Self-cultivation and Meaning through the Experience of Injury Rehabilitation:

A Case Study of Two Female Basketball Players

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Abstract
This case study involved interviewing athletes who had sustained moderate to severe injuries about the experience of being injured and the potential for self-cultivation and meaning synthesized through recovering from an injury. Two female intercollegiate basketball players were interviewed at the beginning of their rehabilitation and again at the end after successfully recovering and returning to sport. Data analysis revealed unique characteristics about the rehabilitation process with respect to loss of control, social support and learning about their confidence, motivation, perseverance, attitude, and resiliency. This article examines the experiences of these athletes as they navigated through the rehabilitation process and highlights the potential for the creation of a positive learning experience and self-cultivation that injured athletes can discover through the experience of recovering from an injury.

Introduction
While it can certainly be difficult and challenging for individuals recovering from an injury, I have found in previous research that some people have discovered profound meaning through dealing with pain, injury, and subsequent rehabilitation, with many expressing the positive experiences of what they learned about themselves through such an experience. Many believe that they are stronger people for the experience. A recent example highlighting this idea is that of Kevin Everett, a tight end with the National Football League who played for the Buffalo Bills until September 9th, 2007, when he collided with Denver Broncos’ Domenik Hixon resulting in Everett sustaining a severe spinal cord injury. Of his remarkable recovery, he is described as having a constant positive attitude and his experience has had a profound impact on his perspective of life and of himself as noted in the following:
..he describes only a transforming strength that has come with his injury. ‘I look at my life now in a whole new fashion’ he says. ‘You realize how blessed you are. You thank God even more when you wake up in the morning and for every little thing you have.’ (Layden, 2007, p. 59).

Based on comments from various researchers (Kerry & Armour, 2000, Mainwaring, 1999; Snyder, Lehman, Kluck, & Monsson, 2006; Tracey, 2003), a needed area of research is to reframe the injury recovery process as having the potential to be a positive learning experience and an opportunity to foster self-development. Several researchers in sport psychology have noted the potential benefits of adopting an optimistic attitude in rehabilitation (Bianco, Malo, & Orlick, 1999; Gould, Udry, Bridges, & Beck, 1997; Mainwaring, 1999; Tracey, 2003), with some reporting the use of positive coping styles, such as problem or instrumental coping to manage the rehabilitation process (Gould et al., 1997, Mainwaring, 1999). In the Gould et al., (1997) study of elite skiers, several of the athletes described a reframing of the experience from initially negative to a positive one and demonstrated the use of problem or instrumental style coping. Athletes in the Mainwaring (1999) study displayed a positive attitude toward the process and utilized problem-focused coping during their recovery. Additionally, Mainwaring (1999) noted the importance of optimism as having the potential as a buffering influence, and the athletes in the study demonstrated a positive attitude and optimism about their ability to recover even though they were experiencing a great deal of negative affect.

Examining the experiences of injured individuals offers an opportunity to explore a unique area in which humans make meaning out of a painful event. People tend not to experience injury purely as a physical occurrence. From a phenomenological perspective examining the experience through the rich narratives of injured athletes as they explore meaning experientially can provide a unique understanding of injury rehabilitation. For the purpose of this paper using phenomenology as a qualitative method was guided by Patton’s (2001) description of taking an individual’s unique outlook and gaining an understanding of how people experience and interpret a given phenomenon. The intention with this approach is to focus on the meaning of the experience (e.g., injury recovery) for the individual (Nesti, 2004). Self-cultivation is a term used to describe a process of self-development that can be realized through various means such as movement, effort, or, as used in the present examination, confronting challenges faced during rehabilitation from injury. Self-cultivation utilized in this manner is derived from the self-development and movement literature and highlighted through the sport philosophy work of Davis (1977), Neal (1972), and Slusher (1967).

The purpose of the study was to examine the experience and meaning uncovered through rehabilitating from an injury. The objective was to uncover, through the use of in-depth interviews the unique and personal self-cultivation and meaning that many people experience through rehabilitating from an injury. By doing so, a better understanding of the psychology of injury recovery was gained. The study was guided by three research questions:
a) Is there potential for self-cultivation and meaning to be gained through the experience of recovering from a moderate to severe injury?

b) Is it possible for injured people to reframe the appraisal of the situation of being injured in order to turn the reality of being injured into something positive by taking the perspective that the experience is something to learn from and an opportunity for personal growth?

c) By providing an opportunity to explore the experience of being injured, does it facilitate an enhanced experience for the injured person such that they describe it (among many possibilities), as a positive learning experience?

