

The Emotional Response to the Injury and Rehabilitation Process

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The present investigation examined the emotional response to the injury and rehabilitation process. Qualitative methods were used to uncover the emotional experience of injured athletes through thick description provided in multiple in-depth interviews, to gain an understanding of the psychological recovery from athletic injury, and consequently, to better assist injured athletes during their rehabilitation process. Participants were 10 university student-athletes from 2 Division III institutions in the northeastern U.S. who had sustained a moderate to severe injury. Participants were interviewed 3 times; onset of injury, 1 week post-injury, and 3 weeks post-injury; they responded to a series of writing stems on each occasion. The investigation centered on the interplay of cognitions and affect expressed, and the emotional experience of the injured athlete. Themes that emerged highlighted the fluctuations in emotions characterized by feelings of loss, decreased self-esteem, frustration, and anger. Thoughts and affect changed over time to view the injury as a challenge which participants approached with a positive attitude. The experience of the participants was acknowledged as a process in which they learned about themselves and the many emotions involved with being injured. Understanding the complexity of the experience can help researchers and practitioners assist injured athletes by facilitating a more effective recovery.

Involvement in any sport or activity requiring physical exertion has within it an inherent danger of physical injury. In 1994, Smith and Milliner noted that as the number of people participating in sport has increased, so too has the number of injuries occurring. Due to the inherent risk involved in sport participation and subsequent incidence of injury, researchers have investigated the complex nature of the experience of athletic injury. The focus of researchers has been on understanding the complex process of injury and rehabilitation and the influence of psychological factors on the experience of athletic injury (Evans & Hardy, 1995; Gould, Udry, Bridges, & Beck, 1997a; Udry, 1997; Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998). When athletes experience injuries, attention is automatically and logically focused on the physical site of the injury. Unfortunately, the focus often remains solely on the physical, which can ignore the psychological experience of being injured and the numerous thoughts, feelings, and behaviors associated with an injury.

Researchers in sport psychology have focused on an integrated model first proposed by Wiese-Bjornstal, Smith, and LaMott (1995). The model was further developed (see Figure 1) by Wiese-Bjornstal et al. (1998). The integrated model offers a comprehensive way of examining the injury response process by its inclusive and cyclic nature. The focus of the present study

Received 15 April 2002; accepted 10 October 2002.

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was on the integrated model, with the emotional response component of the model as the focal point. Previous researchers have focused on coping resources of injury rehabilitation (Gould, Udry, Bridges, & Beck, 1997b; Udry, 1997), while the focus of the present investigation was to examine emotional response and how appraisal of the injury influences that response. The use of the constructs of emotions and coping are based on the work of Folkman and Lazarus (1985), which described emotions as the bi-products derived after appraisal of a situation and coping as the efforts both cognitively and behaviorally to deal with that situation.

Leddy, Lambert, and Ogles (1994) explored the emotional consequences of injury among male intercollegiate athletes and reported that athletes demonstrated greater mood disturbance during the injury rehabilitation than after injury recovery. The greatest mood disturbance appeared to be in the initial phase of the injury when athletes can experience many emotions including anxiety, fear, anger, and confusion. Similar findings have been reported by Udry (1997), who stressed the need to work with athletes early in the injury recovery process because athletes demonstrated fluctuations in mood from initial evaluation of injury through the rehabilitation process. A recommendation has been made by Heil (1993), who noted that early in the recovery process is the time of greatest emotionality. For the purpose of exploring emotional responses to injury, early post-injury access has been deemed ideal (Heil, 1993; Udry, 1997).

Affective responses to athletic injury were the focus in an investigation by McDonald and Hardy (1990). The researchers reported on the importance of athletes accepting the reality of the injury, and of expressing and experiencing the many fluctuations in emotions to the point where they are able to progress toward concentrating their energy on the recovery process. Accepting and focusing on the rehabilitation process was the emphasis of an investigation by Bianco, Malo, and Orlick (1999) with elite level skiers who suffered severe injuries or illnesses. Through a retrospective design, athletes were interviewed and identified a variety of cognitive, emotional, and behavioral responses as they progressed through phases of recovery. The importance of maintaining a positive perspective and belief that they would progress through recovery and return to the sport they loved was a dominant force for the athletes.

The importance of internalizing, accepting, and taking personal control and responsibility over the injury and the recovery has been noted by several researchers (Brewer, Linder, & Phelps, 1995; Udry, 1997; Udry, Gould, Bridges, & Beck, 1997). Considering this point, it was deemed relevant to investigate the emotional experience of injured athletes during the early phases of rehabilitation when emotions and affect are possibly complex and in continuous flux. The present study sought to extend the literature on psychology of injury by focusing on the emotionality of injury and recovery by way of studying injured athletes from the onset of injury to 3 wks post-injury focusing on in-depth interviews. Although it has been urged to control for injury severity (Evans & Hardy, 1995), it was a purposeful decision and an inherent interest in the study to include different types of injuries and both acute and chronic injuries (based on the moderate to severe classification of the Colorado Injury Reporting System; Blackwell & McCullagh, 1990) so as to maintain the focus on the emotions and the emotional experience of injured athletes with a variety of injuries.

