustained her second and third injuries during her sophomore year of college; and, currently she is injured for the fourth time. During her senior year of high school (2007), Amanda developed bursitis in her right hip, largely from overuse. As a result of this injury, Amanda was unable to run for about a month or two; however because it was the off-season, she was able to take off most of the winter (i.e., not run), and instead cross train and complete 6 weeks of physical therapy. During her sophomore year of college at the end of cross country season (October 2008), Amanda sustained a right hamstring strain while stretching. Because of her hamstring injury, she missed 2 weeks of participation (i.e., practices and competitions) during which time she received treatment (e.g., electrical stimulation, ice, active release, massage) from her athletic trainers. Amanda was able compete at the conference championship, but not at full intensity. Shortly after injuring her hamstring, also during her sophomore year of college (December 2008), Amanda’s running was interrupted by another injury, chondromalacia in her right knee (which is an abnormal softening of the cartilage of the under the kneecap; Starkey & Ryan, 2002). This injury forced her to miss 2 months of running and to redshirt her sophomore year indoor track season. With this knee injury, Amanda did rehabilitation exercises with her athletic trainer and at a hospital physical therapy clinic. Currently, during her junior year of college (2009), Amanda is rehabilitating another right hamstring strain. This injury occurred while running an interval workout at practice. With this injury, Amanda missed a month of running and 2 competitions. She also saw her athletic trainers for rehabilitation and treatment (e.g., e-stimulation ice, water massage, deep tissue massage).
Amid all of her injuries, Amanda was able to complete some form of cross training (e.g., swimming, biking, elliptical) when she was unable to run.

Tami is a senior student-athlete on a varsity women’s basketball team. She has never red-shirted yet has only played one full season; her first two injuries occurred too late in the season to meet the redshirt qualifications. During her freshman year, Tami was just beginning to gain playing time in competitions when she became hurt the first time, and then during her sophomore year when she was finally getting back into shape, she got hurt again. During her junior year, she played while injured. Her first injury occurred halfway through her first season with the team (2007). Tami tore her right anterior cruciate ligament of the knee (ACL) while performing a defensive drill during practice. The following season (2008), halfway through her sophomore year, Tami re-tore her right ACL while performing an offensive drill during practice. After her first ACL tear, Tami missed 6 months of basketball and including the second half of the season. With the second ACL tear, she missed 4 months and again did not compete during the end of the season. For both ACL injuries, Tami performed rehabilitation with her athletic trainer, the first for 6 months, and the second for only 4 months. In her junior year (2009), Tami tore her left ulnar collateral ligament (UCL) of the elbow while going for a rebound during a game. With her UCL tear, she only missed one practice and Tami continued to play the rest of the season using an elbow brace. On top of playing, she did rehabilitation with her athletic trainer (e.g., stretching, light resistance training) again for about a month.

Hannah is a senior on a women’s basketball team. Hannah’s first and second injuries (torn ACLs) occurred in high school. As a result of her injuries, Hannah played only a total of 7 games during her junior and senior years of high school. Hannah’s third injury, additional meniscus tearing in her knee, occurred in the summer between high school and college. Her
fourth injury, additional meniscus and a microfracture in her femur, occurred in her junior year of college. In Hannah’s junior year of high school (2004), she tore her left ACL during the second game of basketball season. Following a fastbreak lay-up, Hannah landed and immediately heard three pops. Ten days after the injury, Hannah underwent surgery and was unable to play for five months while she was in rehabilitation. As a result, she missed the rest of her junior year basketball season. In the summer going into her senior year (2005), 4 months after returning from her 1st injury, Hannah tore her right ACL during a scrimmage at the University of Michigan's elite camp. On the last day of camp, she was coming down from a rebound when she landed on another player’s foot. Following her second ACL tear, she once again underwent surgery and rehabilitation; however, with this injury, she was able to return to participation in 16 weeks (4 months) and make an appearance in the final five games of her senior basketball season. Then, in the summer going into her freshman year (2006) of college, Hannah re-injured her right ACL and tore more meniscus. Once again she underwent surgery and was forced to sit out for 6 weeks. As a result, Hannah was unable to participate for the first couple weeks of her collegiate career. Hannah’s fourth knee injury, which was the third injury to her right knee, consisted of both torn meniscus and a fracture in her femur. This injury occurred in the pre-season of her junior year (2008) of college; however, she did not undergo surgery until after the season. Following her fourth surgery, Hannah missed 11 weeks of participation.

Narratives of Multiply Injured Athletes

The following individual narratives and composite monologues are the injury experiences of Charlotte, Amanda, Tami, and Hannah. As previously mentioned, an individual narrative is the voice of one athlete while a composite monologue is the combination of two or more athletes. The individual narratives and composite monologues are presented in Arial Narrow font.
Responses to injuries and rehabilitations. Immediately following injury to the time of return to play, research (Brown, 2005; Faris, 1995; Lynch, 1988; Smith et al., 1990; Taylor & Taylor, 1997) has consistently shown that following emotions (i.e., reactions) are commonly experienced by the involved athlete, depression, anger, fear, tension, disgust, anxiety, and panic. In this section, I will examine the reactions experienced by four athletes to their multiple injuries. Specifically, I will highlight their responses according to two time frames, the first being their Initial Responses to Injuries, and the second their responses to Being Multiply Injured.

Initial responses to injuries. Many of the reactions these athletes had to their initial injuries were consistent with what has been described in previous research. These common responses are best illustrated by Tami’s and Hannah’s descriptions of their immediate thoughts and feelings after tearing their anterior cruciate ligaments (ACL). The following narrative reveals Tami’s reactions to her ACL injuries, first in her right leg and then in her left. Tami’s narrative begins with the recollection of her initial response to her first ACL tear which occurred during basketball practice.

You hear people. You think "ACL" and it’s like a horror story and that it’s like unbearable pain. And when it happened, I was thinking, “oww, but that’s not that bad.” So I think the first one, it was just like complete denial like absolutely not, this isn’t happening to me. I didn’t think it happened and then when I realized it did, it was like, “okay well now what, what do I do, like am I done?” I don’t know how my coaches were going to react to [my ACL injury] since we hadn’t had any in the program for a while, up until me and this other girl that did it right before I did. So it was just like, “now what? I mean, where do I go from here” because I had no idea. I’d never been injured before. And then reality sets in or whatever, but I just realized that, especially for the first one, my whole freshman year was over.

Another first thought was that you see so many people who have ACL injuries and they just don’t come back from them. Like there are star athletes who do come back and play great and then there are
other athletes who just don’t come back. So of course, being the person that I am, I immediately think “I’m never going to come back.” Right away you just sit there and think “I’m never going to back from this, this is the worst thing that’s ever happened to me.” I think that’s hardest thing to get past is that you will get past it. You just want to sit there and pout and think “oh woe is me, I’m only the one who’s ever done this.” So my first thought was “this could be it, I’ve let a lot of people down that have helped me get to college,” and stuff like that. I think it was just I hurt everyone, like my parents were really upset, not with me, but with the whole situation.

I think you get injured, and at least for me, you’re in denial for a little bit. I didn’t do it, it’s not that serious. Then reality sets in and you have deal with the surgery and the rehab. Then you got to get through that. Then you get the whole like, “I just want to be cleared and I just want to play.” I just think throughout the whole entire rehab situation, the only thing that I was thinking was “can I play yet?” And then you keep thinking that and then the closer you get to the time when you’re finally going to be cleared to play, you keep thinking “now am I ready to be cleared yet?”

With the first ACL, I was really upset and disappointed. It was more or less, I was finally getting time to play as a freshman and then to all of sudden [I] go down at like the peak, that was probably the most upsetting. Our team was really, really good that year and went to the Sweet 16 [national tournament]. I don’t know specifically if it was, but I think I was just angry. I was upset that I had a chance and I lost it. I think it was just a missed opportunity, I mean, I finally got a chance to show myself on the court to my coach and he was finally putting faith in me, and then I lost it. And I’ve got to start from ground zero as essentially a freshman next year, like trying to prove myself again.

Tami’s narrative continues as she discussed her second ACL tear. Her experience illustrates the impact multiple injuries to the same body part can have on an athlete’s psychological state.
Okay, for the second one, it was like almost the complete opposite [reaction], like I knew right away that that’s what I’d done. So it was just disappointment that I’d let it happen again, thinking it’s my fault, I’ve done something wrong, I didn’t rehab right the first time. It was just shock, disbelief. I don’t want to go through this again. Like I knew what all it takes to go through and rehab and to get back. And to think I’d just done it a year ago, I was just like, “I can’t do this for another year, that’s the last thing I want do.” So when it happened the second time it was “my whole sophomore year is over, like I just wasted two out of four years of my college career and I haven’t done anything yet or at least felt like I have participated, played, earned any respect, and stuff like that.” So I think it’s just the realization that you’ve been here for two years already and you haven’t done anything yet. That’s what it kind of felt like I guess. So my second one was more upsetting personally, where as the first one was just bad luck maybe.

Going into [my first ACL] surgery, I had no idea what to expect. Like one of the big things with ACL’s is whether or not they’ll have to fix your meniscus. If they fix it you’re in a big brace and non-weight bearing for like a month or something like that, 4 weeks. So for the first one I just had no idea. Like, I didn’t know what pain was going to come. I think I was just more scared definitely for the first one. I really had no thoughts going into [rehabilitation] how the pain would be. For the second one [ACL], I went to a different doctor. Before going into surgery, he told me that I could be back playing in 4 months whereas my last doctor said 6-8. So I’m thinking 4 months, like if we can beat 4 months, let’s do it. So when I came out of surgery, my mom said the only thing I kept asking when I was coming out of anesthesia was “am I in a brace, am I in a brace?” And I was begging the doctors like, “am I in a brace?” I was so upset and like don’t tell me I’m in a brace. I think going into the surgery, especially with the second one, that was my biggest fear like, “don’t make my recovery any longer than it has to be.” I didn’t want to sit out another 6 months, which was part of the reason I went to a different doctor and was like, “I’m coming back faster, I’ve been through this before I know what I’m doing, I’m not dealing with it anymore, there’s no way, I’m ready to just get the rehab going.”
I wanted to get back so it [with my second ACL] was more just anger and I want to get started with the rehab. I was starting to become an upperclassman. I needed to get back for my junior and senior year. I think, especially with the second one, I kind of knew what to expect so the pain didn’t affect me as much. I was like fine I can get through it. With the second one I was mad too. I didn’t want to be on my crutches. I even tried to walk the first day after I got out of the surgery to the bathroom and got yelled at by my parents because that wasn't good for me. When I was trying to throw the crutches down and wobble through my house, which wasn’t smart anyway, I just felt like I should be able to do it. And I could to it to an extent, but it still wasn’t smart to push it like that. I think I made everybody mad trying to do that, but it made me feel good to be like see I can do it. It’s like, “I’ve done it before, like I’m fine.” It’s kind of like you’re superman the second time around. Like, “I’ve been here before, I’ve done this, let’s just get it over with.” I think if anything, I rehhabed 10 times better my second time around. I think it just motivated me. I’m going come back faster. I know exactly what to do. I don’t need my trainer to baby-sit me, hold my hand, and tell me it’s going to hurt. I know exactly what’s going to happen and how it’s going to feel. So I think the second time around, the anger definitely motivated me, like let’s just get through this and get back as soon as I can.

And with the second one, I don’t think you realize that you really hurt your knee until you take the dressing off and you see it’s like this balloon staring at you in the face. Then you’re like okay I really am hurt now. I think that was the first realization, like “I just tore my ACL, I’ve had surgery, and now I have 6 months ahead of me just trying to get back to where I partially was before.” I remember crying, taking off the dressing before I even tried to do the exercises, and just seeing this big cut up thing like sitting on my leg. I think that was the hardest part. If I’m going to do something, I’m going do it, and I used to being able to accomplish things, especially when it’s just a simple leg raise. But when I was lying on my stomach trying to lift my leg kind of back off the ground, I was incapable of doing it. I couldn’t understand why. As much as I knew I was hurt, it still shouldn’t be hard. “I shouldn’t be able to play basketball yea, but it’s a leg raise.” Like I couldn’t understand what little techniques go into your knee and what's all hurt. So it was just hard for
me to comprehend what was wrong. Yea I mean it’s rough, it’s just like you realize you can’t do certain things. You all of sudden realize that you’re hurt. You get up and try to turn and fall. I guess it’s like you were kind of in denial for a little bit where “it’s fine, it’s fine.” But then you go to do something and it slaps you in the face again. “I can’t run, I can’t be part of the team,” and stuff like that.

The second one hit the most close to home because my dad has torn both of his ACLs too. So I think it was more or less he felt bad, which made me feel bad. Like he kind of passed that gene down and I think that was really disappointing. Like, “how did I let this happen to me again?” Through all that, I think that’s when I struggled the most. I wanted to get back so I kept trying to push it. I couldn’t understand why if I working so hard and rehabbing so hard why I wasn’t back yet. I think both ACLs were a lot harder to rehab without playing and to go through because I had to see myself falling behind. Yea my rehab was getting better, but my on-court skills were still way behind where they should have been.

Hannah provides another narrative about multiple ACL injuries. Hannah’s experiences also illustrate reactions to consecutive ACL experiences, but unlike Tami, Hannah’s injuries were on different legs. This narrative begins with Hannah’s recollection of her reactions to her first ACL tear, an injury she sustained while in basketball practice.

[When I injured my ACL the first time] I just remember it was high school, the second game of the season my junior year, I was going down the court with a breakaway lay-up, did a fake out move to a girl, and then came down basically with no one around me. I came down on the side of my foot and I heard my knee pop 3 times but I remember looking behind me to make sure the ball went in on the lay-up. It was like slow motion, like as I was falling down I could see the crowd and everyone’s reactions. It was just like I was in dream. Like I felt like my body was outside myself watching me. It was strange. Yea there was a lot of pain, but it was the fact that I knew what I had done that was worse off than the actual pain that I felt. So like my initial reaction was “my season’s over.” Basically it was like, “I’m screwed, my season’s over,” like everything just pores through your head like, “I can’t do this anymore, what’s going to happen after I get
You just don’t know, everything from that point on is just unknown and you become in panic mode basically. One of my first thoughts was “wow this is awful,” especially because it happened during my junior year when all the scouting and recruiting was going on. I just thought to myself, “wow I blew my chance at this.”

Well the first time when you rehab, I mean, you don’t know what to expect, you’re injured, you have your leg in a cast, basically in a brace, and you don’t want to move it, you’re scared to move it. I mean it hurts. You don’t know what to expect and you’re having to do all these things, so as much as you want to get better, you’re so scared because it’s so new. The injury just happened. Like you’re already starting rehab and you just had surgery 3 days ago. It’s just scary not knowing what to do. You’re scared to push yourself because you’re like “is this going to hurt it,” like you just don’t understand.

I mean it sucks. You get down. There are days you’d wake up and be excited for practice, excited to do things, but other times you’d wake up and not feel like going to practice. I didn’t want to go to practice everyday because I didn’t want to have to sit around. It was hard sitting through practice knowing that you could be out there helping your team, seeing your team struggle and you can’t be part of that. That aspect of it, the first time around, was hard. Like I’m an active person, I love being active in anything and having to sit there and not do anything was probably the worst thing, it was just horrible. You just get sad because your not there doing what you love. It’s just like something was taken away from you that you feel never should have been.