**Design and Methodology**

This exploratory case study was phenomenological in nature and provided the opportunity for injured athletes to describe their experiences through semi-structured interviews in order to reveal an understanding of a unique aspect of the psychological recovery from injury.

**Participants**

Athletes who were referred to a sports medicine clinic for the purpose of rehabilitation of a moderate to severe injury suffered through participation in intercollegiate basketball served as participants for the study. The participants in the study were two female intercollegiate basketball players from a southwestern Ontario university. The ages of the participants were 20 (participant 1) and 22 (participant 2) and both had been involved in competitive sport for 12 and 13 years respectively. Each participant had sustained a total of 5 career injuries previously through sport participation. The criterion for inclusion in the study was based on a definition of injury which kept them out of practice and/or competition for at least 7 consecutive days. Injury severity was determined by use of the Colorado Injury Reporting System (Blackwell & McCullagh, 1990). For inclusion in the study participant 1 sustained anterior collateral ligament (ACL) tear to her right knee requiring surgery participant 2 sustained a fracture to a sigmoid bone in her left foot and.

**Procedures**

The study was a prospective design involving interviewing clients attending rehabilitation sessions for a moderate to severe injury sustained during participation in sport. Determining a moderate to severe injury was assessed by the physician and the athletic therapist. The study involved interviewing injured people prospectively, as they progressed through their rehabilitation program. Once the athlete agreed to participate, they signed a consent form and completed a brief demographic form (age, type of injury, prior injury history, sports/recreation they participate in etc). Participants were interviewed at the beginning of the rehabilitation within 1 week of sustaining their injuries. The first interview was conducted to gather useful information about their personality and cognitive processes (e.g., thoughts about being injured, coping mechanisms) at the onset of rehabilitation. The first interview helped to obtain an understanding of each participant and how they viewed themselves and aspects of how they were approaching rehabilitation. The first interview was approximately 20 minutes in length and the second interview was approximately 45 minutes in length and was conducted at the conclusion of their rehabilitation program upon successful completion of rehabilitation and/or substantial recovery from the injury. The second interview was more involved and focused on how recovering from an injury influenced their lives, how they dealt
with the injury emotionally, and the impact of the injury from a personal growth and learning perspective.

**Data Analysis**

Recorded interviews were transcribed by a research assistant and all data analysis was done by the researcher. The data was content analyzed using an interpretational analysis to reveal patterns and themes. The analysis was based on Grounded Theory (Glaser & Strauss, 1967) and interpretational analysis described by Tesch (1990) and was analyzed for consistent and/or divergent themes. These themes helped to facilitate multiple comparisons in an inductive analysis process. The transcripts for each athlete were analyzed as a separate case study initially in order to describe the experience of each athlete through the steps of interpretational analysis. The researcher then compared the two athletes’ data to identify possible commonalities and contrasts in the experience of injury rehabilitation. Results are presented with respect to the individual experiences reported by the athletes, as well as the themes generated centred on personal self-cultivation and meaning.

**Results**

The experiences of the two injured basketball players recovering from a moderate to severe injury were characterized by several themes across both sets of interviews. Interview one focused on their thoughts, coping mechanisms and personality with the data revealing many divergent responses from the two participants with some similar responses surrounding feelings of loss of control, the importance of the role of social support, and the recognition that although recovering from an injury is difficult they are resilient, motivated and maintain a positive attitude. Interview two contained questions that delved into how the participants perceived the injury impacting their lives, the possible meaning derived from the rehabilitation experience, and what they may have learned about themselves, life, and/or other people during their recovery. Interview two uncovered many convergent and divergent responses, with both participants reporting an overriding positive attitude marked by perseverance, motivation, determination, and persistence. Though the participants had both similar, as well as varied responses to the questions, the dominant difference centred on how participant one was extremely articulate about a myriad of feelings about her experiences, while participant two was very focused on the physical aspect of her injury.