Previous researchers have tended to study injured athletes retrospectively (Gould et al., 1997a, 1997b; Gyurcsik, 1995; Johnson, 1997; Leddy et al., 1994) and/or surveyed or interviewed only once (Bianco et al., 1999; Gould et al., 1997a, 1997b). Successful recovery may possibly cloud judgment of the emotions that may have been experienced early in the process. Numerous researchers including Brewer (1994), Heil (1993), Johnston (1998), and Udry (1997) have recommended the need for employing qualitative methods, interviewing injured people early in the injury process, collecting several data points early in injury recovery, and being cautious about issues with retrospective information (Brewer, Van Raalte, Linder, & Van Raalte, 1991).

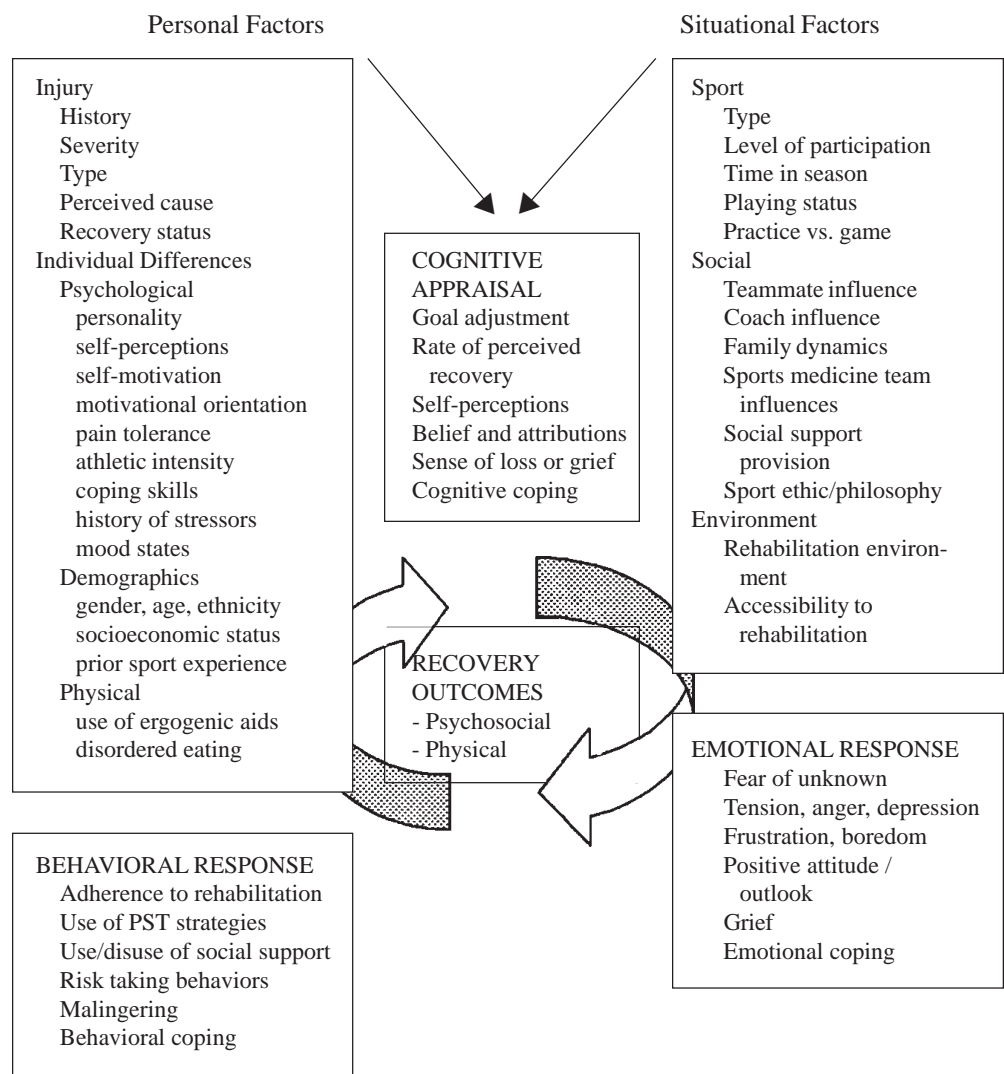
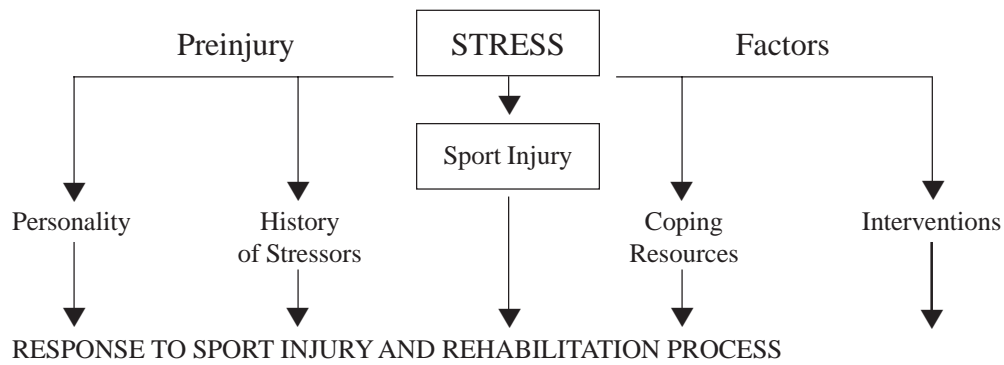


Figure 1. Integrated model depicting the psychological response to sport injury and rehabilitation process.