Hannah’s adds to her narrative by describing her reactions to her second ACL tear. Her response to this injury further reveals the impact repetitive injury can have on an athlete.

The second ACL, well, I was hoping it wasn’t one. I was at a camp and I came down from a rebound on someone’s foot. I saw the trainer there and he told me “it was just a sprain, it wasn’t a big deal, try running in a couple of days.” I figured the trainer has been around, or whatever, so my initial reaction was “okay, like there’s no way I did it again, it’s only been 4 months since I just started playing, there’s just
absolutely no way I did it again.” So I told myself, in my mind, “it wasn’t [an ACL tear]”, but hobbling down the step, I went to try to run, and my mom goes, “Hannah what are you doing, you can’t even walk down the steps, we’re getting an MRI.” So we got an MRI, and the whole time, I was thinking “oh it’s just a sprain it’ll go away.” I mean my hopes were a little high, I was probably in denial. Honestly, looking back at it, like how I reacted and how I couldn’t walk and all that stuff, I knew it was an ACL, but my body was telling my brain and my brain was telling me there’s no way I did it again. I was just trying to believe the trainer that said it was just a sprain.

The second time around, my mindset was a little different. I thought to myself, “I’ve been through this before, I can do this, you have more motivation, and you want to get out on the court faster.” However, getting injured is annoying though. It’s tedious. You have been through it before so it’s almost worst because it’s just like you know the time, you know the timeline, you can’t go any faster, even if your ahead, you can’t go faster than it’ll allow you to. So it’s just really frustrating having to sit out, knowing that all the while when you come back, in how many months, I’m going to be this much out of shape, and it’s going to take me this much longer once I’m back to get into shape and into the feel of the game again. I mean, it’s a big mind game basically. In college your team can go on without you, but in high school, you know, you have your elite players and you have the rest of your team. It’s like that in every situation. So getting injured in high school and knowing that you’re a big piece of the team, but [you’re] sitting out, it’s frustrating. You think, “oh if I was out there this could have happened or if I could have done this, someone else could have done this, I could have helped my team out in this way.” And that was frustrating cause you couldn’t be there, like, “oh man if I was there, it wouldn’t have happened.” But it wasn’t like that.

Consistent with the integrated model (Wiese-Bjornstal et al., 1998), Tami’s and Hannah’s narratives reveal the influential role injury history can have on an athlete’s response to injury and rehabilitation. Tami and Hannah both sustained the same type of injury consecutively; and, although they initially felt disappointment, the knowledge gained during their first rehabilitation
allowed them to enter their second rehabilitation with a more productive mindset. For Hannah and Tami, the memory of their first ACL injury still was lingering at the onset of their second injury. All too well they knew the aftermath of an ACL injury; both feared the consequences of injury like loss of playing time and ability.

Tami and Hannah also shared a similarity in their approach to rehabilitation with both ACL injuries. After the first ACL injury, neither Hannah nor Tami knew what to expect; they essentially were rookies to the rehabilitation setting. However, with the occurrence of another ACL injury, both athletes were transformed into veterans and were able to enter rehabilitation with a firm knowledge of what was ahead. Hannah’s and Tami’s narratives illustrate that repeat injuries actually can ease the rehabilitation process by providing the athlete with a better understanding of the “rehabilitative netherworld” (Shuer & Dietrich, 1997, p. 104) they are about to enter.

Nevertheless, not all athletes sustain the same injury twice or complete a structured rehabilitation plan (e.g., a post-operation ACL rehabilitation protocol) and as a result, are unable to achieve a firm understanding of what is ahead. Evidence of this emerged from the experiences of Amanda and Charlotte. Their experiences differed from those of Tami and Hannah in that their significant injuries were different injuries to different body parts. Charlotte’s narrative provides an excellent detailing of those injury experiences and best illustrates the similar reactions felt by Amanda and herself. In the following narrative, Charlotte recalled her initial reactions upon injuring her ankle and then her hip.

My immediate reaction with my first injury in high school was mostly just shock because it was in the middle of a race and it was at the sectional race right before state my senior year. I was shocked because like I had never been injured before from running, um, in the 4 years that I had started running
competitively and I had no signs of like, no thoughts that my ankle would break cause like I felt completely fine, so I was like just total, totally unaware that it was going to happen. And I just started crying and I don’t even think it was because of the pain, it was just because like I knew like I wasn’t going be able to run the next weekend. So mostly just shock and just like I was just so angry about the fact that like, “why me?” I worked so hard to like be ready to contend for a state title and it just got like taken away before I even had my shot. Then with my second injury, I was in [college] in my sophomore year [1st year of actual eligibility] of cross country, I strained my hip and pretty much got the same reaction as the first one, mostly just shock. I was just so angry about the fact that like, “why me?” It was kind of like, “not again, like, what am I doing wrong that I can’t just stay healthy?”

As demonstrated in Charlotte’s narrative, athletes who sustain different multiple injuries may react and cope more negatively to the second occurrence as result of not being able to use the knowledge gained from their first. Similar to Tami and Hannah, Charlotte and Amanda experienced distress following their second injury; however, in addition to that emotion, they had to cope with a new injury and an increased distrust in their whole body. Thus, athletes who sustain different multiple injuries, have different courses of treatment, and work with different medical personnel with each injury are unable to establish a firm understanding of the rehabilitation setting. Also, as a result of their variability, they are unfamiliar with the course of recovery and do not know exactly what to expect with their second injury.

**Being multiply injured.** Unlike the responses to initial injuries, which are well documented in the literature, coping with further injury is an area that has yet to be thoroughly examined. These athletes’ narratives amply demonstrate the psychological reactions an athlete experiences over time, from the time of their first injury through the occurrence of multiple injuries. Also, the narratives show how coping with multiple injuries differs from coping with
other injury classifications, such as acute and chronic injuries. The following narrative illustrates Tami’s reaction to tearing her ulnar collateral ligament (UCL) in her elbow. Unlike her first two injuries, Tami’s third injury did not require surgery or any significant time loss from competition.

When my trainer went and looked at it, he goes “oh this is your UCL.” Immediately I think ACL, I’m like “what? There’s not an ACL in your elbow.” And he’s like, “this is what Tommy John’s surgery is for, baseball players, and it’s not even in your dominant arm.” That would make sense, like that would happen to me. I mean that’s just kind of the way I looked at it. If something’s going to happen, it’ll happen to me. Kind of like that’s annoying and one more thing I got to deal with or one more brace I got to put on my body.

So the first night I think I was upset. I couldn’t even lift a cup at dinner with my parents afterwards. And I was like this isn’t happening, this is going be something that sets me out. Immediately, I’m thinking worse case scenario, “I’m going be out for another 6 months, like another ACL.” However, with my elbow, it was just rehabilitation with the trainer during the time. So I had a brace and I continued to play, but with the knees I sat out both times. It was almost easier doing the rehab and playing because I could focus more on playing and I didn’t have to sit there and watch the game happening in front of me or watch my friends getting better and my teammates getting better and like my coaches noticing them getting better while I was stuck on the sideline. But I think when it happened, especially because it was something I could continue to play with, it was just like, “it’s just another injury, I got to get through it, brace it, let me keep playing.”

The anger, I think it was also different because it wasn’t my knee so and just because of that it was a welcomed injury, I guess if you could say that. I mean my elbow was something different, something else to rehab. And if I’d been in any other sport maybe I would have had to have surgery on it, but it was one less surgery I had to go through and less time to sit out. I mean it was just a completely different feeling I think. It’s just put a brace on it and we’ll deal with it after the season.
Hannah’s subsequent injuries were to her right knee. In the following narrative, Hannah discussed her reaction to her fourth major knee operation.

So my doctor goes in there to scope it and we think it’s just a meniscus tear; however, it turns out I tore my medial meniscus and I also had a microfracture on my femur. Usually for that surgery, they would drill in 8 holes and you’d be out 6 to 8 weeks with non-weight bearing and then you’d have to go through your normal rehab. So it’d be a long process. But knowing me and it being my 4th surgery from the same doctor, he goes, “there’s no way that I could’ve done that to you your senior year.” So he only drilled in 3 holes and I was out 11 weeks. Because of that my mindset going into it was “awesome, great, take care of it, I’ll be back in 2 to 3 weeks playing again. Perfect, like this is not a big deal, it’s in the summer, not in season.” But when I woke up, I found out that I could possibly be out for a lot longer and that caused my mindset to change a little bit. It was like, “oh shoot like, I can’t afford this.” Granted it was still summer and season wasn’t there, but the summer is when you take all this time to get in shape and bond with your teammates and do the strength training and everything. I needed the summer going into to my senior year. I wanted to be as strong and as fast as possible. So that kind of stunk.

Both the more injuries keep happening and more rehab, you walk in there like a veteran and you just start doing your workout without them even telling you what to do. You’ve been through it so much that I know I have to do quad sets and I know I have to wall slides. Basically, I know I have to do all these exercise without you even telling me because I’ve been through it 3 other times. Like it’s just part of the maturity process that you know that this is what you have to do to reach your goal and there’s no short cuts. There’s no, oh you can be back in 6 weeks, but we can you get in 3. No you have to go the 6 weeks because your body can only heal so fast. Even though you think you’re superwoman, that you’re stronger than everyone else and you can come back faster, the truth is you can’t because your body has to heal at a certain rate.
Amanda’s and Charlotte’s narratives lacked any positive reactions and their frustration continued to worsen with each additional injury. Amanda sustained her second hamstring strain while Charlotte experienced lingering hip injuries. To provide a comprehensive account of their similar reactions, a composite monologue was composed in which the voices of both Charlotte and Amanda were blended to reveal the influence of injury on an athlete’s training schedule and sense of stability.

The next year I had put in a good summer of training but as soon as I got back to school my [injury] started kind of acting up again. That just really sucked because I felt like I just could never like get a break, like as soon as something started going well, there was always a setback. It’s just really frustrating. I just want to cry because it’s just like one thing after another. Finally I had gotten like, I felt fully healed up by my junior track season. I was making it through a whole season uninjured and having a good track season. Then right before the [conference championship] meet, my [injury] started acting up again and I strained it again. Once again, as soon as things started going good, there was another setback. It’s just seemed like every time I got to a certain level of training where I started feeling strong again, like the peak of my training or the peak of my racing, like, something would start hurting and then I would be back where I was before, just not as strong as I felt like I was getting. I worked hard all summer and so, I don’t know, it’s hard but I’m just trying to get as strong as I can, as fast I can without like putting myself back more.

I hate being the person that’s always injured cause I was never that person in high school. People used to say she never gets injured, she’s always consistent. Like I was always really, really consistent. A lot of runners will run awesome and then the next race they’ll run terrible, but I always ran steadily consistent. My teammates could always rely on me to pretty much run the same every single time. Now, I’m so inconsistent. I’m here, I’m there. I do awesome in one on Monday the first week of pre-season, pretty good on Wednesday, finish on Friday, and I won’t be able to run on Saturday. It’s like I have no consistency
anymore, my teammates aren’t able to rely on me. I can’t be there pushing them everyday or be in races giving my best effort and finishing well pretty much every time. I hate that.

Amanda’s and Charlotte’s composite monologue highlights the impact of injury context and different multiple injuries. Both athletes experienced comparable reactions to their multiple injuries, with feelings of frustration and fear of setback particularly prevalent. Most notably, it appears that the timing of injury played an influential role in both athletes’ reactions. Previous narratives from Hannah and Tami support this notion as well.

Based on these four athletes’ narratives, it appears their responses depended heavily on factors such as injury history and athletes’ ability to actively participate in their sport. These findings extend beyond the integrated model of response (Wiese-Bjornstal et al., 1998) and introduce the concept of multiply injured. Unlike the integrated model, which predicts the psychological responses following a single bout of injury, the narratives provide rich detail about the psychological responses following multiple injuries. Immediately following their injuries, all four athletes experienced commonly found emotions like frustration, anger, and distress. With early injuries, it appears that time off was the source of negative stress in their reactions. Following subsequent injuries, time away from participation also plagued the athletes’ thoughts and emotions. For a multiply injured athlete, a new injury is viewed as a setback, one more thing to deal with, a hassle so to speak. Essentially, to these athletes, injuries were equated with time off and/or decrease in functional performance ability (ability to perform normal sport-related activities or skills).

Furthermore, the narratives show the chronological responses of athletes following each their injuries. They depict the impact of an athlete’s injury history and reveal how a multiply injured athletes’ responses change over the course of their injuries (i.e., from one injury to the
next). For instance, athletes who sustained the same injury multiple times, like repeat ACL tears, tended to cope better with the second occurrence as result of the knowledge gained from the first injury. These athletes were able to enter the second rehabilitation with more productive thoughts, motivation, understanding, and knowledge. Also, the athletes who sustained the same multiple injuries only had to cope with a distrust in one body part whereas the athletes who sustained different multiple injuries had to cope with a distrust in their whole body. As a result of this, their responses and approach to rehabilitation were hindered by feelings of uncertainty and unfamiliarity. Thus, the experiences of these athletes support the need to take into account a multiply injured athlete’s reactions following injury.

**Interactions with sports medicine team.** During rehabilitation, injured athletes typically interact with variety of healthcare professionals. Because of the potential negative impact of injury, social support should be a concern to those directly involved in an athlete's care, for instance the sports medicine team (Hardy & Crace, 1993; Wiese-Bjornstal et al., 1998). All four athletes had unique interactions with their sports medicine team. Their experiences, some positive while others negative, influenced their responses to injury and subsequent rehabilitation.

In the following narrative, Amanda recalled her experience with her sports medicine team. Throughout her multiple injuries, Amanda struggled with diagnosis variability among her medical staff. Her account illustrates the influence of this issue and poor communication among those directly involved in her care.

None of my injuries were like, “this is exactly what it is” and that’s why it was so frustrating for me. It wasn’t like, “this is what you have, this is how long it’s going to take to heal, this is what you need to do.” It was frustrating not having the answers, not knowing all the answers to why things were happening, and just being irritated with what was happening. I got really frustrated last year because I went to the doctor
and he told me one thing and I was okay, that’s what it is. Although he wasn’t an orthopedic doctor, he had whoever interprets MRIs, like 2 or 3 people interpret mine. Then when I went to my trainers, they got frustrated and irritated with me, thinking that I went behind their back by seeing multiple people and getting different opinions. I just wanted to know what it was, like I didn’t care at that point what the outcome was, I just wanted to know what the injury was. So it was like I was upset about not being able to run for so long and on top of that I was kind of getting in trouble. That was frustrating obviously, because your rehab and time off depends on whether it’s a stress fracture or a general knee injury. I don’t even know in the end what they thought it was, but I could have started running sooner and my rehab would’ve been a little different. So I was set back because of not really knowing. I didn’t know when I was going be back, when I was going to be healthy again, what I needed to do to get healthy again, or why things were happening to me.

Charlotte worked with different athletic trainers over the course of her college running career. Charlotte’s narrative provides the opportunity to compare the effect of different approaches by ATs.

For my second injury, I used our university trainers and was provided with treatment. However, early on I kind of felt like they prescribed like the same treatment for every injury to anyone on our team or other teams. But with my third and fourth injuries, like I felt they actually kind of like looked at me more and like messed around with my hips and stuff instead of just like asking me where the pain is, they actually like took a hands-on approach and um came up with a diagnosis which I had never, never really seen them do before.