**Interview One**

**Participant 1**

Participant one had sustained an ACL tear to her right knee requiring surgery that was scheduled for two and a half months from the time of the interview. The interview took place 1 week post-injury. At this time she was understandably distressed and angry about her situation and reported feeling “upset” that this injury had occurred. She had torn her left ACL the previous year and was now facing missing the majority of another basketball season and the fact that she was dealing with another ACL tear was the reason for her saying she felt “disillusioned”. In spite of these feelings, she did not dwell on the negative for long and chose instead to talk about her feelings of motivation to push forward to be strong for surgery and to come back to playing basketball the next season. She recognized her resilience as both a dominant thought as well as part of her personality and described that her resilient nature was developed in part through previous experience with injuries. This point is highlighted in the following statement:
I went in a circle like this, right after it happened I was ‘it was ok it sucks, accept it move on let’s get this done’, and I was extremely angry. ‘Why me?’ That sort of thing and then it went back to acceptance. It was just frustration and I don’t want to do this again, like it took so much out of me last time, ‘don’t make me do this again’ and then back to ‘ok, well, you have two choices, lay down and call that your career or fight like hell.’

When asked questions that pertained to coping mechanisms, couched in terms of what was difficult to deal with at this time and what was helping to deal with her injury, a theme of a loss of control was revealed; however, it was buffered with the role social support played for her during this time. She reported that she felt a level of “uncertainty” and felt a “sense of vulnerability” which was difficult to deal with, but she took comfort in her social support system including friends, family and most importantly to her, the athletic trainer. She described her social support system as giving her the confidence to feel “hopeful” about her recovery and this provided much needed comfort at this time. The hopefulness and support she had, coupled with her description of herself as highly motivated enabled her to recognize that she is a very positive person who was going to get through this rehabilitation successfully.

**Participant 2**

Participant two had sustained a fracture to a sigmoid bone in her left foot. The interview took place 1 week post-injury. At this time she was “upset” and “discouraged” and her responses to the interview questions were dominated by her extreme focus on the pain she was in and the physical aspect of her injury. The theme of loss of control for this athlete was centred on her feelings of a loss of independence and a frustration with the challenges she was experiencing with daily activities of living due to her limited mobility (e.g., climbing stairs, walking to class, carrying laundry). Her feelings of loss of control were also noticeable in her fear that she was losing fitness, emphasizing her strong focus on the physical aspect of her injury. This is highlighted in the following:

*I can’t work out. I’ve gone to the therapy room and lifted weights, but I don’t feel that I have burned anything off. I just feel that every time I am just going to keep gaining weight instead of burning off anything which doesn’t make sense. I know I am not going to get fat or anything but I am going to feel that I am losing muscles because I am not working them out. That is what the big concern is.*

The participant also made several comments throughout the interview about how much pain she was in and how “depressing” it was that she felt she could not work out or practice. Although she described herself as feeling “depressed”, she was quick to point out that she relied quite heavily on her social support system including her teammates, her coach, and her family to help when she was struggling. She described the valuable role of her support system in the following; “everyone has been calling or stopping by so they don’t let me go very long being by myself.” She continued by describing the significant and appreciated support she received from her coach to help keep her involved and a part of the team, “he has been calling me a lot, just to make sure what is going on and he’s been trying to give me stuff to do related to the team so that I am not sort of floating away.” Although she did not initially describe herself as highly
motivated at this time, she was able to identify that she possessed a solid level of resiliency and a positive attitude most of the time, albeit at this phase, often with the help of her social support system.

Both athletes had a strong sense of resiliency and possessed a positive attitude. Participant one was more forthcoming about her positive nature and demonstrated a strong sense of focus and motivation to successfully recover. Participant two was focused on her physical pain and did not describe herself as particularly motivated at the time of the first interview, although she clearly described herself as positive and resilient and knew she would “make it through”.

**Interview 2**
Participant one was interviewed 9 months post-injury and 6.5 months post-surgery. At this time she had completed a significant amount of rehabilitation and had returned to modified practice. Participant two was interviewed 2 months post-injury, she had completed her rehabilitation program, and had returned to modified practice and was playing a few minutes in some competitions.

**Participant 1**
Participant one was very focused on maintaining a positive attitude and emphasized how important using previous injury experience was to enhance her confidence to deal with the present injury. Having experienced the same ACL injury to her left knee the previous year, she reported that knowing what to expect with respect to the details of rehabilitation demands and typical physical progress with all aspects of pre and post-surgery, helped her to feel more confident and focused on her rehabilitation. This point is highlighted in her description; “knowing what the next step was and how to get there, just the knowledge of having done it already… [previous experience] absolutely hands down helped.”