The present study examined the emotional response of college level athletes recovering from moderate to severe injuries for three phases of injury recovery: onset of injury, 1 week post-injury, and 3 weeks post-injury. Results are reported for two research questions:

1. What affect is expressed and what is the emotional response regarding the injury and rehabilitation process at the onset of injury, 1 week post-injury, and 3 weeks post-injury?
2. How do the cognitions expressed by the injured athletes regarding injury influence emotional response at three points in time during rehabilitation?

METHOD

Participants

The participants were male and female collegiate athletes ($N = 10$) from two private Division III colleges in the northeastern United States. Sports represented by participants were baseball, soccer, volleyball, track and field, rugby, and lacrosse. The sample consisted of 3 1st year students, 2 sophomores, 2 juniors, and 3 seniors with a mean age of 21.1 years ($SD = \pm .91$). All participants had sustained an injury that was moderate to severe and which kept them out of practice and/or competition for at least 7 consecutive days, thus meeting the established criteria for the study. In the present study, the minimum number of days out of practice/competition was 16 days. Injury severity was determined by use of the Colorado Injury Reporting System (Blackwell & McCullagh, 1990). Participants also attended rehabilitation sessions in the training room at the institutions as appropriate for their specific injury. The types of injuries sustained by the athletes included a severe contusion of the foot, a torn anterior cruciate ligament, two sprained ankles, a sprained ankle coupled with a strained back, a torn meniscus, a separated shoulder, a strained back, a fractured fifth metatarsal, and a stress fracture to the fifth metatarsal.

Procedure

The researcher worked with the head athletic trainers and training staff and was contacted about the injury status of each athlete at the onset of injury and determined that study participation criteria was met. Each athlete completed a demographic form, an open-ended questionnaire consisting of a series of writing stems asking the athletes to explain how they were feeling with respect to the emotional experience of being injured completed at each of the three sessions, and an in-depth interview. The semi-structured interview was conducted within 24–72 hr after the injury. The same procedure with respect to the open-ended questionnaire and interview was followed at 1 week post-injury, and 3 weeks post-injury for each athlete.

Data Analyses

Data from the interviews were recorded and transcribed verbatim by the researcher. Interpretational analysis as described by Tesch (1990) was conducted and revealed patterns and relationships as data were analyzed. The analysis was also based on the general concept of grounded theory proposed by Glaser and Strauss (1967). The data were analyzed for consistent or divergent ideas and the analyses facilitated multiple comparisons in an inductive analysis process. The specific steps of the analysis were as follows:

1. All interviews were tape-recorded and transcribed verbatim by the investigator.
2. All interviews were reviewed multiple times by the investigator and the peer debriefer. The peer debriefer acted to both support and challenge potential biases and assumptions of the investigator. When disagreements emerged, transcripts were reexamined and points of disagreement were discussed.
3. Raw data themes emerged from the data from the interviews and from the information gathered from the open-ended questionnaires and were organized into theme groupings.
4. Several levels of analysis were done by reviewing the transcriptions and open-ended questionnaires, and themes and patterns were generated based on the data. Levels of analysis included analyzing across interviews and open-ended questionnaires by common ideas, words, or phrases, and by category, across participant, by interview question across the interviews and open-ended questionnaires, by research question, and by comparing and contrasting the transcriptions with the peer debriefer to form the main themes.
5. Through the levels of analyses, themes and general dimensions emerged from the data. The inductive process was deemed complete when no further significant grouping of ideas combined.

RESULTS

The Affect Expressed and the Emotional Response

Interview One

When the participants sustained an injury, the process of dealing with the emotional impact involved a series of responses characterized by a wide array of emotions. The type and severity of injury mattered less at the onset of the injury. Participants described experiencing a “roller coaster” of emotions as they attempted to deal with and adapt to being injured and the process of recovering. The predominant affective states were described as a mixture of being “angry,” “depressed,” “down,” “afraid,” “confused,” “frustrated,” and “worried.” A few of the participants reported that being injured lowered their self-esteem. The affect of lowered self-esteem was expressed as an influence on how one participant viewed his value as a person. While some participants expressed feeling that the injury affected their self-esteem, others reported experiencing feeling sorry for themselves.