Now everyday before practice, I’ll go in and one of the trainers will stretch me out. So I think, um, I just feel like they’ve been more helpful than in the past. And I think it’s because, our trainer has gotten to know us instead of just like “oh I’m stuck with track.” Like he enjoys being our trainer. That makes me feel good. Sometimes, on this campus it’s kind of like cross country and running doesn’t really matter. It’s nice
to have a designated trainer for our team and to know that he truly does care and wants to help us get better. That has made me want to go to the training room more if it hurts instead of just running though like I had in the past. What he’s been doing has been helping, like the pain is going away, so that like makes me want to go in there and see him and get worked out. And I would say now, like this season, I wouldn’t say I’m as hesitant about it because a lot of the times, I’m out there running and it does hurt, but I know it’s also getting taken care by the trainers so I’m still running full on. It’s helping that they’re doing more than I feel like they have in the past with like each day having me come in and work out my hip. So I think just mentally, I think I’m a lot stronger than I have been in the past about still running well even with the pain every once and awhile.

While Charlotte and Amanda experienced some negative interactions with their athletic trainers, Tami and Hannah both had positive stories to share when it came to their athlete-athletic trainer relationship. Because Tami and Hannah spent a substantial amount of time in the rehabilitation room with the same athletic trainer throughout their injuries, a strong rapport was developed. Tami’s narrative illustrates the impact a positive, amicable athletic trainer can have on an injured athlete’s attitude towards rehabilitation.

My trainer has been a 10 times bigger support to me than my coach or my team because I spent so much time with him. I’ve been with other girls who have rehabbed with a different trainer or a GA [graduate assistant athletic trainer] or something like that, but I got to work strictly with the head trainer. We were attached at the hip for the whole time I was rehabbing and I spent all my time with him. I think with my first ACL, my freshman year, you really come in and you’re not really going get to play as much because of the upperclassmen ahead of you, so I knew I could just kind of rehab and get back. But he pushed me to the point where it was going to help me, but at the same time, he knew when I was going as far as I could and then he would stop. For the first one, he was kind of in my face a lot, but I needed that now that I look
back on it. I'm glad he did that because I wouldn't even have been where I am now had I not rehabbed the way I did the first time.

There were definitely a lot of fun things that happened in the training room. When I came back after my first ACL, he's like, "you know you shouldn't be walking," kind of made that joke to me, so I came in walking and had my mom hold my crutches and I was limping and I sucked it up, came in walking, and was like, "see I did it." Well he took my crutches from me and was like, "okay now you really can walk," and I didn't get them back. And as I'm gimping around campus, you think, "woops I shouldn't have done that," but at the same time, it made me walk. So he pushed me, he made me cry everyday, but I think he was funny about it. He would be like, "I'm going to make you cry today," it was almost a joke. I think that's the comic relief I needed. Also, I remember one of the things that you have to work on is your extension and your flexion and being able to get to full range of motion. Before the first one, there was this girl that had just tore her ACL so I was watching her rehab and do an exercise where you had to lay on your stomach on the training bed with your knee hanging off and they'd put a 10 pound weight and pull your knee over. Terrible. And I remember watching this girl do it, and before it was even my turn to do it, I was crying because I knew how painful it was for her. I was like, "I can't do this, [Athletic Trainer] I don't want to do it. I'll find some other way to do it." So I remember just crying before that drill even started.

My trainer and I had a really good relationship and a really good understanding of where each other were coming from. He was really like the backbone behind my rehab, especially the second time. Once I'd gone through it before, he'd kind of let me do it on my own. He knew I could push myself on my own. After my second one, I was like this is my time to really play, this is when kids really start to play in college and that was my motivation. I mean I wanted to be a starter, I wanted to be someone who was in the game all the time. Mentally I was thinking, "okay, I'm going be here half an hour before practice even starts to start my rehab, I'll rehab the whole time, and I'll stay longer if I need to, whatever it takes to get in and get the rehab going." So I think I was more motivated to be there earlier and stay later if I knew it was
going to get me back and make me healthier, especially if I could meet that 4 month deadline I was trying to get at. I mean, I had to be there earlier, later, and I had to suck it up a lot more than I did the first time. So you go to the second, and it’s like give me my towel. I’ll put the towel over my head or I’ll chew on a towel, like let’s just get it over with. I’ll time myself, I can handle it. I did it at home, like that same workout before I even came home. There was just so much more motivation behind the second one. I knew what was going happen, I knew it was going to hurt, so let’s just start it and get it over with.

With the third injury, the UCL, my trainer just laughed at me. He’s like this doesn’t happen to basketball players. But I am the one that gets hurt. It’s just like if something can go wrong, or someone can get injured, like it’ll be me. I rehabbed a little with my elbow, but we couldn’t do too much because I didn’t want to inflame it or anything like that. So the only really rehab I had with my elbow was my trainer would hold my arm and just bend it, like try to straighten it. Scar tissue had fixed itself to where my arm was stuck and when I tried to straighten it, I couldn’t. So would just try to straighten my arm back against his hip and it was almost funny because he would act like he was trying to kill me. So I think if I would’ve done my elbow earlier than my ACL, it would have been a living hell to try to get through but because I’d been there, it was just like, “I know you’re not trying to hurt me, you’re trying to help me, I’ve dealt with that pain, and I know what the pain is, it’s not a hurting pain, it’s just what I got to do to get back.” So I was just like, “get your 30 seconds of pushing in, give me a break, and then we’ll get back at it.”

Hannah provides another perspective on interactions with sport medicine personnel. Her narrative reveals the influence of a team approach to her rehabilitation in college, which included her athletic trainer, coaches, teammates, and strength coaches.

Injuries in college are different. You want to come back a lot faster. High school just like, “oh I want to come back because this or that, but it’s just a fun sport at that point.” But at this point it’s college, like you have money and people are riding on you. I mean coaches are always there of course, but in college it’s a business. I mean they’re investing tuition, which is what 30,000 dollars, on you as an individual and they
expect you to perform. So if you get injured it’s almost like this is a scholarship that someone else could’ve had and could’ve helped the team whereas you’re on the sidelines. But at the same time they’re pushing you to get better because, yea, they want you to get better, they want you to help the team. They don’t want to have wasted their decision on someone who is injured consistently over and over compared to someone who could have been healthy.

So in college, you want to come back faster and they’re more people here to push you, to help you with that, which is nice. There’s just more people, like trainers and strength and conditioning coaches, available to help you out. I mean in high school you don’t have all those people to help you out, but here you have a whole support system, coaches, teammates, strength and conditioning coaches, athletic trainers. So mentally, the injuries I received in college were easier to handle because of the support here and everything.

Consistent with the literature (Udry et al. 1997b; Wiese-Bjornstal, et al., 1998), having social support from sports medicine personnel, such as athletic trainers, can help injured athletes cope with their injuries. In the previous narratives, the athletic trainers motivated these injured athletes during rehabilitation by educating, encouraging, and helping them stay positive throughout recovery.

Although Charlotte’s relationship with one athlete trainer was hindered by feelings of poor support, the appearance of subsequent injuries and the arrival of a new athletic trainer with a better rehabilitative approach changed her behavior and attitude towards seeking help. With the new athletic trainer, Charlotte became willing to approach the medical staff, which has led to more healthy approach to training (e.g., she no longer tried to continue running while injured to avoid the trainer). Tami’s and Hannah’s relationships with their athletic trainer seemed to be strengthened over the course of their injuries, with increased trust and support gained along the
way. Thus, social support from the sports medicine team plays an important role in a multiply injured rehabilitation.

On the other hand, athletic trainers and other sports medicine professionals can serve as a source of frustration or even hinder an athlete’s recovery through misdiagnoses, insufficient care, and lack of support. Evidence of this behavior is seen in the narratives of Charlotte and Amanda, as both of them experienced negative interactions with their sports medicine teams. For a multiply injured athlete, having another injury is already frustrating enough, but then to not have a definitive diagnosis seems to exacerbate that frustration. Amanda received conflicting assessments with differing time loss for each; and because of this, she was uncertain as to her rehabilitation plan and return to activity. In Charlotte’s situation, she felt as though her athletic trainers prescribed the same treatment despite different injuries or different athletes. Based on the narratives of Charlotte, Amanda, Tami, and Hannah, it appears that positive interactions with the sports medicine team can enhance an athlete’s ability to cope and recover from multiple injuries.

**Changing roles and team responsibilities while being multiply injured.** As a consequence of injury, the athletes were removed from participation, which left them feeling disconnected from their team and eager to return to it. While injured, they all sought ways to stay involved with their team through the adoption new roles. For instance, while injured, the athletes supported their teammates by serving as “cheerleaders” and “coaches.” To present an inclusive account of these roles, the following composite monologue was constructed, which combined the voices of Hannah, Charlotte, and Amanda into one narrative.

I would say the injuries were frustrating because the number one fact is that you’re not being active. As an athlete, I’ve been active my entire life ever since I was a kid. So having to hold back, sit there, and not be able to do what you want to do or what you think your body is capable of, that’s frustrating. You
know you can do it and you feel you can do it, but you can’t. You don’t realize what you have, until you have to sit back and watch your teammates practice in front of you. You just want to get out there with them. You want to be pushing them. You want to be competing. So it was really hard watching my team compete knowing I wasn’t able to. Getting hurt you don’t have control over that, but somehow like you still feel like, “oh man, if I did this differently, if I wouldn’t of gotten hurt, I could be there for my team.” So that aspect is frustrating.

Not being there for your teammates, it’s almost as if you feel like you’re letting them down. You feel a disconnect from the team, or at least I felt a disconnect, because you’re not with them every single [practice], you’re not with them through the hard workouts, and you’re not with them through the [competitions], pushing them or with them physically a lot. You can’t be out there helping everyone who has helped you along the way, like your teammates.

Even though our team’s really close, the relationships are probably closer when I’m not injured because I can be [at practices] with them talking about our days and things going on in life. When I’m not with them on a daily basis, like when I’m injured, I don’t have time to like sit and call them all and see how their day went. So it’s just like I don’t feel as close to some of them as I would normally would if I was participating.

Being injured is a different role to play. It’s being a supporter. It’s doing things right so that you’re still a role model. Like I was captain last year, and even though I was injured, I still had to lead the team and find ways to do that without being on the [playing field]. I mean I was there at every workout. I talked when I could, and I cheered them on. I pushed people. I’d take them off to the side if they needed that. I was just trying to be the ultimate teammate, the one you’d want on your team. When I’m injured, my role was to be like supportive and encouraging to my teammates during [competitions] and things. I did become more of the cheerleader type. I was there riding on people making sure they did things right and making sure that I myself did things right.
Being injured isn’t time off. When you’re on the sidelines, you can cheer your teammates on, but you also have to do your own rehab. I have to be doing what I need to do to get back. I mean, if you’re injured and you just take that time to sit on your couch and rest, that’s not really helping anything. And so that’s your role too, like taking personal responsibility. So I would go to practice, try to make my appearance, but then I would still have to workout. It’s like double the time because you’re spending time at practice and you have to workout on your own. There are a lot of people that just don’t go to treatment because it’s a pain, like you have to go in the morning and in the afternoon, you have to do all these things that you don’t really want to do, but when your injured, you have to take personal responsibility and be there for your teammates.

Tami provides another narrative about role adoption while injured. Unique to her story was Tami’s changing roles on her team as shown in the following narrative. Tami’s begins with her recollection of her role on the team while she was injured with her first torn ACL.

We were going to the Sweet 16 [national competition], it was the best team you’ve been part of in [university] history, but it was kind of bittersweet, I mean, you’re so happy for your team, but at the same time what I wouldn’t have given for it, not to have happened to somebody else, but for it just to not have happened to me. Like I could have been out there. So it was just more, not upset with the injury, but with the context of the injury. Sitting out, I hated it. It sucked. You wish you could be helping your team on the floor, not just being that cheerleader and being like, “oh you can do it, yea get out of here!” Yea it’s hard. It’s bittersweet. I mean you want them to do great and you want them to do the best they can, but at the same time, I want to be able to play with them, I want to be helping them at least in practice or something. I was also more of the cheerleader that year because I wasn’t so involved and the team was just so upperclassmen dominated that I was just kind of a cheerleader. So I think that’s what my role was. Like if someone was having a down game, I was like you know you’re fine, at least you’re out there.

Tami continues recalling her experiences with the team upon her second ACL tear:
Once that big class graduated then I became one of the older kids and because we graduated so many people that’s when I kind of worked on being a coach. My teammates were actually listening to me and respecting what I was saying. And we could have conversations back and forth. There was one of our seniors that played last year, we got along and played together, so when she’d come off the floor and I’d tell her what’s open and what’s this person doing. Our coaches were busy trying to direct the whole team whereas if someone came down to the end of the bench, I could be like you can do this and this and this and this is open. That was more of my role. Like, “hey if you do this, you’re going to get your shot off,” because it’s something I can see that maybe the coaches weren’t paying attention to at the moment, but I was looking for it. So from one ACL to the next, I think it [my role] changed from a cheerleader to a coach.

With both ACL tears, Tami was unable to participate; however, with her UCL tear, Tami was able to remain an active member of the team. The following narrative shows how an athlete’s ability to participate while injured can allow her to take on a new role, unlike those previously adopted while not participating.

With the UCL, I could still be playing and be involved and everything like that. Rehabbing would take 10 minutes, half an hour everyday. So it was definitely a lot easier because I liked to be able to still play and I was still getting to play. But at the same time, they’d go to throw me a pass and I couldn’t get it because of my injury. You almost feel like if I wasn’t hurt this wouldn’t be an issue. So it was frustrating because you still are hurt, but it’s still a lot easier definitely to be playing than just sitting on the sidelines.

The previous narratives reveal that even if their injuries prevented them from being constant, active participants, they were still able to contribute to their team during this time. As these athletes coped with their multiple injuries, they adopted different roles on the team, like being a cheerleader or coach. These roles corresponded with the timing of their injury (e.g., in-season vs. off-season) and the current needs of their team (e.g., increased instruction or increased support). Thus, unique to this study, the athletes’ responses showed the changes that occur over
time and across multiple injuries. Further, it appears that changing their roles on the team offered the athletes a type of distraction, sense of purpose, and way to staying connected to their team while injured, another unique find to this study. Although multiply injured athletes frequently miss participation, taking on diverse roles while in rehabilitation can potentially offer benefits such as decreased separation from the team as well as increased responsibility and purpose.

**Coping strategies.** In an attempt to deal with the physical and psychological trauma that can accompany sport injury (Brewer, 2007), the integrated model of response (Wiese-Bjornstal et al., 1998) predicts that athletes use a variety of coping efforts. In this study, each athlete had her own unique way of coping with her injuries although some similarities did exist. Amanda, Hannah, and Tami took a similar approach to coping, and thus, a composite monologue was composed to illustrate their comprehensive experiences. The following composite monologue is a shared description of their coping strategy following multiple injuries.