Her motivation remained strong throughout her recovery and she repeatedly made comments about her ability to “look forward” and “push through” the challenges of rehabilitation. She was adamant that she would not give up and was committed to adhering to all aspects of the physical exercises required in her rehabilitation program. However, she did recognize the difference between the physical versus mental rehabilitation by stating, “the physical aspect of it is not a problem. I don’t mind being in the gym twice a day. I don’t mind doing the extra stuff, stretching, icing. It is the mental part of it that is hard.” She viewed her motivation and determination in simple terms, “it’s just from within and you just do it.”

Reflecting on the impact, meaning, and self-cultivation of the injury for her, she described it as an experience that made her, “know she had to buckle down and push through” and she became aware of how “positive” and “goal focused” she was during her rehabilitation. Although she recognized that dealing with the injury was challenging and a long process, she kept focused on “the big picture” and was motivated to return to playing basketball. Through the process she became more aware of her depth of perseverance and determination as she said, “I just learned that I can. If I put my mind to something I can do it. I mean I am not going to question that ever again in my life.” When asked specifically what the experience of recovering from an injury meant to her she highlighted her perseverance when she said, “It’s definitely taught me a lot about myself that the fact that I am still here and that I haven’t thrown the towel in. Like wow, you say you are going to do something and you
actually do it.” She went on to mention the importance of her social support when she said, “the fact that I am still around is important. It’s definitely taught me who my friends are, my support system – [the athletic trainer].”

The participant was noticeably introspective at the time of the second interview and a couple of times during the interview said she knew she had “changed” and “matured” which she attributed to going through this rehabilitation process. She initially described herself as a person who values close friendships, but does not tend to open up and talk to people very freely. This experience taught her the value of confiding and trusting in people to the point where she described opening up and talking to friends and even to me as much appreciated as, “comfort in knowing everyone was there for me”, which she said helped her to feel more “confident” that she could persevere through her long rehabilitation. She went on to explain that she had come to view being injured as “a good thing”. Although she chuckled as she made the statement knowing it may sound odd to say that sustaining an injury could be a good thing she saw the value when she said, “I wouldn’t have changed it [being injured] because it has made me. It’s given me the ability to open up more. I am more determined than I was before.“

For participant one, dealing with the challenges of this injury was difficult, but led her to realize how much determination and motivation she possesses. Most surprising to her was that she learned to be more open with people and discovered the important role social support plays in her life. She now believes that this injury has helped her to realize that she can “do whatever I put my mind to” and feels more confident that she will be able to cope well with future challenges because of what she has learned through her injury experience.

**Participant 2**
Although the participant had returned to practice and was participating in some playing time in games she was still experiencing some pain and was still very focused on the physical aspect of her injury. She described her rehabilitation experience as “difficult” and “frustrating” where she had repeatedly felt she was “missing out” and felt “alienated” from her teammates and from feeling a part of a team, which she said decreased her adherence to attend rehabilitation sessions. She was pleased that she was practicing and playing, but noted that she was doing so with some hesitation due to pain she was still experiencing. During the first interview she had reported about her fear of losing fitness coinciding with her inability to train and her limited mobility at that time. At the time of the second interview, even with continued pain and discomfort, she was able to train and play so she was less concerned with fitness loss and instead this fear had been replaced with her self-described “confidence” of, “knowing that I am a fit person”.

In spite of feelings of alienation and pain she had been employing instrumental coping by making attempts to deal with the physical challenges of her rehabilitation including listening to her the recommendations from the athletic therapist, and consulting with her teammates and her coach. She also reported that although she felt some discouragement, overall, she was determined to “push forward” and was “motivated” to return fully to competition. The role of her social support system was described as “monumental” and that she always knew she surrounded herself with valued friends; this latest injury experience reaffirmed how important these people were to her. She also
acknowledged how much she appreciated the support from her coach and the athletic trainer whom she described as someone who was “always there” for her, whether it was for rehabilitation assistance or just someone to talk to about how she was feeling.

Reflecting on the impact the injury had on her she indicated that this injury experience had made her feel “concerned” in general and “uncertain about decisions in the future”, as she was concerned whether she will be able to remain healthy and how this might impact whether she would continue to play basketball. The impact and meaning of the experience was centred on her present state of uncertainty, coupled with her focus on the pain she was experiencing and her hesitation with certain movements on the court. Initially she was unsure what impact the injury has had on her and was unclear as to whether she had learned anything. When she continued to talk she realized that she had underestimated herself and she had learned that she is “motivated” and possesses a great deal of “determination” and “perseverance”. She described her learning in the following:

*It taught me that even if you are prepared something might come out of nowhere and you have to believe in yourself and the people that are helping you to get back to where you were. That fracture helped me see how much my family supported me. It also showed me how driven I can be when I want to get over something and back to doing what I love. This injury allowed me to see that having people around that you can trust and talk about anything with is something extremely important because sometimes I need to get things off my chest and then I feel so much better.*

Her support system provided her with comfort and assisted her to feel confident and motivated, which she described as something that was “engraved” in her with the present injury experience.