Adding to the initial depressed state reported by the participants was a minimal amount of shock due to the occurrence of the injury. A couple of the participants reported experiencing shock as they admitted that there appeared to be an active component of invulnerability. All participants reported being cognitively aware of the inherent risks associated with participation in sport; however, they reported feeling a small amount of shock that an injury actually occurred to them. Although they were used to describing themselves as strong and invincible they were also completely aware of the severity of their injury. This led to an overall consensus typically described as a sense of uncertainty and possibly fear of vulnerability and loss of independence.

During the first interview, most of the participants reported thinking that the added attention paid to them by people willing to assist them, carry things for them or opening doors, was enjoyable and it was appreciated. They were, however, quick to report that with time the nov-

elty of being injured and getting more attention from people trying to help had worn off and they were very frustrated. A common sentiment identified was that they were “over” enjoying the attention within the 24–48 hr of sustaining the injury. The participants in the present study did not report experiencing denial per se, but initially three tried to downplay the seriousness of the injury, which could be interpreted as denial. When further questioned on this issue the participants recognized that downplaying sounded like denial and acknowledged that if they were completely honest, they knew not admitting to the seriousness of the injury completely was a way to protect their feelings and reduce anxiety.

Early in the experience of dealing with an injury, the participants reported feeling “helpless” or “a burden” for a brief period of time. The helpless feeling caused tremendous frustration for them as they described themselves as “independent” and asking for help was uncomfortable for them. Numerous comments were made concerning their frustration and desire to be independent. The participants did not like the loss of independence and freedom they were accustomed to and did not hesitate to express it.

Interview Two

The emotional turmoil of restricted mobility and a perceived loss of independence described by several participants were further influenced by a visual aspect of the injury. Six participants sustained injuries resulting in either visible bruising or swelling, adding to the visual nature of the injury. Eight of the 10 participants required either crutches or a sling. The participants mentioned focusing on the appearance of the injury as an influencing factor in the affect and emotional response. Observing the visual improvement such as decreased swelling or bruising was reported as positively influencing emotions for the participants.

The visual influence on the emotions of the participants was also impacted by the response of the athletic trainers. As reported by one participant with a sprained ankle, “a lot of it too is the expression on the trainer’s faces. Today they looked at it and they were smiling and said that it looks good, whereas at first they looked at it and were down and said ‘oh no.’” For the second interview, the visual component of the injury was consistently identified as impacting their emotional response. Participants often reported during the second interview that their emotional response would not be determined until they talked with the athletic trainer at the rehabilitation session that day.

Frustration was the predominant negative affect expressed by the participants at 1 week post-injury, and it continued to resurface during the second interview and in the open-ended questionnaires. Some of the participants reported transferring their energy into their academic work. Although they previously used sport in part as an “outlet” to vent frustrations and stress in their lives, they had noticed a concerted effort in doing more academic work. Part of the reason given for this transference was the increased time, energy, and resources available now that they were not participating in sport. Several began to rationalize their injury as possibly “good timing” and they made a conscious effort to devote these resources to academic work. By the second interview, participants had made a conscious decision to take their feelings of frustration and anger and express an increased positive attitude. This was manifested in an increased effort toward academics and in the positive affect expressed and the attitudes demonstrated by the participants.

Although the participants expressed only brief shock regarding the injury, several mentioned feeling “fearful” as the shock had subsided. The fear did not stem from fear of reinjury in the future, rather it was reported as fear of “missing practice,” “losing fitness,” “missing out,” “playing catch up,” and worried about “how long” would they be unable to participate in sport. The identified fears were frequently expressed surrounding sport participation with attending practice after the injury had occurred the predominant fear-evoking factor.

The choice of whether to continue attending practices while injured was identified as an emotionally difficult experience, which influenced their affective states. In some cases, coaches either mandated or strongly encouraged the participants to attend, while for others it was a choice or a perceived obligation. Four participants chose, or were told by their coaches, to continue attending practice while injured. The remaining 6 did not want to, and therefore decided not to attend. For those who attended practices, comments were made regarding the difficulty of being present on their emotional well being. Several participants who did not attend practice, reported that it was too emotionally difficult to consider going. Two participants described walking past the practice facility and not being able to look in the direction of the team. Attending or not attending practice was clearly agonizing for the injured individuals. As the participants progressed through the rehabilitation process, attending practices remained difficult as they continued to feel frustrated with their restrictions from participating.

The reality of attending practice brought the participants continued reminders of either their perceived or real loss of fitness. Additionally, it had the ability to strengthen their belief that they were letting their team down, simply by virtue of watching practice. These factors fed into affective states that included anxiety, frustration, anger, and depressed feelings. During the first interview the participants reported dealing with many emotions and by the second interview the sense of disenfranchisement from their team appeared to be taking a toll on them. In addition to attending or not attending practice, the importance of being with their team regardless of the type of injury or time in the season, added an essential component to their emotional well being. While many found the practice environment difficult, teammates provided much appreciated support for most of the participants during a phase of recovery that was frustrating and served as a constant challenge to their emotional state. All participants reported remaining in close contact with teammates during injury rehabilitation, with most socializing with teammates. The social contact was reported as helpful to them emotionally by assisting them to maintain a sense of connection to the sport and their teammates.