Because I've had many injuries, you just become mature with it, you understand the consequences, you understand what you have to go through, and you understand the time range. You're just more mature so you're able to handle it better. As the injuries kept coming, the mindset changes and it's not as big of a deal as it used be. In the beginning with each surgery, you'd be nervous or whatever, but with my last one, I wanted to stay awake and watch. I was just like it's not a big deal, just go in there get it done with. I mean your mindset is totally differently because you know what to expect and you've been through it before. I got a bigger pain tolerance where if something’s really bothering me, physical pain as well as I’m upset about something, I can just handle it. I think maturity really helped me get through stuff like that. Now I’m like, “okay you can get through this, it’s fine.”

I mean I guess it happens like it does with anything else. As you get older the experiences you go through change how you think about things. One surgery after another surgery, instead of being nervous or getting down about it, you become more optimistic. You realize like I can do this, I can go through with it,
it’s not life changing, and it’s not as big of a deal as it was the first time. When the first one happened you thought that it was the end of your career, but as they progress it’s just another injury, it’s just another common thing that athletes go through, and you become mature in the fact that you understand the process and the things you have to do to. So by getting injured and becoming more mature, I realized that [my sport] is an aspect of my life, not my life.

As illustrated in the composite monologue, Amanda, Tami, and Hannah all found maturity to be a beneficial tool in coping after sustaining multiple injuries. Maturity for these athletes meant learning to use different skills over time such as keeping a positive attitude, utilizing positive self-talk and goal setting, and maintaining a one day at a time focus. With the occurrence of new injuries, each athlete learned more positive ways of coping with the injury. This growth and development allowed them to be better equipped to handle the outcomes of their injury. Thus, the athletes were able to respond to their circumstances or environment in a more appropriate manner.

One athlete in particular, Tami described in detail how her coping strategies changed over the course of her injuries. Tami’s narrative further illustrates how a multiply injured athlete develops new coping skills over time, and with that, improves her ability to cope from early to subsequent injuries.

I’m an emotional person. I’m a crier when I get upset, sad, and stuff like that. That’s kind of how I handle it. I think it was more or less, I need to give myself 3 or 4 days to just hate the world and pout. But at the same time, I would want to be there for all the rest of my team and they were there for me. Also, I’m still part of the experience so, I mean, you just kind of have to get over it I guess and then come back.

When [I injured my ACL the first time and] my trainer’s sitting on my leg, it upsets you, but that’s not the emotions that I want to portray to my coach who’s constantly around me, although he may not be paying attention to me all the time. And when I come back I’m going to be an upperclassman and I don’t
want him to see an upperclassman leader crying all the time or something like that. So yea, it definitely happened a couple times a week where I’m sitting there biting my lip. It’s just I wanted to come back more than anything in the world, I wanted to play. I wanted to finally prove myself. I didn’t want to let my friends from home and everything and all my community there, they like saw me as this good athlete, and I didn’t want to let them down or have think she went to college and now she sucks. Like she had one ACL injury and now she can’t do anything. I wanted to not be that person, like I wanted to prove myself and continue to prove myself.

With the second one [ACL injury], I think I was sitting there biting my lip actually more because that’s when I was trying to come back the fastest. Also that’s when I was dealing with like, if I’m really going to make an improvement, it’s going to be after this one. You know, with my first one, it was just I was a freshman, if I was going do it, it was a good year to do it, your freshman year, and get it out of the way. And then it happened again, and it’s just like, this is the one that I’ve really got to come back from and this is the one that once I am back I need to make sure I’m not babying my knee or something like that. I just needed to, like I said, bite my lip and just get through it.

I think that’s the biggest point to get past, like that mental block. Going from you’re so excited, so excited, to you’re scared to death. I think it’s scary that’ll I get out and hurt again, and I hope it doesn’t happen, but after all this I probably, I would react to it a lot better and I’d be ready I guess. So then once you’re finally cleared, it’s just, I can go now. You’ve been cleared, you’re healthy, you’re knee works, you’re elbow works, you know, you’re fine now. I think that’s the biggest part of the rehab and the whole coming back thing is just getting through those stages.

[To help me cope] I have my baby shoes from home, like my little baby basketball shoes, hanging in my locker with a sign that says baby steps on it, because it’s just like everyday I come in, one more day, you didn’t get hurt and as stupid as that sounds like, thank goodness I didn’t stove a finger today. You just have to let that fear trail off I guess. I mean you’re going to try to play defense and you’re body’s going to
feel like you’re there, but you’re legs just don’t put you there. So I think it’s just trial and error. I think just making it through another practice. Making it through a season, like I finally made it through a whole season without tearing an ACL. So like an ankle injury is a welcomed injury to me. I can take a sprained ankle, tape it, and I’m fine. To make it through a season or to make it through, you know, a 5 game stretch, depending on how injured you normally are, I think it’s just making it through milestones. You have to set little milestones for yourself and get through them.

[With my third injury, UCL] I liked [to use] humor and stuff like that. Yea, it’s just a way of coping with it. I guess then if something does happen, it’s like I said at first, that it was going happen to me. And my mom or my dad will be like “don’t say that, that’s bad luck, but I’m like “well I didn’t say anything before and it happened.” So it’s just kind of like my way to get through it I guess. So I’ll be the first one to make a joke at myself, or some else will make a joke at me, and I think after it’s happened so many times, it’s just like, I think, you have to laugh at it. I mean if you sit there or if I sat there and pouted after every injury, I’d be a bitter, bitter person. I mean I’ve been through enough with injuries that you kind of just have to joke it off. It’s just how I’ve learned to react to it. Humor’s just my release I guess. Maybe it won’t affect me so bad if I tear my ACL again if I’ve joked about it, not that that really makes sense, but in my mind, it’s just like if it happens, it happens, so I might as well laugh it off.

[Overall] I think I’ve proved to myself and to my coaches that even though I’ve re-torn my ACL, or hurt an elbow, I can still get past it, like this isn’t going to keep me down. I’ll still be here, I’ll still be able to be here for this team whether I’m on the floor or not.

Amanda offered another view into coping with multiple injuries. She too talked about how her coping attempts changed over time.

Sometimes when I come back from injuries and start running again, I can still feel it. It’s almost like you’re like tuned into that. I try to think about other things, but it’s hard. I try not think about, “oh when is it going to start hurting, is it going start hurting, what’s going on.” As long as it stays like this, like I can feel it
there but it doesn’t hurt, then I’m completely fine, but if I go do a speed workout and it tightens up and I can’t run anymore, then I get really mad all over again. I’ll just cry and then it’ll be over with. I’ll tell myself “I need to get myself together and do what I need to do to get better.” The thing is I can’t stay frustrated for a long time because that won’t help me get to where I want to go. Like I’m not going to sit there and be mad about it, I just have to put that aside, do what I can, do what’s in my control, and work on staying fit other ways like getting stronger, maybe like mentally work on things. Being frustrated is not going to get me anywhere, instead, I need to control the things that I can control and worry less about things that I can’t control. For example, I can control the things of daily living like what I eat, when I sleep, and what I drink to stay hydrated. I can take care of myself by stretching, using foam rollers, doing the things that I need to do to in rehab, exercising, and going to treatment a couple times a day. So like if I needed 3 weeks to rehab and recover, thinking about what I could do in those 3 weeks would help me. By finding other ways to stay in shape, it wouldn’t be as hard when I came back. Also, I’ll try to look on the bright side, talk to people, my parents, sometimes coach, God, my teammates or the teammates that have gone through injuries.

The following narrative offers yet another view of coping with multiple injuries as Charlotte described how her coping changed from early injuries to now.

Mentally, like, my head has been where it’s supposed to be, where I want to get out and I want to do the training, but at the same time, I have to listen to my body and hold back. It is hard to listen and hold back because I feel like in order to accomplish my goals I need to get a good base. It’s really hard cause to think about too, like if I don’t push through the pain, I feel like I’m losing training and losing like steps on all these people that are able to train through stuff. Like, at the beginning of this year and in the past, I tried to like push through my hip pain. I just felt like I was like never going to get through this hip pain, so I would just run through it even if it hurt. But now if I’m hurting, I’ll like tell my coach and I’ll tell our trainers. I’ve been doing a really good job of like getting to my treatments and doing what I need to do to. Also, I’ll listen to the extent like if it’s hurting one day, I’ll go cross train instead of trying to run on it.
With her early injuries, Charlotte chose to push through her pain rather than notify her coach or athletic trainers about her early injuries. However, after multiple injuries, she has been using more productive coping strategies such as body awareness and speaking out to combat the various feelings she associates with injury and consequent missed training. Coping is the process of contending with difficulties and acting to overcome them (Williams & Scherzer, 2006). It is critical that injured athletes move beyond the negative consequences of injury and find productive coping strategies. All four athletes used a variety of coping efforts to combat their psychological reactions to injury. With the occurrence of more injuries, the athletes talked about gaining new insight. Rather than push through and dwell on the negative aspects of injury, like they did following early injuries, the athletes thought and acted more positively. Following their later injuries, they realized the importance of speaking out (i.e., notifying the sports medicine staff about any pain or injury), finding humor amidst hardship, lowering the priority level given to their sport, and seeking other ways of staying active while injured. Thus, multiple injuries sharpened their coping skills and allowed the injured athletes to better accept injury. Also, a positive outlook, as these athletes demonstrated, helped to improve the management of psychological reactions found with injury.

**Social support.** In accordance with the integrated model (Wiese-Bjornstal et al., 1998), the athletes’ narratives illustrate the influence social support, in particular from teammates and coaches, can have on response to injury and rehabilitation. Rosenfeld, Richman, and Hardy (1989) operationally defined social support in a sport context as involving a network of personal ties to meet a recipient’s needs for venting feelings, providing companionship and reassurance, reducing uncertainty during stressful times, aiding mental and physical recovery from stress and fatigue, and improving communication skills.
Social support from teammates. Consistent with the literature (Wiese-Bjornstal et al., 1998), all four athletes, throughout their multiple injuries, experienced positive interactions with their teammates. Each of them spoke openly about the togetherness and supportive nature of their teams. According to the athletes, teammate support and encouragement helped propel them through their numerous bouts of injury. Charlotte and Tami’s narratives illustrate the impact positive teammate interactions can have on an injured athlete’s response and attitude towards her injury. Charlotte’s narrative begins with her recollection of how a teammate came to her aid following a challenging and disappointing race.

Up until probably last year, um, I needed a lot of encouragement from my teammates. I was really struggling mentally and stuff, like in cross country races. In some races, at a certain point in the race when it starts to get like painful not for an injury painful but just like painful in a race, I would basically give up on myself. Like I don’t know how to necessarily explain it, but I would kind of like slow down even though like mentally I knew I was stronger than that and I would just let myself drop or fall back in the race and finish poorly. Doing that never felt as bad during it as it did after when I realized like “wow like I could’ve done a lot better.” Almost after every race my sophomore season and junior season of cross country I was crying because I was never happy about how I finished or um having to quit two races because of the pain in my hip. So after the conference cross country race this past season, I wasn’t happy about how I did and I was crying, but our number 1 girl came up to me, hugged me, and told me that I’m going to get better and she’s seen me progress since I came my freshman year.

Similar to Charlotte, Tami also had teammates rally around her after a difficult time in her career, that being the discovery of yet another ACL injury. The following narrative is Tami’s account of her social support over the course of her three injuries.

When I found out that I had tore my ACL the second time, we were on a road trip at Akron and I remember coming down to get on the bus and immediately the girl sitting next to me, who was year ahead
of me and had torn her ACL the year before, kind of turned and was like, “what’s wrong? Something’s not right.” And I immediately went into tear mode, like I was just bawling my eyes out and the whole bus kind of turned around and came back. You don’t want that attention on you especially for something so negative, but it meant a lot that everybody cared.

With the UCL thing they laughed right along with me since they knew it was something that I could play through. It was almost a running joke on the team or with myself, like if something bad is going to happen, it’s going to happen to me. Like I’ll be the one to break a pinky or something like that and have it set me out for like 5 games. I feel like I’m always that hurt person. It was fine to just laugh it off as a joke and make fun of my brace and stuff like that. We saw a girl with a big shoulder brace on at the volleyball game and everyone looked at me and was like “oh it’s only a matter of time before you have that.” I always would get teased by one of the girls that would play our point guard. She would go to try to pass me the ball on my left side and try to lead me and I could never get it because my brace kept my arm bent. So coach would go to yell at us and it’s like there’s nothing I can do to stop it. So it just kind of stopped practice, but we’d have to laugh because I’m stuck in this contraption and it has my arm all bent up. It happened 3 or 4 times a practice, but there’s nothing we can do about it cause I’m stuck in this brace that I should never really be in because injuries like that don’t happen to basketball players. It’s a pitching injury in my non-dominant arm. So it was just a really freak accident that it happened to me. It’s weird. It was just humor almost, just kind of a joke.

After receiving support from their teammates, Charlotte and Amanda actually found themselves lending support back to their fellow teammates in need. Their narratives are best illustrated by a composite monologue of their similar experiences.

My teammates have always just been there like a shoulder to lean on. And then this past season, I was having a better track season and I felt myself reaching out to people who got injured. Just kind of letting them know I’ve been there and I know that they’re going to get through it too. The other day we were
sitting in a circle I said something like, “make sure that when you have setbacks whether it be a bad race, whether it’s injury, whether it’s like things are going well outside of practice, keep pushing through and don’t let it get you down. If you have a bad race, use it as fuel to go to the next race and to redeem yourself. Or if you have an injury, do what you need to do to get better, but don’t get down on yourself because you’re heading backwards and you need to head forwards.”

Despite their inability to always participate or be there for their teammates, Amanda and Hannah were still able to gain the respect of their fellow athletes by overcoming multiple bouts of injury. A composite monologue of Amanda and Hannah’s experiences illustrates that being multiply injured does not always equate to weakness in the eyes of your team.

My teammates know what I’ve been through. Some of them may not understand it because they haven’t been through it, but I mean they respect me more. Even though I’ve been injured and I’ve haven’t exactly been there the whole time, our team’s close enough that we really support each other. One of girls spoke up and said Amanda I admire you so much for that because you’ve had so many things yet you still stay optimistic and do what you need to do to come back stronger. She also told me that the team knows I’m going to come back stronger this time. Others have verbalized things like that and have told me they just admire that I’m able to stay pretty positive at most times and that when I come back I can do it.

Social support from coaches. Consistent with the literature (Udry, 1997), all four athletes detailed various interactions with their coach. Charlotte, Tami, and Amanda all relayed positive stories of coach support whereas Hannah had slightly different experiences. Tami, Charlotte and Amanda recalled times in their careers when their coaches offered words of encouragement and helped them cope with their various injuries. A composite monologue of their interactions illustrates the impact positive coaching behaviors play in an injured athlete’s thoughts, feelings, and behaviors.
My coach pretty much does everything she can to help me. She’s always encouraging me to do what my body needs, whether it’s a day off, cross-training, or doing the workout. My coach tells me that, “I know when you say that you’re in pain, you’re in pain and even though I don’t doubt your abilities to run through things, we don’t want to set you back for the future, we don’t wanna set you back for the season.” I think my coach pretty much just feels bad for me too. Like, that’s probably her biggest reaction to the injuries. She has been so patient and understanding and then I come back with something else. I had a really good freshman year and she expected me to come back the next year, to be a leader, and to improve, but then it’s like setback, after setback, after setback. Obviously that’s frustrating for her. She just feels bad. She knows that I’ve put the time in, worked really hard, and done everything right, but for some reason, I just can’t come out on top.

Constantly, [my coach] tells me that I’ve had a lot to deal with but that I’m stronger because of it and that she believes that I can keep doing better. She doesn’t know why this is happening, but has told me that it’ll make me stronger. She says I know if I put a wall in front of you, you’ll run through it. So just knowing that she knows I can do it helps me to know I can do it. I just know specifically one time, I was just coming back and we were doing defense then we went to running, and I’m not the slowest person, but I was dead last. And I was like I shouldn’t, I’m not this out of shape, I’ve been on the elliptical and stuff, but afterwards my coaches came up to me and were just like we know you’re not this slow and we know you’re not dogging it. Like the fact that they came to me and were just like we know you’re not milking this injury, like, “we’ve seen you rehab, we not how hard you worked at it, we know this is just something you have to go through,” I think that was the biggest thing for me, they acknowledged it. It helps you understand that they understand. It helps you get through.

Alas, Tami did not always experience positive interactions with her coach. She, as well as Hannah, recalled negative exchanges with their coach as a result of their not so shy eagerness to get them rehabilitated and quickly back to participation. A composite monologue of Hannah and
Tami’s narrative illustrates the influence coaching behaviors like fervor and an uncaring attitude can have on an injured athlete’s approach to rehabilitation and return to play.

Me and my coach, we don’t really have the best relationship anyway so it was just kind of like “how are you doing this week?” “I’m fine.” We just kind of kept it pretty laid back like that. I mean he was involved, like he wanted to know what was going on, but I think the coach to player relationship, at least for me, was just very like on a need-to-know basis. Like when’s my player going to get back, when can I have her on the floor, and what can she do when she is on the floor? My coach wants you on the floor and he’s always going to push for you to be there. When someone goes down in practice, he doesn’t really care. He goes “everybody to the other end” and then we run to the other end and continue practice. So injuries to him are kind of like “it’s done, it happened, we’re moving on, don’t think about it, and don’t look down there.” If we would look down like concerned he would yell at us. We’d have to be focused on ourselves and our practice, and it’s just like it doesn’t matter. You understand that the practice needs to go on but at the same time it almost hurts because it seems like he doesn’t care. He’s just like okay other end, get over it kind of thing. He has to be a leader with the other part of the team and keep them not panicked of losing a player that’s injured.

It [my interaction with my coach] was just real kind of, I don’t know political sounding, like what can I do and stuff like that. Where as with my teammates it’s like how are you feeling and stuff like that. My trainer was really involved, like I’d see him 3 or 4 hours a day and stuff, where my coach, I think he would just stop in and be like when she’s going to be back. So our relationship was more when are you going to be back ready to play and when I am on the floor, what all am I allowed to do?

After the first injury he told me that he knew that I had done it right away, which I wish he would’ve told me because I didn’t think it was going to happen. I didn’t think it happened, but he said he knew right away, but didn’t want to scare me by saying oh that’s what you did. Because he says he knew right away, I think immediately he thought we’re already down on numbers and I was just starting to play. So I think he
was really upset with the first injury, like we’re already down to 10 people, we need bodies. For the second injury, I was talking to him and he’s like, you know your heart just breaks. I worked so hard to get back and he’s just like it breaks your heart to see you to go down again. He was just as frustrated as I was, like I can’t believe it happened again And then he mentioned at meetings that I had with him, he’s just like I saw how hard you rehabbed the first time, can you do it again, and can you do it when you’re not hurt? He was a motivator I guess. Like okay, now you’ve rehabbed, can you show that you can still play? Or now that you’ve gotten hurt again, this is your second time through, can you keep it up, can you rehab yourself back and get faster and stronger? I mean it motivates you I guess because it’s like fine, if you don’t think I can do, that’s automatically how I’m going to take it, that your really going to question me, so okay I’ll show you that I can get back in 3 ½ months instead of 4. For the second especially, that was my thing I’m going prove you wrong. I can do it. Like I’m going to prove you wrong and I’m going to show you that I can do things that I didn’t even do before now that I’ve rehabbed it. That was my motivation.

Social support from teammates and coaches can play a significant role in an athlete’s recovery either by facilitating or debilitating rehabilitation. Based on the narratives, the athletes enjoyed receiving encouragement from their fellow team members. Through teammate support, the athletes were able to see that others cared about their welfare, acknowledged their effort through multiple injuries and returns to play, and still considered them to be part of the team, despite injury. The coach also is essential to the support process, as he or she also can provide encouragement and feedback. Although the desire is for productive interactions between coaches and injured athletes, athletes do not always experience this aspiration. As Hannah’s and Tami’s narratives illustrated, some coaching behaviors can interfere with an athlete’s rehabilitation. An absence of care and support can lead the athlete to feel like an outcast or disappointment, both of which can be damaging to recovery. However, negative coaching behaviors also can foster increased motivation, which could influence the athlete in one of two ways. Increased motivation
could lead the athlete to work hard in rehabilitation, but it could push the athlete to do too much, too fast (i.e., push the boundaries of rehabilitation and recovery timelines). Thus, to help ensure the healthiest recovery, the narratives suggest that rehabilitation should include the support from teammates and coaches, with behaviors such as positive encouragement, understanding, and listening exhibited by both.

**Mental states associated with returning to sport participation.** After sustaining an injury, often athletes are forced to take time off and rehabilitate. Following rehabilitation, they are typically cleared to return to participation; however, the transition from the rehabilitation room to the playing field may lead to various mental states, especially when the transition is repeated multiple times. In addition, research suggests that the beginning, middle, and later phases of rehabilitation are marked with varying positive and negative emotions. Although it is thought that negative emotions generally decrease and positive emotions generally increase over the course of rehabilitation (e.g., Mainwaring et al., 2004; Manuel et al., 2002), a fear of re-injury is frequently found in injured athletes as they draw near to recovery and return to sport (Bianco et al., 1999; Johnston & Carroll, 1998a). Consistent with this knowledge, all four athletes experienced apprehensions about returning to their sport. The following composite monologue illustrates the similar reactions of Amanda and Charlotte.

> When I return to running, there's some hesitation. I'll think about “am I ready to do this, where is the line of like pain and line of just hurting, am I going to re-injure myself, how far can I push myself without it being detrimental?” Mostly I would say the initial hesitation came from getting back out there and not knowing if it was going to hurt that day or if the injury would come back. I would say the hesitation probably lasted until like I felt confident that it no longer hurt and that I didn't think the injury was truly coming back. A
couple times it wouldn’t hurt, but my coach would still notice I had a little limp just because I was afraid from the fact that it hurt so long.

[So] for me, it’s hard because the transition from rehab to running has never been smooth. Like if you haven’t run for 3 weeks and then you come back to running, it’s hard. Trying to get back a lot of times is pretty hard to do. So I go through phases of being really, really frustrated to kind of optimistic to using it as motivation to come back stronger. There have been times that I’ve spent maybe a good 2 or 3 weeks rehabbing and I’ll be ready to go. That’s when I feel optimistic because I’ll think that I’m getting better. However, then I’ll go to workout or try to like test it a little bit and I’ll find out that it still hurts. Like sometimes when I come back from injuries and start running again, I can still feel it. It’s almost like you’re like tuned into that. I try to think about other things, but it’s hard. I try not think about, oh when is it going to start hurting, is it going start hurting, what’s going on. As long as it stays like this, like I can feel it there but it doesn’t hurt, then I’m completely fine, but if I go do a speed workout and it tightens up and I can’t run anymore, then I get really mad all over again. It’s like if you try to run and it doesn’t work out, you’re have to go right back. So it’s like I’ll take three steps forward, just to take two steps back. So those are the times it’s like up and down.

Coming back from the injuries, I was happy just to be able to return to running, but I wasn’t running nearly as fast as I had before the injuries. That was really frustrating because my times were like similar to what my times were freshman year of high school when I had no experience running and here I am 4 years later struggling to run similar to what I did back then. Running times that were subpar than what I was used to, knowing that I’m in good shape, not running as well as I feel I should be, and knowing how good the people I’m competing against are, together just made me more nervous before races and like during a race. I would be worried about what could happen, then I would second guess my abilities and myself, and then I would almost just like give up in some races. I think that all just stemmed from the fact that I wasn’t confident that I could compete with all these other like Division I girls.
…Most of all, I feel the injuries have led to issues with like my confidence and believing in myself. Not being able to come back as strong as I used to be after injury just kind of led me to, even when I wasn't injured, to be like hesitant about my abilities and worried about when an injury was going to come back or when a setback was going to come. I think all of that kind of got into my head when I raced. A lot of it leads back to the fact that when I get a setback with my training, I'm not running as much as the other girls, and I know that they're out there working hard, and here I am stuck, like on a bike or something like that. So then when I got to races, I don't know, just knowing that they had been putting in the work that I wish I could have been doing, I just let myself think that they were stronger than I was. So mentally, it just led to a loss of confidence of how I'm going do that particular race or day.

While research exists on an athlete’s return to sport following injury, unique to this study are the effects of multiple returns to sport. The following composite monologue of Tami and Hannah illustrates the influence that a history of injury can have on an athlete’s mental state over the course of recovery and reentry into participation.

I mean you’re excited to finally start playing again. You’re also really nervous because you don’t want to get injured again. After my first and second [injuries], I’ve been out there like “this doesn't feel right,” like “I don’t feel like I’m ready physically,” um, like “I feel slow, I don’t feel like I have enough range of motion.” I remember after my first surgery I struggled to do a lay-up, like I couldn't jump off that leg, I was scared to. I don’t if now looking back, I don’t know if it was I physically wasn’t able to or I was just so scared that I wouldn’t let my body actually perform the jump. And then after the second one I came back during volleyball season and I mean I have videos of our state championship game and I babied it the whole way. I didn’t realize it then, but looking at the tape, I was like “wow, I shouldn't haven’t been playing, like I looked awful.” And actually after my second one, I didn’t feel 100% until a year after that surgery, after I came back. So like my whole freshman year here I still wore a brace on my right knee. And I mean, I still felt slow, I still felt like I wasn’t how I used to be until I finally got rid of the brace I felt better. But the second time, um
after being scared, at some point in time, it's almost like you flip a switch, it's just like screw this, I don't scare if I get injured, I'm sick and tired of playing 50%, I'm going to just go out there and give it my all. Like there comes a time when mentally you just, you know, “I'm not injured anymore, I can do it,” and you just focus on what you need to do and what you can do and not so much as what you used to do and what you can't do. There just comes a point in time where you can only handle so much of being mediocre. It's just like, I don't remember when, I just remember one day, it's just like, “I'm over it.” Just one day, I think I was just sick and tired of like oh I need to do this lay-up and I can't do it and I need to this and my body won't let me do it. I just got sick and tired of having to deal with that and think about that that I just went out there and played like I should've been playing the whole time.

After my subsequent injuries, I felt 100% confident that I'm going to go out there and not feel any different, I'm going to feel the same. So I mean, with the more recent surgeries I've felt fine because you know, you become stronger mentally and you realize it's all mental like, my body's fine and the time has healed it so then you just go and you do your normal movements. I've been through all those different phases after different surgeries so I've kinda had the full spectrum there.

Similar to Hannah, Tami’s narrative illustrates how her mental state changed over the course of her injuries.

I think towards the end is when you start to kinda second guess yourself. And then you get scared to death to finally be able to play, and then it's almost, you get put back into that thing where I don't want it to happen again, and you go through the fear. Your immediate thought is I don't wanna do it again so I guess, you will kinda guard it, or maybe you can't guard it cause, I mean anybody’s that's ever come back is, “I don't wanna do it again. I don't wanna do it again. I can't do it again.” So I think you're just scared that what if that does happen. Especially for me, for my second one, I was wearing a brace, I was doing every precautionary thing and I still tore it. So it's just like what I said, if it's going to happen, it's going to happen. So I think that's how people go about it. You can't think about it too much. I don't know if that totally ever
leaves you, because I know, in talking with my roommate or other people that have done it, you still every
now and then, you see a pro athlete get hurt and it brings back all those memories, like it just makes your
stomach cringe, you see anybody go down and it just, you know, it tears at your insides. It kinda just throws
it back in your face, like you did that too, you know, or something like that, but I think it really really leaves
you, but it definitely dulls to the point where I don’t think about it 100 times a day like I used to. It’s just more
or less that that fear just trails off. You make through your first practice and then it’s like one day or time I
did it. Like now, I don’t think about it until I see someone get hurt and even then you just push it to the back
of your head and you move on. But I don’t know if it ever goes away, but it definitely wears down a little bit.
Yea, I mean currently, you’ll do something in pickup, maybe you were doing, that I did, and it might work
out fine, but as you’re running down, you might be thinking, I tore my ACL one time when I did that. Even if
it’s just a little blip in your mind, you still think of it every now and then. Now it might be once or twice a
week, I mean, it’s still fairly common, but even when I do think of it, it’s just, you think it, and as soon as you
get that feeling, you push it away. You try to ignore it. So it’s not as serious as it used to be and if I do think
about it, even it’s a lot, I’m not going to worry about it anymore cause there’s nothing I can about it
anymore. Yea I mean, if it happens, it happens. There’s nothing more I can do to prepare myself or my
body for it not to happen.

I think the hardest thing that I’ve had to come to terms with is that I’m not going to be where I was
before I got hurt right now. Like, you every person who has ever torn their ACL has told me that, and I’ve
told everyone who has torn their ACL after me. You automatically think that you’re cleared, you’re going to
come back to your peak playing position, you’re coming into college in the best shape of your life, that is a
very wrong thought. Like I’ve finally, a year out of my second ACL, two years out of my first one, and I’m
finally back to where I feel like I’m where I was before I ever got hurt in the first place. So I think, like the
hardest expectation to get over was that I thought that I was going to be back immediately and you kinda
have to push through the fact that now you almost have to start over from being a freshman mentality as a
senior and you kinda have to get through that. That was one of the biggest things coming from rehab to actually playing.

Consistent with the research (Bianco et al., 1999; Brown, 2005; Faris, 1995; Johnston & Carroll, 1998a; Taylor & Taylor, 1997), the composite monologue as well as the individual narratives of Tami and Hannah revealed that one of the major consequences of injury is fear. Once the athletes completed their rehabilitation, or required time off, and began their reentry into sport, their desire to resume pre-injury skill level was quickly extinguished by feelings of hesitancy and doubt. Instead, they were reluctant to train with full intensity for fear of re-injuring themselves. Despite clearance, they also reported feeling less than 100%, that they attempted to protect the site of past injury, and that they were bothered by specific plays or similar situations that served as reminders of the injuries. Because a fear of re-injury can lead to a considerable stress response, and in so doing, increase the probability of re-injury (Andersen & Williams, 1988; Williams & Andersen, 1998), it is critical that this fear be addressed in rehabilitation, prior to an athlete’s return to play. Further, multiple returns to play can significantly decrease an athlete’s confidence, which could also contribute to increased stress and future injury.

Lessons learned as multiply injured athletes. Regardless of the psychological distress that can accompany sport injury, research indicates that perceptions of benefit associated with injury and rehabilitation can develop (Ford & Gordon, 1999; Rose & Jevne, 1993; San Jose, 2003; Tracey, 2003; Udry et al., 1997a). Consistent with this knowledge, each athlete found lessons to be learned from their history with multiple injuries. While Charlotte, Amanda, and Hannah learned to appreciate their bodies more, Tami redefined her perception of injury, “I just completely see injuries differently now. It’s just almost like a complete 180 from where it was
life ending to let’s just get through it.” The following composite monologue illustrates the shared lessons learned of Charlotte, Amanda, and Hannah.