Interview Three

Throughout the interviews many participants reported that talking about their emotions with someone was helpful, whether it be with friends, family, teammates, other injured athletes, or with the researcher. By 3 weeks post-injury, emotions were much improved for those who had returned or were close to returning to sport participation. Participants with more serious injuries experienced frustration, but excelled at keeping a positive outlook with regards to attending rehabilitation and trying to maintain motivation. Being able to return to practice and/or competition enhanced their mood, and was often expressed as feeling more "confident," a "relief," less "tension," and a sense of being "free" again. Return to participation positively influenced the emotional response and enhanced the ability of the participants to deal effectively with other aspects of their lives.

For participants able to return to sport by 3 weeks post-injury, the affect expressed was also reported as being influenced by being with their teammates once again in the sport environment. Although 4 participants had returned to practice and/or competition at the end of the 3 weeks of rehabilitation, they too identified experiencing a period of time when they felt alienated from the team. They reported intense feelings of loneliness and sadness by not feeling a part of a team in which they invested time and felt strong affiliation. For those who had returned to sport, they also referred more to how the injury 'felt' and had abandoned the visual component, as it was less relevant or nonexistent at 3 weeks post-injury.

For the 6 who had not yet returned the visual component was still relevant and the constant visual reminder added to their frustration. These participants may have been missing

the remainder of the competitive season, they reported experiencing “frustration,” “disappointment,” and “discouragement.” In spite of these emotional responses, they were reflective and cognizant that it was a chapter closing and an opportunity to look ahead. The feeling of confidence and an overall happier affect reported by some of the participants was, at times, coupled with comments about overcoming obstacles. A successful recovery from a moderate to severe injury was described as “a sense of accomplishment” and many reported feeling good about themselves once again because of overcoming a difficult emotional rehabilitation process.

For many participants, the emotional experience involved an acknowledgment of being injured as a learning process that tested and challenged them physically and emotionally to overcome what they described as an “obstacle.” By 3 weeks post-injury, the participants reported that the experience provided opportunities for them to “learn about themselves,” discover “how strong they were mentally,” and to “appreciate being healthy.” At 3 weeks post-injury, all participants acknowledged that being injured was an emotional experience and that they learned how an injury affects their emotional state while they recover.

The Interplay of Cognitions on the Emotional Response

Throughout the study, participants frequently described the importance of keeping things in perspective. The cognitions and subsequent interplay of those cognitions on the emotional response to injury were reflected in an optimistic and a pervasively positive outlook toward recovering from injury. The cognitions were categorized into four main themes including internal thoughts, injury and rehabilitation concerns, concerns about and comparison to others, and looking ahead to the future. Part of the acceptance of the injury involved internalizing and processing the mixed emotions including “anger,” “anxiety,” “hope,” and “depression.”

Internal Thoughts

The internal cognitions such as worry and concern, time lost from training and participating, what the injury meant to the season and training, and future plans had a strong influence emotionally as many reported these thoughts causing them to feel “depressed,” “down,” “low self-esteem,” and increased “anxiety.” The comments regarding blame for the injury, whether they were directed internally or interpreted as just an accident, were reported as causing a high level of “frustration” and “aggravation.” Regardless of the level of frustration, they reported that they were determined to positively refocus their thoughts. This cognitive alteration was demonstrated through their motivation and drive to heal the injury. As time passed, several participants realized and recognized how much inner strength they had, which influenced them further in rehabilitation. A few also recognized the injury recovery process as posing a challenge and they felt a sense of accomplishment for maintaining positive thoughts throughout the process. A common thread existed among the participants that continuing to think positively meant they would recover successfully.

Injury and Rehabilitation Concerns

For those who experienced more severe injuries, there was a struggle to remain positive, while simultaneously dealing with the emotional impact of their physical limitations. Hopeful thoughts were identified as helpful in reducing or rationalizing their fears over loss of fitness, often resulting in feeling good about themselves. For many participants, reflecting on what happened to cause the injury resulted in a period of time when they experienced the “what ifs” and self-doubts that spurred internally directed anger. In these cases the overriding consequence was to continually focus their energy on attending rehabilitation sessions and

thinking positively. The participants were observed to be a highly motivated group who transferred their focus and efforts from sport to the rehabilitation process, and at times to attempts to distract themselves by socializing with friends. The redirected focus of their thoughts toward rehabilitation enhanced hopeful thoughts, and many reported they intentionally did this to distract them from the sport they were missing. Participants appeared to believe that control over the situation had a great deal to do with these two factors and in keeping things in perspective.

Concern for and Comparison to Others

The concern for and comparison to others was reported by the participants as frequently negatively influencing their emotional response. While they were predominantly positive in their cognitions, when they compared their fitness level and lack of training with their teammates, they reported that they made negative comments to themselves about their status. These thoughts were reported to cause anxiety and tension, which led them to have thoughts about doubting they would get back in time to compete.