I’ve learned I got to take care of myself. I’ve learned to listen to my body and to take the necessary precautionary measures to not let an injury get worse. For instance, if I treat an injury right away and that will usually help you recover right away, which isn’t something I used to do. It’s about doing the little things right, like taking time to foam roll or stretch. With previous injuries, I wasn’t stretching that much. I’d get back from my runs, go straight to work, and tell myself that I didn’t need to stretch. When you’re younger none of those things really mattered, like you’d never got hurt even while doing the stupidest things like jumping off high trees and things. But now, I know I need to take care of myself.

After being injured so many times, I’ve realized there are limitations in my training. I’ve learned that if I do need to take time off, it’s not going to set me back as much as I thought that it would. When I’m in shape, a couple days off isn’t going to ruin like my entire week of training. I’ve learned to be patient and that no matter how times I call my doctor, no matter how many times I ask “can I do this? Can I do this? Can I do it faster? Can I do this? Am I allowed to play yet?” I’m still going to get the same answer. So I’ve learned that patience is probably the best thing because even though you feel like time is moving so slowly and it’s just drudging on, you just can’t wait to be out there, you need the time to heal. I just don’t want to feel like I did when I wasn’t playing at 100%. After everything, I’d rather sit out and wait until I can come back at 100%. After the injury has gone away, I’ve also learned just to be more confident about my abilities, to be confident with myself, and just to know that like I am a strong [athlete].

...[My sport] is a big part of my life, but it isn't like my entire life to me. I have things outside of [my sport] that I also enjoy that the injuries didn’t affect at all. I know that for me there’s life beyond running so if at the end of the day I had a bad race, I’m not going let it get me completely down. I’ve believe everything happens for a reason, so obviously there is a reason for my injuries. They have made me stronger and you realize what’s important to you. You’re like first and foremost this is how I define myself and then it's
becomes easier to get your priorities straight. A freshman got injured and was like, I don’t know how you do it, I had to watch these girls [participate in one competition] that I couldn’t and I could barely do it. I told her that’s what you understand when you come to college and realize that running isn’t the be-all-end-all of everything. That’s when you start to enjoy it more because it’s almost too much pressure when you look at it that way. You make all these decisions that consume your mind like going to bed at 9 o’clock every night and eating really healthy and stuff. The injuries just kind of put things into perspective and made me get my priorities straight. Running should never be your number 1 priority.

Hannah has a unique story as a result of the timing of her injuries in high school.

I remember the day that the colleges are allowed to call you. The first phone call was the day that I found out that I’d torn my second ACL. I didn’t want to talk anyone so my sister, who was my secretary, told them that I was busy. I just didn’t want to tell them. I didn’t want to know what they had to say. I was just, obviously heart broken. Then I decided “oh let’s talk” and then “oh we’re talking away.” Then all of sudden they ask “how you’re doing?” And you’re like “well I just tore my ACL” and their like “oh I’m sorry to hear that,” and then basically click. So there was a lot of recruiting that got turned off by my injury and out of tons of phone calls, only like 5 people stuck with me after that. So that brings your confidence down a little bit too. I mean it’s not like you feel worthless, but at the same time like you’ve been told this whole time you can do this, you can do that, all this stuff, and you’re so excited to go to the next level and pursue your dream, but then all of sudden you have this conversation with this person you’ve been talking to for months, if not a year, and all of sudden one thing goes wrong and they give up on you. So it’s just, you just feel like your confidence is down. It’s just like “oh man I’m going to tell them this, like they’re going to say no, and they’re going to hang up.” You just have no confidence in someone believing in you just because of an injury.

I used to believe that if the injuries hadn’t occurred I would be at a different place in my life, like at a different school, different area, different situation. I mean with other offers from other schools and their
looking at you, yea there were bigger ones out there. You always have dreams of going bigger. At the time I was frustrated because I had an injury and everybody gave up on me except the smaller schools. Only they were the ones that were like “you know you can rehab this, you’re fine, we still want you,” all that stuff. I remember in high school I was being recruited and I was really excited. You make your list and you do your things, have your dream schools, and have this and that. I remember having a couple hampers full of just letters I would just get and just throw them in there. At one time I had letters from 73 different schools and at the end of all this, I was only consistently hearing from 5.

But I mean, over the course of all these injuries, you have to believe in something and I’ve always believed everything happens for a reason so there’s a reason this happened, there’s a reason that I’m here. Sometimes you don’t know what that reason is until 5 years down the road, 10 years down the road, you may never know, and no I don’t know the reason why I’m here. However, I am here, I am on a very successful team, and I have made some really good friends out of it. That’s enough for me. So I’ve matured over the years and learned that yea it sucks, yea it happened, and I wish it didn’t because who knows where I would be, but at the same time, you have to take it with a grain of salt. The injuries happened so I just had to make the best of the situation and move on.

As the narratives revealed, benefits can emerge out of repeated setbacks. Overall, each athlete was able to come full circle despite their different thoughts, emotions, and behaviors over the course of their injuries. As a result of their experiences, it appears that several of the athletes have decreased their athletic identity with separation of life and sport. Thus, the multiply injured athletes were able to emerge from their injury experiences in a positive way as they learned lessons, made personal growth, and gained healthier perspectives.

Advice based on the experience of being multiply injured. The athletes were asked if they had advice to give to sports medicine professionals and to their fellow injured athletes.
Although all four athletes offered different pieces of advice, a composite monologue best illustrates their collective suggestions.

*Advice to sports medicine professionals.* [Electrical stimulation] and ice isn’t the cure for everything. In the past, I feel like [electrical stimulation] and ice was the treatment for every injury. I mean I don’t know anything about sports medicine so maybe it is, but I just feel like the other things that my trainer is doing know, like stretching me out and doing exercises with me are more helpful than what the [electrical stimulation] and ice has been in the past. So trainers should provide rehabilitation exercises, not just treatment. I just think personally when they take on a hands-on approach to finding out what’s wrong with someone instead of just asking questions and coming up with a diagnosis is better because then I feel like they’re looking deeper into the basic issue.

One of the things I really liked that some of my rehab people did was that they would explain in depth why I couldn’t go faster. I felt good, I felt fine. I was like why can’t I do this, why can’t I start running? They then sat me down and actually explained how the body worked and why I couldn’t do something—because it has to heal. Yea you may feel great, but inside like this is what going on, this is why you can’t do this, and if you do this, these are the repercussions. Like I’ve had like graphs drawn for me of when the ACL is the strongest and when it’s the weakest, when you reach your potential, and when it’s stronger than it used to be. All that stuff in depth and detailed information helped me understand why I wasn’t allowed to push myself when I know I could have. So my advice would be to explain to the athletes more in depth, explain to them the anatomy and all the ideas behind it, and just like be no, this is the protocol and you have to follow it.

Be patient with and listen to the athletes. Be understanding because if you haven’t been an athlete, you can’t really understand our mentality. Be very realistic with them but patient at the same time. [Also] just don’t baby them, I guess, because I’ve seen people that get babied and I’ve seen them not come back. So I think if you set that standard from moment one, when you’re dealing with injured athletes, that you’re
not going to baby them, they need to get through this. And I think it’ll help, it’ll push them past that mental block.

I feel like there’s so much more mental issues that come with multiple injuries. Like for me, my main mental issue was confidence and giving up on myself in [competitions], which always left me being unhappy afterwards. I’d just get so nervous that I was going give up on myself again that I would have a repeat performance the next week. I guess my biggest mental issue was being scared of [competing] because even if I was hurt before the [competition], the adrenaline would kind of kick that out of head, but I still had my own head to compete against. So like I haven’t felt comfortable as much with trainers or doctors like talking about that mental stuff as I do with my coach and my teammates. For me, the injuries have lead to more mental issues so I think that if they did have training in like mental skills I would feel more comfortable in talking with them about my poor racing than just being “oh like I hurt today” or having someone else there that there for injured people to talk to or something like that would help.

Based on the responses given by the four athletes, it appears that interactions with sports medicine professionals have room for improvements. Because multiply injured athletes spend a substantial amount time in the rehabilitation setting, it’s critical that optimum communication exist between athletes and medical practitioners. The narratives within this blended composite monologue demonstrate, most importantly, that injured athletes desire hands-on treatment, patience and listening, and treatment of the psychological aspects of injury as opposed to just the physical.

Advice to other injured athletes. My biggest advice would be to try to stay part of the team as much as possible even though you can’t be out there going through the everyday grind of practices and everything. Do your rehab at other times during the day so that at practice you can feel like you’re more part the team. Try not to do your rehab on the side or in another room while the whole team is practicing
because you’ll just feel more distant than if you were there with them at practice. [Also] do what you need to do to rehab, be diligent about it, and maybe seek out the reason why the problem happened.

Don’t be afraid to talk to your teammates and your coaches because they really are there for you. One the girls on the team just tore her ACL, and I remember as soon as she did, the first thing I told her, I know you don’t want to be here it, but you need to take like two days, hate the world, punch a pillow, and then you got to get over it. You’re not the only person in the world’s that’s torn an ACL. I think that’s what I think I dwelled on for the longest part of my first ACL. You got to realize there are plenty of people who are in worse cases than you are. You need to get over it. It could be a worse injury. So whether it’s an ACL or not, you got to know the difference between it hurts but I can play or this is a serious pain that I can’t play on. You’ve got to distinguish whether you can keep playing through it because if you can, don’t waste your time sitting around like you can’t. [So] talk to the people you’re close to and to listen to your body because I feel like that’s going help catch an injury sooner than not worrying about the certain pain that you have. Also, never give up on yourself even if you keep getting injured because ultimately in competition, no matter how much your coach believes you, it matters how much you believe in yourself. Always just believe in your abilities in your sport. Keep a positive outlook on the situation and try not to dwell on why you can’t run. Instead focus more on what you want to do to get better or try occupying your mind with other things like school or other aspects of your life.

Based on the narratives of the four athletes, it appears they have not only learned valuable lessons from their history of multiple injuries, but also have advice for other injured athletes. Although multiply injured athletes have had to endure numerous bouts of injury, rehabilitation, and a variety of psychological reactions, those experiences have left them wanting to educate and help others avoid the pitfalls of injury. Their narratives illustrate the importance of taking action both before and after injury. To help decrease the severity of injury, early detection and notifying
athletic trainers of pain or injury are key suggestions while team cohesion and positive thinking are crucial for healthy psychological response post-injury.

**Injury status at the end of study.** At the end of the study, three of the four were uninjured and participating in their sports. They all expressed satisfaction with their position and had goals of becoming more active contributors and leaders on their teams. Where are they now:

**Charlotte.** I really like my spot on the team right now. I have been in the top 5 the first two races [of the season], and it’s never been like that any other year. Although I started this season still with some pain in my hip, I think in my head I’m a lot stronger than I have been starting past seasons with injuries or even without them. I’m doing what I need to do by like telling my coach or going to the trainers and letting them know what’s wrong. Even though I’m not where I fully want to be yet, like the leader of runners on our team, I think I’m making good progress towards that. Like in a workout, I’ll step out and maybe like lead the interval or I don’t know how to explain it. I’m not afraid to go hard, hold on, and have a full workout. So I think I’m more of a leader now than I was in the past just because of the fact that I’ve had some stuff to overcome. It’s just kind of made me have a stronger head on my shoulders. I think I just kind of take charge more in like workouts and I just run with like full confidence than I had in the past.

I have gained my confidence back a lot from what I had after the first injury. I don’t know necessarily what to attribute that to, other than the fact that I just took control of my workouts and races again and just started realizing not to worry about what could happen. Instead, just control what you can. After last track season went pretty well, I just feel more confident about my abilities this year than I have been in the past. I’m just a lot more confident racing with these girls knowing I’ve been practicing well and that I’ll be able to close the gap on them in races. Basically just one race that I had last season kind of changed my entire confidence level and gave me the confidence I needed to come back. I won race for the first time and it just kind of showed me again what I capable of. I took that race and moved forward with it
and since then I’ve started having even better races. It just really helped because it showed me that I can win races and I can run fast.

*Amanda.* Because I’m currently injured, I’m taking splits at the miles and driving a golf cart around, cheering, and standing on the mile markers telling my teammates how fast they’re running.

*Tami.* Right now I feel the best I have yet. I mean I feel like I’m in a good position. I’m in shape. I feel like my relationships with my coaches are the best they’ve been and my relationship with my teammates is the best it’s been. Physically I feel really good, and I feel like my coaches feel good with where I am. I’m really excited for this year and I guess my mindset with my knees or elbow is just like if it’s going to happen, it’s going to happen. My elbow, every now and then, since I didn’t have surgery on it, it’s still a little off. I mean it just feels weak. Like I’ve had problems lifting when we’re doing dumbbells presses or something like that. My right arm will go right up and my left arm is a little shaky. It’s just weak having nothing done to it for 3 or 4 months and then slowly trying to develop it back up. It’s just trying to get back to speed with my right arm, which does everything and is kind of a losing battle. Luckily for my sport I don’t really need that part of my body like I do my knee so I just kind of forget about it until something happens and it tweaks it a little. Even then it’s not enough to really bother me.

[With regards to my knee] I feel 1 to 10, I feel like a 10. Like I don’t even have to consciously think about the things that I’m doing now because I’ve practiced it so much in the summer and last year. I feel like I can just go and not have to worry about it. I can do lay-ups or whatever off my hurt knee and I feel great. I don’t really think about my knee at all, which already puts my confidence level up because I’m not worrying about it.

It’s my senior year, whether I get hurt or whether I don’t, it’s my last year so just go for it. I mean, if it happens, it happens. I just want to play. I just want to have fun. I want it to be a fun year for me and my team. I want to start and I feel like I finally have a chance for that to happen especially after coming off all the surgeries I’ve had. I think it would be a big goal for me to get to accomplish. I just want to be more
active on the floor than off the floor, which is what I've been the last couple years. I've noticed so far that I've been playing a lot more confident. I think last year I was scared to get hurt so I would play differently. Like if the floor was slippery, I wouldn't run on that side of the floor. I think you could tell by the way I ran, you could tell by the way I played or how I talked, that I was scared to get hurt again. Yea I was like scared to do the running and the cutting and the driving and I didn't want to step on anyone's foot wrong or something like that. But I think so far this year, it's if it happens, it happens. I guess that's the best way to put it. So I think I'm playing more confidently. At least if I'm going to get hurt, it's going to be something full go not because I'm sitting back and waiting for it to happen to me.