Although the participants did not tend to discuss their thoughts and feelings about their injury with coaches, they reported being anxious to tell the coach the diagnosis, as they were concerned about the response of the coach to the diagnosis and/or continued injury status. Thoughts were also reported about the fear of losing playing/competing time once they returned. Several remarked about thoughts of fear of losing their spot on the team or losing playing time and did not want to discuss the situation with their coaches for fear of being labeled as “damaged goods” by the coach.

Looking Ahead to the Future

The thoughts regarding looking to the future were acknowledged to have a positive influence on the emotional response of the participants. Several reported that thinking about the future and envisioning themselves participating in sport once again, enhanced their motivation to attend rehabilitation. Four participants mentioned that if they were having a difficult day that day they tried to focus on thoughts of going to rehabilitation and about being healthy and participating in sport again. Thoughts of the future were also reported by many of the participants to allow them to feel good about themselves and have “peace of mind” that they would recover from the injury and would be able to be involved in sport again. Additionally, for the 9 who had experienced previous injuries, thoughts of the future were influenced by thoughts of past injuries and their successful recovery from the injury. “Knowing what to expect” was reported to give further peace of mind and had a “calming” effect that allowed them to stay positive and focused on recovering.

As the participants looked to the future, fear of reinjury was not a predominant theme for the participants; however, as the reality of participating in sport again became imminent, they began to experience new found apprehension and hesitation. As a return to participation drew nearer, a couple of participants experienced a “roller coaster” of emotions once again. A few participants struggled with feeling excited about the prospect of participating again, but reported that they had learned from the injury experience and were more cautious about reentering sport. The influence on their emotional experience was described by the participants as a “learning experience.” They learned that they must take care of themselves and “not to take anything for granted.” The experience of sustaining and recovering from a moderate to severe injury was marked by a variety of emotional responses by the participants. Most participants referred to the idea that “injuries just happen,” with a few mentioning that “things happen for a reason” and they had to “listen and learn to take care of themselves.”

DISCUSSION

The present investigation centered on the emotional response to the injury and rehabilitation process by focusing on the emotional response component of the model of psychological response to athletic injuries and rehabilitation developed by Wiese-Bjornstal et al. (1998). Specifically, an effort was made to describe the experience of dealing emotionally with sustaining and recovering from a moderate to severe athletic injury. The investigation was unique with respect to the design of collecting data at the chosen. The use of the three-interview format was unique as it provided the opportunity to collect in-depth data from participants about their emotional response as they experienced the recovery process. The timing of the data collection during the chosen rehabilitation phases is considered to be one of the strengths of the present investigation. Much of the previous research has been retrospective in scope; subsequently, a limitation has been noted that favorable recovery outcomes may have an influence on the responses by athletes who have successfully recovered, as the tendency has been with a successful recovery to potentially downplay the emotional fluctuations that may have occurred (Bianco et al., 1999; Gould et al., 1997a, 1997b; Gyurcsik, 1995; Johnson, 1997; Udry et al., 1997). The three-interview process permitted the researcher to examine the response to injury in the early phase of response and recovery, a time deemed of particular interest when investigating emotional response and experience.

The thoughts and cognitive appraisal of the participants greatly influenced their emotional response to the injury and rehabilitation process. They reported experiencing negative thoughts briefly at onset of injury coupled with feeling depressed, then quickly summoned their resolve and optimism to work diligently during the rehabilitation phase. The way in which injured athletes appraise their situation has been said to potentially have more impact than the fact that the injury itself has occurred (Brewer, 1994; Gould et al., 1997a). The appraisal of the injury influences the emotional response and the behavioral response throughout the rehabilitation process. Previous researchers have reported that athletes have described injury recovery as an opportunity to learn important lessons about themselves (Ievleva & Orlick, 1991; Rose & Jevne, 1993). The present investigation further explored this idea as the injury and rehabilitation process was described as an experience that participants considered to be a significant learning experience, as well as an obstacle to overcome. Ievleva and Orlick (1991) found that athletes who recovered quickly reported more positive comments and that the learning during the process enhanced insight into sport. In the present study, learning was described on a more personal level as learning about oneself, inner strength and commitment, and learning not to take being healthy for granted in the future.

The acknowledgment and early acceptance of the injury may have aided in dissipating thoughts and responses concerning fear of reinjury for the participants. The fear reported was of loss of fitness and playing time throughout the phases studied and not of reinjury as previously reported by researchers (Bianco et al., 1999; Gould et al., 1997a; Gyurcsik, 1995). The lack of fear of reinjury may possibly be explained as a response by the participants who were extremely optimistic and proactive in their approach to the injury and rehabilitation process. The participants reported feeling a heightened level of maturity and it appeared that they had positive attitudes toward dealing with the emotional experience of coping with an injury. It appeared that participants accepted the inherent risk of injury in athletic participation. Although they reported that they looked forward to their future in sport, fear of reinjury was not reported as a concern; rather, as time passed, they reported viewing the experience as a learning process in which they gained a sense of self-discovery. The participants indicated that they were focused on healing and returning to sport participation rather than the possibility of reinjury, and along the way recognized a heightened sense of self-knowledge.

Fear of reinjury has been reported by researchers as a common factor in injury response (Bianco et al., 1999; Gould et al., 1997a; Ievleva & Orlick, 1991; Udry et al., 1997). Fear of loss of independence and of losing a spot or position on a team has been reported by researchers (Gould et al., 1997a; McDonald & Hardy, 1990; Udry et al., 1997). The participants in the present study consistently reported that they do not necessarily fear reinjury. It was possible this would become more of an issue the closer they came to returning to sport; however, even when discussion arose about reinjury, they maintained that it would not be a predominant concern as much as other fears. The fears that were reported were fear of loss of fitness, fear of loss of independence, fear of asking for assistance, and fear of losing a spot on the team. The participants in the study also reported a significant investment in their respective sports and demonstrated a high level of athletic identity. Many disclosed that part of the function of sport was for an outlet to deal with various stressful events that occurred in their lives. The elimination of sport participation posed difficulty for the participants because such an important part of their lives was temporarily taken away. Young, White, and McTeer (1994) discussed the concept of invulnerability suggesting that injured athletes may possess this characteristic. It may be considered a factor in the identity of the athlete. If this is possible, then experiencing an injury can take a profound emotional toll on the athlete who normally considers him or herself as strong, and invincible. Experiencing the perceived or real losses of fitness, independence, and place on team increased fear and the emotional difficulty for the participants, which could challenge their perception of invulnerability and their identity as athletes.

Progression through rehabilitation emotionally was linked to the visual aspect of the injury. The visual appearance of the injury has not been discussed or highlighted in previous research and was illuminated in the present investigation. This finding is of particular interest as many injuries show visual signs of physical damage and based on the numerous comments from the participants can have a profound influence on how they assess their emotional response to their injuries. The visual appearance of the injury and the comments made by the athletic trainers combined to act as a significant factor in the emotional response of the participants. Further examination should be done to explore this influence on the emotional response and experience of being injured.

Accepting and taking responsibility for the injury has been noted as an important part of coping more effectively with the injury and rehabilitation process (Bianco et al., 1999; Brewer et al., 1995; Gould et al., 1997a, 1997b; Udry, 1997). Individuals who feel a sense of control and personal responsibility for their recovery are more invested in the rehabilitation process. The participants in the present study supported these findings as they quickly took responsibility for their recovery and reinvested energy into the rehabilitation process. The participants felt a sense of control because they chose to be proactive in their approach to recovery. In the present study, the participants reported that they were willing to do whatever they could to try to ensure a successful recovery. The participants were very active in learning details about the injury and how to expedite recovery.

Regardless of the severity, type, or level of athletic status, the participants were extremely proactive, optimistic, and willing to do whatever was required to ensure a successful recovery. The intensity and motivation with which they approached sport was transferred to the rehabilitation process. McDonald and Hardy (1990) suggested that the rehabilitation process is an active rather than a passive process involving a series of tasks athletes must engage in. The participants took charge of, and responsibility for, their recovery, and maintained a strong sense of focus towards recovering. Bianco et al. (1999) recognized the importance of maintaining motivation for rehabilitation and suggested that a positive outlook was essential to the recovery process. The participants in the present study discussed at length their positive outlook and attributed much of it to their personality and believed that remaining optimistic was essential to

the rehabilitation process. The participants appraised the situation by reframing it and attempted to turn the reality of the injury into something positive by taking the perspective that the experience was something to learn from and an opportunity for personal growth.

The participants acknowledged the role cognitive appraisal played in their emotional response as their emotions fluctuated depending on the progress of the injury recovery, the degree of pain experienced on any given day, comments by the medical staff or other sources of social support, as well as the attitude with which they approached each day of the recovery process. The participants appreciated the situation as an opportunity for self-discovery and recognized that they learned about themselves because of dealing with an injury. A unique feature of the three-interview format allowed the participants to discuss the meaning of the injury and to verbalize and write about the learning that took place.

Additionally, the participants reported the medical staff as an important source of support. Participants relied heavily on their input as a source of information upon which they based some of their emotional affect during the three interview phases. At times, determination of their emotional state was a conscious suspension until they talked with the athletic training staff. Part of the fluctuation in the openness and perceived benefit of the support from the medical staff and others could be due in part to the time of season in which the injury occurred, along with the status of the individual's injury. In a sense, an early to midseason moderate injury was acceptable to the participants if the medical staff told them that they would return to competition. This assurance allowed them to accept and deal with the injury better emotionally as they could look forward to participating in sport once again. Being able to look ahead was considered by several of the participants to be a significant factor in dealing with being injured.