**Hannah.** Now, I try not to think about my injuries to be honest. You can't “what if” everything in your life really. What's the point of that? I try to be a leader on the team. I've been captain the past two years so I feel like people have enough respect for me to vote me into that position. I'm more of a lead by example so whatever I can do on the court, I lead that way. If I can do everything post-injury, if I can come back and be like I was before the injury, like quick enough and that stuff, my teammates respect that and look up to me as a leader.
CHAPTER IV: CONCLUSION

Research such as this study sheds light on the psychological aspects of sport injury. Athletes are more than only their physical components; and thus, should be approached from a holistic perspective. Athletes are expected to adhere to the norms of sport and ignore things such as pain, injuries, and feelings (Shuer & Dietrich, 1997). They are taught to sacrifice their bodies and claim it is for the love of the game. If injuries do occur, athletes are to maintain composure, tend quickly to any symptoms, and then return to competition. To avoid disconnecting from the team and potential loss of abilities (e.g., sport-specific skills, speed, endurance, strength), some injured athletes elect to play through pain despite both the physical and the psychological consequences. Some injured athletes, who have been forced to the sidelines, or the “rehabilitative netherworld,” long to comeback so badly that they do despite less than 100% readiness (Shuer & Dietrich, p. 104).

Further, assumptions can not made that all athletes experience the same reactions to their injuries. And, as shown in this study, multiply injured athletes differ from athletes with a single injury. Although similarities can exist among the experiences of multiply injured athletes, every story is unique. Also, every athlete’s story has layers and depth as new injuries interact with or build on the previous injury experiences. Each injury must be looked at separately as well as situated within the complete context of the athlete’s experiences. According to the stress and injury model (Andersen & Williams, 1998) as well as the integrated model of response (Wiese-Bjornstal et al., 1998), an athlete’s history of stressors will affect his or her stress response which, in turn, will affect his or her injury risk. For multiply injured athletes, previous stresses could include their extensive injury history. As a result of their history of stressors, multiply
injured athletes are highly at risk for additional injury; thus, they may need different psychological rehabilitation than single injured athletes.

The narratives by Tami, Hannah, Amanda, and Charlotte demonstrate that multiply injured athletes have different psychological needs in rehabilitation. Although their initial responses were consistent with the literature on response to injury (e.g., Brown, 2005; Faris, 1995; Taylor & Taylor, 1997), their reactions changed over time as they experienced a variety of emotions upon sustaining multiple injuries. Following their first injury, emotionally, the athletes experienced grief, anger, frustration, denial, panic, sadness, shock, and fear. Following subsequent injury, athletes with the same multiple injuries, like back-to-back ACL tears, felt disappointment and increased distrust in their affected body part. These athletes also experienced increased motivation in rehabilitation and were able to enter rehabilitation with a greater familiarity and understanding than those with different multiple injuries. Following subsequent injury, athletes with different multiple injuries were annoyed and frustrated and experienced feelings like distrust in their body, that they could not get ahead, and concern that were considered unreliable by their teammates and coaches.

All four athletes looked predominantly to support from people like their teammates and athletic trainers. Several of the athletes participated and adhered to rehabilitation protocols, while others engaged in “risk-taking” behaviors like pushing through and hiding pain or injury from others. With the addition of subsequent injury, emotional and behavioral responses did become more productive, with these athletes demonstrating healthier coping behaviors (e.g., informing the medical staff of injury, taking days off from participation when needed, having a positive outlook). Also, all four of the athletes’ desire to participate grew, lessons were learned, and in the end positive outlooks were developed. The experiences of Tami, Hannah, Amanda, and Charlotte
Narratives of Collegiate Female Athletes 102

...juxtaposed with theoretical discussion help to expose the impact of multiple injuries. Their experiences also support the need for additional research and psychological interventions for athletes with multiple injuries.

**History of Injury**

Currently, little research has investigated the psychological impact of multiple injuries on rehabilitation from the athlete’s perspective. After an athlete’s first injury, athletes, for the most part, have no idea what to expect in terms of treatment and rehabilitation; they are newcomers to the rehabilitation setting. However, with the occurrence of additional injuries, athletes become “rehabilitation veterans” and can enter rehabilitation with an increased understanding of what to expect. Evidence of the impact of injury history can be seen in the narratives of all four athletes. The narratives revealed repeat injuries can, to a certain extent, ease the recovery process and provide multiply injured athletes with a better understanding of the rehabilitation setting. Further, the athletes in this study, like Hannah and Tami, who sustained the same first and second injury (e.g., ACL tears) tended to cope better (i.e., had more productive thoughts and behaviors) with the second occurrence as result of the knowledge/history gained from their first injury.

However, not every multiply injured athlete sustains the same injury twice or completes a structured rehabilitation plan (e.g., a post-operation, injury-specific rehabilitation protocol) and, as a result, still lacks an understanding of what to expect. When two of the athletes in this study, Amanda and Charlotte, sustained different multiple injuries, their rehabilitation or course of treatment was different with each injury. Previous rehabilitation experience did offer them a certain level of familiarity with the setting, like knowledge of the athletic training room and athletic trainers; however, that consolation would have been small compared to athletes with the same back-to-back injury. With different first and second injuries, Amanda and Charlotte could
not know exactly what to expect from one rehabilitation to the next. A new injury meant a new rehabilitation program with different exercises, treatment, and recovery timelines. Also, without a definitive diagnosis and accompanying protocol-type rehabilitation plan, Amanda and Charlotte had less rigid rehabilitation plans, a factor that could help to explain their unproductive emotions and underadherence to rehabilitation. Thus, while multiply injured athletes may have different psychological reactions to their injuries than athletes with a single injury, they also can differ from one another based on their injury history.

**Trust in Body**

Athletic injury is perhaps the most severe blow to the physical confidence of an athlete (Taylor & Taylor, 1997). An injury says to an athlete “your body is not as capable as you thought it was” (Taylor & Taylor, p. 106). In the narratives of these multiply injured athletes, injury after injury chipped away at their confidence and trust in their bodies. Tami and Hannah, the athletes with the same first and second injuries, had to cope with distrust in one specific body part, their knee. Tami’s ACL tears were both in her right knee whereas Hannah sustained a tear in each knee and had subsequent right knee injuries (e.g., meniscus, microfracture). After repeated ACL tears, Tami and Hannah experienced decreased confidence and wavering trust in the durability of their knees. Unlike Tami and Hannah, who only had decreased trust in one body part, Amanda and Charlotte had to cope with a distrust in their whole body. Both Amanda and Charlotte sustained different multiple injuries; and, as a result, began to question the durability of their whole body. Upon sustaining her third new injury, Amanda’s distrust continued to develop as her confidence continued to plummet. For Charlotte, subsequent injuries to same body part (i.e., hip) gravitated her focus and distrust to that area. Tami’s focus also switched from her second to her third injury. With the occurrence of her third injury, this time to her elbow, Tami’s distrust in her
right knee was slightly alleviated, but nevertheless still noticeable. With a growing list of injuries, Tami’s distrust began to shift from her right knee to her whole body. Thus, the narratives suggest a relationship between a multiply injured athlete’s history of injury and lack of trust in her body.

Following rehabilitation or treatment, the athletes’ distrust and lack of confidence in either a body part or their whole body appeared to carry over into their return to their sport. According to Williams and Scherzer (2006), despite physical readiness, decreased trust could affect an athlete’s return to participation and even predispose an athlete to additional injuries. Upon re-entry to participation, distrust, decreased confidence, anxiety, and tension can lead to re-injury, injury to another body part, and fear of further injury (Williams & Scherzer). Guarding, limping, and other gait changes are just some of the things athletes do to protect the site of past injury. Athletes also may be reluctant to train at full intensity or avoid certain activities (e.g., skills, techniques, plays) that serve as painful reminders of their injuries (Shuer & Dietrich, 1997). The narratives suggest that their protection or guarding of the site of past injury was due to a lack of confidence and trust in their either body or body part.

As illustrated in the profiles and narratives, all four athletes, at some point in their injury history, returned to play at less than 100% psychological readiness. Although they were still experiencing decreased confidence and trust in their body, the athletes ignored these feelings and resumed participation. Similar to a study with chronically injured athletes (Shuer & Dietrich, 1997), the athletes in this study also experienced fear upon their return. Although lingering pain may have been a factor, they all expressed reluctance to train at full intensity for fear of re-injuring themselves. Based on these findings, additional research should explore the decreased
bodily trust multiply injured athletes experience during rehabilitation and after they have returned to play.

**Social Support**

Social support is especially vital for injured athletes, particularly when the athlete has a lengthy injury and rehabilitation history and prolonged separation from her team (Taylor & Taylor, 1997). Within sport, considerable research (e.g., Bylerly, Worrell, Gahimer, & Domholdt, 1994; Duda et al., 1989) has investigated the impact of social support on rehabilitation. These studies have found that greater perceived social support is associated with increased rehabilitation adherence. According to Taylor and Taylor and Williams and Scherzer (2006), athletes need support from their coaches, teammates, and sports medicine team as they move from injury through rehabilitation to recovery. The integrated model (Wiese-Bjornstal et al., 1998) also suggests the importance of social support in an athlete’s cognitive appraisal of their injury and subsequent responses.

Further, the importance of social support can be seen in the narratives of the multiply injured athletes. Social support from teammates appeared to benefit the athletes’ rehabilitation. Productive interactions, including support, encouragement, and feedback, decreased their feelings of disconnection from the team and provided them with a sense security. Also the athletes’ narratives revealed evidence of social support from sports medicine professionals. Hannah and Tami experienced positive interactions with their athletic trainers. During rehabilitation, their athletic trainers were able to motivate them through educating and encouraging them and helping them stay positive. Unproductive interactions also existed in the narratives. In these situations, lack of support and insufficient care from either an athletic trainer or a coach fueled athletes’ frustrations and hindered rehabilitation.
Overall, for the athletes in this study, social support from their team members, coaches, and athletic trainers helped them cope with being injured. Consistent with other research (Udry, 1997), social support provided a sense of connectedness with the team and offered encouragement in times of uncertainty. Thus, social support can be a critical factor in a multiply injured athlete’s response to injury and rehabilitation.

Coping with Multiple Injuries

More often than not, a consequence of injury is either time off or decreased participation. When athletes who are highly invested in their sport are kept away as a result of injury, they may experience considerable psychological distress when they are unable to participate and miss what they perceive as valuable training. In addition, they may feel that their teammates and time will march on without them. Athletic activities around which their lives are centered move on without them. During rehabilitation, new jokes, friendships, plays, and team line-ups develop -- in essence new situations will be formed that exclude injured athletes and into which they must try to reintegrate following recovery. By being there, other athletes have grown and developed with the team situations whereas the injured athletes missed out (Williams & Scherzer, 2006). Multiply injured athletes miss out on even more team activity than singly injured athletes. This may result in experiencing the same sense of insecurity and unfamiliarity they felt entering the “rehabilitative netherworld” (Shuer & Dietrich, 1997, p. 104) when they return to sport and rejoin their team.

Evidence of these feelings was illustrated in the athletes’ narratives. Following their injuries, the athletes in this study experienced a number of emotions ranging from anger to sadness. They also felt isolated and estranged from their teams and their sport as a result of frequently missing practices and competitions over the course of their injuries. Missed
participation and a sense of isolation were large sources of frustration throughout rehabilitation. Feeling guilty about their extensive injury history and thinking they were letting the team down by incurring injury caused several of the athletes to question or push the limits of their body. While some elected to push through pain/injury to avoid sitting out, others challenged rehabilitation timelines in an effort to speed recovery. Nevertheless, all four athletes displayed productive coping when they found alternative roles and team responsibilities while injured. Incapable of fulfilling their participant role or function on the team, the athletes took on other roles during their rehabilitation and recovery. As Amanda, Charlotte, Hannah, and Tami coped with their multiple injuries, they adopted different roles on the team such as “cheerleader” or coach. Taking on another role appeared to offer the athletes in this study a type of distraction, sense of purpose, and way of staying connected to their team while injured. By changing their role from competitor to that of a coach or cheerleader, the athletes were able to contribute and stay involved in the day-to-day interactions of their team, which benefited their rehabilitation.

Lessons Learned from Being Multiply Injured

While it is generally assumed that nothing good comes from injury, let alone multiple injuries, this may not be entirely true. In a study with elite skiers with season-ending injuries, 17 of the 21 athletes identified personal growth benefits associated with sustaining and recovering from their injury (Udry et al., 1997a). According to the skiers, they gained perspective, experienced personality development, developed non-skiing aspects of life, and learned better time management skills. These athletes also felt they had experienced an increase in self-efficacy, mental toughness, and personal motivation as well as learned to be more realistic in their performance expectations. In the current study, all four athletes with multiple injuries
gained similar benefits from their experiences. They too gained perspective and learned valuable lessons, not just from one injury, but from all of their injuries collectively. Over time, they developed a more productive attitude towards injuries and recovery and learned the importance of listening to their body, patience, and communicating with their medical staff.

Also, with the occurrence of new injuries, each athlete learned more productive ways of coping with that injury. For instance, instead of pushing through and dwelling on the negative aspects of injury, like they did following their early injuries, the athletes thought and behaved more positively. Following their later injuries, they realized the importance of notifying the sports medicine staff about any pain or injury and seeking other ways of staying active while injured. From their multiple injury experiences, they gained confidence, mental toughness, and rationality. They also learned to be less critical regarding their injuries and realized that they had interests outside of sport that their injuries could not affect. Over time, the growth and development they experienced allowed them to be better equipped to handle additional injuries. Thus, in the end, the athletes were able to respond to their circumstances or environment in a more productive manner. The narratives revealed that experiencing multiple injuries was difficult, but these athletes were capable of better coping over time.

**Being Multiply Injured**

This study highlighted the unique experiences of multiply injured athletes. While there are some common aspects among their injury experiences with other injured athletes it also is important to recognize how they are distinct from single injury or chronically injured athletes. According to Shuer and Dietrich (1997), athletes who experience a constant state of pain or injury can be classified as chronically injured. Chronic injury often is difficult for elite athletes to tolerate. There often is no physical manifestation of the injury, such as a cast or crutches, and
they may at times question whether they are really injured. An important distinction between chronically injured athletes and multiply injured athletes is that for chronically injured athletes, their pain may decrease, but the pain never completely subsides or resolves. Chronically injured athletes tend to continue to train just below their pain threshold, minimize the extent and nature of their injury, and deny its long-term sequelae (Shuer & Dietrich). As Shuer and Dietrich suggested, chronically injured athletes may be "frozen" in the avoidant state and may not have the psychological tools required to adequately process the serious effects of the event, and, thus, remain in denial.

In contrast, multiply injured athletes sustain an injury, recover, and return to athletic participation; however, they repeat this process over and over again. Thus, multiple injured athletes often lack consistent, routine training and the chance to participate injury-free for an extended period of time. Based on the findings in this study and those of Shuer and Dietrich, each group of athletes will have some unique psychological reactions to their injuries and will benefit from different psychological interventions.

When distinguishing multiple injuries from chronic injuries, more emphasis can be placed on the athlete’s return to participation. Similar to chronically injured, the multiply injured athletes in this study returned to participation with less than 100% ability, at times still experiencing pain; however, their pain did resolve and it appeared that they viewed their injury as “healed.” Therefore, these athletes trained with the premise that they were fully recovered and did not compete in a constant state of pain or injury. One key to distinguishing multiply injured from chronically injured is that in the multiply injured athletes, the injury symptoms were not always present.
Also, when they sustained another injury, the multiply injured athletes viewed the injury as new rather than as a continuation of a previous injury. For example, Tara sustained her second, third, and fourth injuries to her right knee yet viewed each one independently. In her mind, each had its own treatment and rehabilitation. Charlotte sustained multiple injuries to her hip, but likewise, viewed each one as its own injury, each one another setback. Multiply injured athletes view their injuries as separate experiences; each new injury is unexpected and may increase their frustration and perceived body failure. Their injury experiences are multiplicative rather than lingering. In this study, an important consideration is that the multiply injured athletes had eligibility constraints. Regardless of their injury status, they only had four to five years of college competition. Multiple injuries chipped away at possible time to compete, potentially exacerbating their responses.