The social support component is a key factor in dealing emotionally with being injured and recovering from an injury. Social support has been recognized as a potentially strong influencing factor to dealing emotionally with an injury (Gould et al., 1997a; Gyurcsik, 1995; Rose & Jevne, 1993; Udry, 1997). Researchers have focused on social support from various sources and have recognized that injured athletes consider a lack of social support to be a stumbling block in recovering emotionally from injury. A unique source of social support was revealed in the present study: the researcher. The participants acknowledged their appreciation about being able to open up to someone who cared about how they were feeling. Talking with athletes while they are injured and asking them to express how they are feeling brings with it a need for an understanding that the process may be emotionally charged. These are people who may be raw with emotion and a careful sensitivity to communicating and understanding people is essential. A possible application is for sport psychology researchers and consultants to conduct support sessions both individually and with a group of injured athletes in order to discuss and share the emotional experiences and provide support for each other.

Udry (1997) noted that although social support was not a significant indicator of adherence to rehabilitation, injured athletes perceived the support from others to be important throughout the recovery process. The support by others has also been noted by Johnston (1998). The participants in the present study fluctuated somewhat as to the degree of social support they felt they needed through the recovery process, although all reported that they appreciated and benefited from the support they did receive from various people. The participants in the present study supported most of the data on sources of social support with the addition of the role of the researcher and the exception of the coach as a source of social support. Participants did not discuss with or seek support from their coaches. The unique feature reported from participants in the present study was the clear lack of a desire to seek social support from the coach. Further exploration could be done to examine this interesting finding.

One of the most emotionally difficult aspects of dealing with the injury and rehabilitation process for the participants centered on attending practices. Previous research has addressed

alienation and concern over feeling left out or letting the team down (Gould et al., 1997a; Udry et al., 1997; Weiss & Troxel, 1986). The present study takes a step further by addressing the emotional difficulty of attending practices while injured. Although social support from various people was considered beneficial, the participants revealed an interesting component to the social support factor previously not detailed by researchers. The difficulty of attending practices influenced the emotional response for several of the participants as it was particularly upsetting for those who chose to continue attending practices. Coaching staffs have varied policies for injured athletes attending practices. Based on the results of the present study, an application to coaches would be enhanced awareness of the potential difficulties athletes may experience if required or perceived to be required to attend practices. Coaching staffs, medical personnel, and sport psychology consultants and researchers must be aware of the influence of actions and policies, along with the multiple influencing factors involved in the emotional response to the injury and rehabilitation process. In so doing, it could help to ensure that the emotional and physical well-being of the athlete is not compromised, but rather is enhanced.

A further application to facilitate a better environment for the recovering athletes is for medical personnel including physicians, physical therapists, and athletic trainers to enhance their awareness of the importance of their verbal assessments and nonverbal expressions on the emotional experience of injured athletes. The tone with which information is delivered is valued tremendously and listened to intently by the athletes. In the case of the participants in the present study, this exchange of dialogue could dictate their mood for the rest of the day depending on the communication with the medical staff. Careful attention should be paid to the manner with which information is delivered to help injured athletes cope more effectively with the rehabilitation process.

A few limitations of the study must be noted. The first limitation is the nature of the data and the potential for researcher bias. Although attempts were made to accurately represent the experiences of the athletes through the interview process and the open-ended questionnaire, the interpretations may have included biases of the researcher. The second limitation was the choice of only three data collection phases. The emotional response was limited to information for three data points only. A conscious choice was made to interview early in the process in order to focus on the emotionality of injury. A number of other data collection points could be added to possibly enhance a more thorough understanding of the process. A third limitation was the fact that only 10 participants were investigated. While it is not necessarily unusual to have small numbers within a qualitative study, the results of the present investigation should be treated with caution.

Future research should include examining the emotional response for injured athletes at different levels of participation from youth through to masters and senior level athletes and from recreational to elite level. Additionally, the emotional state prior to returning to competition compared with the emotional state immediately following the competition could be investigated. The types of injuries and types of sports studied should be expanded. Furthermore, an expansion of the work of Bianco et al. (1999) should continue to examine chronic injury and illness.

Sustaining and recovering from a moderate to severe injury can be emotionally difficult for athletes. The suggestion made by Brewer (1994), and Gould et al. (1997a), that the physical injury is not, in itself, as crucial an issue to psychological adjustment as the cognitive appraisal and emotional response an individual has to the injury and rehabilitation process was of particular relevance to the present study. In the present investigation, a further understanding of the emotional response to the injury and rehabilitation process was revealed through the affect expressed and cognitions described by the participants. The principal influence of the thoughts of the participants on the emotional response was to focus their energy on rehabilitation and

thinking positively. Injured athletes with varied injuries and from a variety of sports, navigate through a difficult emotional journey as they acknowledge, accept and cope with the injury and rehabilitation process. The emotional response involves gaining and maintaining emotional stability by appraising the situation, seeking social support, talking with a variety of people, remaining proactive and positive, and learning from the series of challenges faced during the experience. The participants acknowledged that they reached a point when they recognized that they learned about their own inner strength, motivation, and belief in their ability to overcome a difficult physical and psychological obstacle. For the participants in the present study, an understanding was gained about the complexity of the experience, which can help researchers and practitioners to offer assistance to injured athletes and help to facilitate a more effective recovery process for the athletes.

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