**Future Research**

In the future, more research is needed on athletes with multiple injuries. Although the narratives support the predictions of the integrated model, they also expose areas that need further research. While the majority of research, including the integrated model (Wiese-Bjornstal et al., 1998), is focused on post-injury outcomes following a single bout of injury, the focus of this study is on post-injury outcomes following multiple bouts of injury. Expanding on the unique findings of this study, future research could dig deeper into concepts such as the multiply injured athlete’s trust in her or his body, effects of being a rehabilitation veteran, and the lessons learned from their experiences. Spending more time with multiply injured athletes, such as by conducting more than two interviews with them could be beneficial. An increased number of interviews can enhance the researcher-participant rapport and allow the participants to feel more comfortable divulging intimate information such as their thoughts, feelings, and behaviors.
following their injuries. Also, using unstructured interviews could lead to gaining additional details and stories from the athletes.

Additionally, focus group interviews could be used to allow several multiply injured athletes to connect and build off each other’s descriptions of injury experiences. Focus groups may encourage the participants to open up more as they realize that they all share a common history of multiple injuries with other group members. Also, in the future, research could investigate the multiple injured athlete versus the chronically injured athlete. Because information on the psychological responses of both the multiply injured and the chronically injured athletes is considerably sparse, studies involving both of these athletes can help fill gaps within sport psychology knowledge as well as provide beneficial knowledge for sports medicine practitioners.

The multiply injured athletes in this study were all competing at the collegiate level. Because of this, their responses to injury and rehabilitation could be confounded by eligibility timelines. For instance, some of the responses such as anger, frustration, and pushing through rehabilitation could have been influenced by having only four to five seasons of eligibility. Thus, to investigate how different timelines and pressures influence responses to injury, future studies could compare multiply injured collegiate athletes to multiply injured high school or elite athletes. Comparison studies such as these could be valuable for understanding more factors involved in the multiply injured athlete’s response.

Furthermore, additional research could investigate the relationship between rehabilitation adherence and an athlete’s need to avoid feeling disconnected from the team. In particular, the adherence rates, rehabilitation programs (e.g., physical and psychological), and recovery outcomes could be investigated in athletes with multiple injuries. These variables also could be
studied over time to identify if a history of injury improves an athlete’s adherence as a result of increased knowledge, familiarity, and social support; or, if a history of injury reduces an athlete’s adherence as a result of repeated bouts of disconnection from the team. Overall, research can build on the findings of this study and conduct new studies involving athletes with multiple injuries.

**Practical Implications**

The athletes’ narratives provide an understanding of athletes’ psychological responses to multiple injuries and have practical implications for sports medicine professionals, coaches, and sport psychology consultants. Previous research (e.g., Ford & Lindgren, 1990; Rose & Jevne, 1993), as well as this study, highlight both the strong emotional and behavioral consequences of sport injury and the significant role sport psychology can play in the overall treatment of injured athletes. Studies also (e.g., Cupal & Brewer, 2001; Ievleva & Orlick, 1991; Ross & Berger, 1996) show the benefits of using psychological interventions, such as confidence building, relaxation, and imagery, as athletes rehabilitate from injury. Results from these studies reveal that mental skills can positively influence rehabilitation outcomes and help speed recovery.

According to Gordon, Potter, and Ford (1998), those sports medicine professionals “in regular contact with athletes during treatment are in an ideal position to inform, educate, and assist with the psychological as well as physical sequelae of injury” (p. 141). Thus, athletic trainers, sport psychologists, and other members of the sports medicine team should teach mental skills in conjunction with rehabilitation exercises and take steps to ensure that the athlete recovers both physically and psychologically before returning to play. For multiply injured athletes, psychological interventions like patient education, confidence building, and goal-setting could be particularly beneficial in helping them cope with the challenges of their experiences.
Before and after injury, skills such as these could provide them with coping resources. In particular, these skills could help multiply injured athletes combat feelings of decreased confidence and bodily distrust stemming from their injuries.

According to both the narratives and the integrated model (Wiese-Bjornstal et al., 1998), rehabilitation adherence is an important component of athletes’ behavioral response to injury. Taylor and Taylor (1997) differentiated between underadherence and overadherence, outlining the characteristics and causes of both. According to Taylor and Taylor, underadherence occurs when “patients do not fully comply with the prescription, miss planned rehabilitation sessions, put less than complete effort into the sessions they do attend, fail to do exercises at home, or end their rehabilitation programs prematurely (Taylor & Taylor, 1997, p. 46). Underherence is caused by a wide range of psychological, social, physical, and logistical issues” such as decreased confidence, motivation, social support, fear of returning to play and reinjury, and pain. Overadherence is characterized by just the opposite and is most often found among athletes with high athletic identity or highly disciplined athletes who are strongly motivated to return to sport as quickly as possible (Taylor & Taylor, 1997). The causes of overadherence include an overdeveloped athletic identity and lack of understanding of the rehabilitation process as well as social and financial pressures.

For the athletes in this study, underadherence seemed to be linked to a lack of understanding of the injury, decreased familiarity with the rehabilitation setting, and to avoid sitting out. Examples of underadherence could be seen in the narratives of Amanda and Charlotte. Both athletes sustained different multiple injuries with less definitive diagnoses. Also, both athletes described attempts to push through pain and injury to avoid sitting out and missing important activities with their teammates yet another time. Overadherence also could be seen the
narratives. For Hannah and Tami, the causes of overadherence appeared to be increased motivation to return to participation as quickly as possible and to decrease the amount of time spent away from training and their teammates. Also, because these two athletes sustained the same multiple injuries, they viewed themselves as veterans of the rehabilitation room. With this status, it appeared that they felt entitled to push their exercises and question injury timelines. All in all, one of the biggest challenges in working with multiply injured athletes might be rehabilitation adherence, both underadherence and overadherence.

Sports medicine professionals need to be aware of multiply injured athletes who consider themselves veterans of the rehabilitation as a result of their repeat injuries. These athletes may overadhere to rehabilitation and cause further injury. They may think that because they have been through rehabilitation before, they are “supermen” (a term the athletes in this study used) and all knowing in regards to the rehabilitation abilities. If they push the limits of their body and return to sport prematurely, re-injury also could result. In addition, sports medicine professionals need to be aware of multiply injured athletes who have different multiple injuries and underadhere to rehabilitation to avoid sitting out and feeling disconnected from their team. These athletes may engage in unproductive behavior like pushing through pain and injury and hiding symptoms from their athletic trainers. If behavior like this goes unnoticed, additional injury could result.

To increase the likelihood of productive rehabilitation behavior in multiply injured athletes, sports medicine professionals especially need to focus on decreasing feelings of disconnection with the team, frustration, and rehabilitation haughtiness. One skill that can be directly focused on reducing these feelings is goal setting. Athletic trainers can help multiply injured athletes establish productive goals for their recovery. An emphasis can be placed on
recreating the athletes’ previous rehabilitation successes while educating the athletes of likely problems if they try to speed up the rehabilitation process. Providing in-depth information about their current injury can help “rehabilitation veterans” understand why they cannot push themselves and return to participation before they are healed. Thus, educating multiple injured athletes differs from single injured athletes. While having a history of multiple injuries does increase their familiarity with rehabilitation, it does not mean they will be able to heal any faster.

To help athletes maintain a connection with their team, rehabilitation could be scheduled at a time so that they can attend practices. These athletes also should be encouraged to actively participate in the practice sessions by assisting the coaches, encouraging their teammates, or learning new plays along with their teammates. Athletic trainers can encourage multiply injured athletes to take proactive roles on their team and find other ways of contributing, such as being a “coach” or “cheerleader.”

Both medical treatment and mental skills are important to all injured athletes, especially those with multiple injuries. Social support, particularly with multiply injured athletes, also is indispensable in the rehabilitation process. Over the course of their athletic careers, multiply injured athletes become frequent visitors to the athletic training room. Because of this, sports medicine professionals have an excellent opportunity to establish a rapport and serve as a primary source of social support. To help build rapport, it is important that multiply injured athletes work with the same athletic trainer after each injury. This allows the athletic trainer to know both the multiply injured athlete and the athlete’s history of injury. Having familiarity and knowledge of a multiply injured athlete’s work ethic, personality, and injury history can be valuable assets to the athletic trainer. Information such as this will allow the athletic to know when to push, motivate, and encourage the athlete to work harder in rehabilitation or when he or
she needs to do the opposite and counter the athlete’s desire to speed recovery. Thus, social support from the sports medicine team plays an important role in a multiply injured rehabilitation.

Further, sports medicine professionals can assist multiply injured athletes to see injury as an opportunity for personal growth. Sports medicine personnel can encourage these athletes to use their time away from sport productively. Rather than make every conversation about their injuries, athletic trainers can talk to multiply injured athletes about their classes or other non-athletic related hobbies. Athletic trainers also can remind these athletes to focus on their homework or classes as a means of distraction while injured. Additionally, by encouraging the use of psychological skills learned with their first injury with each new injury athletic trainers can facilitate the development of multiply injured athletes’ coping resources. Following multiply injures, these athletes will be better equipped to handle or cope with new injuries. All in all, athletic trainers, sport psychologists, and physicians should use psychological interventions alongside the physical modalities of rehabilitation when dealing with multiply injured athletes.

**Final Thoughts**

Rarely do we see athletes at their most vulnerable and multiply injured athletes are particularly vulnerable. These athletes experience both a physical and mental “rollercoaster,” an up and down cycle of being injured then healed, injured then healed. Unique characteristics of multiply injured athletes include distrust in body, both underadherence and overadherence to rehabilitation, and the lessons learned from their experiences. Multiple injuries chip away their confidence and trust in their body. With decreased confidence and trust in body, multiply injured athletes can be more susceptible to future injury or re-injury. Also, rehabilitation behaviors such underadherence and overadherence can influence multiply injured athletes’ recovery and lead to
additional injury as well. In the end though, multiply injured athletes can learn from their experiences and better cope with subsequent injury.

Unlike other injured athletes, multiply injured athletes have special rehabilitation needs. For instance, sports medicine professionals working with these athletes should be aware of their distinctive characteristics and history of injury. Multiple injuries can lead some athletes to feel like rehabilitation veterans. These athletes think they can speed recovery because they have completed rehabilitation time and time again and should be able to do what they want. Multiple injuries also can lead some athletes to steer clear of the athletic training room and ignore their injury symptoms. These athletes are willing to put themselves at risk to avoid sitting out again and missing what they perceive as precious training. Thus, athletic trainers can benefit from knowing about both the productive and unproductive behaviors and responses revealed in this study.

Overall, the athletes’ narratives in this study represent the unique perspectives of four multiple injured athletes. Their multiple injuries disrupted their existence and played havoc in their collegiate athletic careers. Sports medicine professionals, coaches, and multiply injured athletes can benefit greatly from addressing multiply injured athletes’ distinctive needs. While multiple injuries may leave them down, they do not leave them out. The findings from this study can prepare sports medicine professionals and sport psychology consultants to give hope to multiply injured athletes, a group frequently overlooked in the literature, that their rollercoaster may become easier to cope with or even see its end.
REFERENCES


APPENDIX A: INTERVIEW GUIDES

Interview #1,
Unstructured Interview Guide

Demographic Questions

1. Age
2. Year in school
3. Sport
4. Years of college eligibility have you used (i.e., current athletic eligibility status)
5. On scholarship
   a. full or partial scholarship
6. Chronology of your injuries
   a. what were your injuries (e.g., list your injuries in order of occurrence)
   b. approximate time loss
   c. medical treatment

Essential Questions

1. Talk to me about your experiences being injured.
2. How has your history of multiple injuries affected your life?
Interview #2,
Semi-Structured Interview Guide

The following questions will be asked if not discussed by the participant in the first interview:

1. What were your initial reactions upon being injured?

2. How did those reactions change from the first injury to now?

3. Talk to me about your interactions with the sport medicine team (e.g., athletic trainers, physicians, physical therapists)?

4. How have your injuries affected the relationship with your team, including your coach and teammates?
   - how has this changed overtime?

5. How have your injuries affected your life outside of sport?

6. What are your current views of your sport involvement post injuries?

7. What have you taken away from your history of multiple injuries (e.g., what have you learned)?

8. Based on your injury experiences, what advice would you give to sport medicine professionals about the future treatment of other injured athletes?

9. Based on your injury experiences, what advice would you give to fellow team members who become injured?
Title of Study: Narratives of Collegiate Female Athletes Who Sustained Multiple Injuries

Investigator: Mallory Secrest, Graduate Student
School of Human Movement, Sport & Leisure Studies
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The purpose of this study is to examine college athletes’ experiences with injury. This study is being conducted for a master’s thesis. This thesis will extend our knowledge by examining the mental states associated with experiencing multiple injuries. Ultimately, I hope this study will provide information that may help sport medicine professionals effectively communicate with and rehabilitate athletes. Your participation will allow you the opportunity to openly discuss and examine your experiences as an injured athlete.

Your involvement in this study includes participation in two interview sessions. Each interview will last 60 to 90 minutes and will focus on your collegiate sport injury experiences. The interviews will be audio-recorded. Interviews will be scheduled at a time and place convenient for you. A profile of your experiences will be created as part of the data analysis. You will be given an opportunity to read the profile and provide feedback about it. Thus, you will have an opportunity to assist me in developing an accurate description of your experiences.

Risks of participation are minimal. My procedures are designed to safeguard your confidentiality. To maintain this confidentiality, your name, names of other people, and any identifying information you mention will be removed or coded in the printed transcripts of the interviews. I will be the only person to listen to the audio-recording. The interview transcripts may be read by my advisor who will maintain confidentiality. Your coaches or sport medicine personnel will not have access to the interview recordings or transcripts. The audio-recordings and transcripts will be kept secured on a password protected computer and in a locked office and will only be accessible to the investigator. Upon completion of the study, the audio-recording will be deleted and the original transcriptions that include identifying information will be destroyed.

Your participation in this study is voluntary. Also, your decision whether or not to participate in this study will have no effect on your relationship with any individual involved with the research or with your standing on the team or with the university. If you decide to participate, you may refuse to answer any questions during the interviews and you may withdraw your consent at any time without prejudice or affect on your relationship with the investigator.
Additional questions about this study can be directed to Mallory Secrest (740-260-3300 or msecres@bgnet.bgsu.edu) or my advisor Vikki Krane (419-372-2620 or vkrane@bgnet.bgsu.edu). You may also contact the Chair, Human Subjects Review Board, Bowling Green State University (419-372-7716 or hrsb@bgsu.edu) about any problems or concerns during your participation in this study.

Your signature below indicates that:

- you are providing your voluntary consent to participate in this study,
- you are over the age of 18,
- you have been informed of the study procedures,
- you have been informed that the information obtained during the course of this study will be kept confidential,
- you can have a copy of the consent form, and
- upon request, you can receive a summary of the findings from this study.

__________________________________ ______________________________
Signature   Date

__________________________________
Printed Name    Phone Number

__________________________________
Email Address