For participant two, dealing with the difficulties of recovery was challenging for her, characterized by her feelings of alienation and frustration, but through reflection led her to realize how much perseverance, motivation, and patience she possessed. She had reached a point at the time of the second interview where she believed that rehabilitating from this injury had taught her that she can handle challenges and she was confident she will be able to face other challenges in her life successfully.

### Discussion

The purpose of the study was to examine the experience and meaning uncovered through rehabilitating from an injury. The objective was to examine the potential for self-cultivation that many people may experience through rehabilitating from an injury. Data from interview one, which focused on establishing information about their thoughts, coping mechanisms and personality, revealed themes centred on feelings of loss of control, the importance of social support, and recognition of their capacity and ability to be resilient, motivated and to maintain a positive attitude. Data from interview two highlighted the meaning and learning the participants articulated upon reflection of their rehabilitation experience, which revealed their overriding positive attitude marked by perseverance, motivation, determination, and persistence.

Feelings of loss of control for the participants were a natural part of dealing with the changes and sudden disengagement
from sport experienced in the early phase of injury recovery. Rather than remaining focused on fears of loss of control, both participants were able to refocus on positive aspects of themselves such as how motivated, resilient, and positive they could be when facing a challenging situation. In light of this finding it is worth viewing this ‘loss’ as a potential catalyst to appraise the situation of injury recovery as an opportunity for becoming aware of one’s capabilities (e.g., motivation, resiliency, positive attitude). Viewing rehabilitation this way offers the opportunity to initiate a proactive approach, which ideally could be beneficial for those recovering from an injury. Data from the present study is consistent with findings from previous researchers (Bianco et al., 1999; Gould, et. al., 1997; Mainwaring 1999; Tracey, 2003) who commented on the benefits of a positive attitude as helpful in coping during rehabilitation. Mainwaring (1999) furthered this idea by suggesting, “…that an overall disposition for optimism has buffering effects for the negative emotion associated with traumatic life events.” The present study compliments and extends previous research by virtue of examining, through open-ended interviews, the potential and capacity for self-cultivation and meaning synthesis in injury rehabilitation.

The role of social support was linked to the participants’ proactive view in that they relied heavily on their support system to enhance their confidence, motivation, and resiliency. Social support has been identified as an important facilitator for rehabilitation by numerous researchers (Handegard, Joyner, Burke, & Reimann, 2006; Gould et al., 1997; Robbins & Rosenfeld, 2001; Udry, 1997). Additionally, Magyar & Duda (2000) identified the potential for social support to influence and lead to higher self-confidence, particularly with athletic training staff. This finding is consistent with the responses of the participants in the present study, emphasized in particular by participant one who linked her social support system to the confidence she felt they provided her and helped facilitate hopefulness about her recovery. This sense of hopefulness and confidence they gained has potentially interesting implications since both participants linked them to their belief they have an enhanced capability for handling future challenges they may face in life.

Participants in the study were asked specific questions regarding the possible impact, meaning, and self-cultivation that may have been revealed through the experience of injury rehabilitation. Choosing to conduct the study in this manner allowed for rich data to be uncovered about the experience that purposefully promotes a positive and proactive view of the injury rehabilitation process. While sustaining and recovering from an injury can be physically and emotionally challenging, the alternate view is to consider appraising and reframing it to be something to learn from and to be potentially positive from a personal growth perspective. The participants certainly struggled in the early phases of their recovery, but were also able to identify their abilities to be motivated, positive, and resilient in the face of this challenge. They chose to seek out social support, to utilize problem-focused and instrumental coping, and to recognize an awareness that they could persevere both in their current situation, as well as with future adversity. Reflecting on what can be learned and cultivated in injury rehabilitation was a beneficial experience for the participants in this study and has the potential for anyone recovering from an injury to appraise and reflect on the process as a meaningful learning experience. Viewing rehabilitation this way can also be used by researchers and
practitioners who work with injured individuals to assist in reframing the experience into one that can be viewed as positive and self enhancing rather than the traditional view of the rehabilitation process as always difficult and arduous with no redeeming qualities. The participants in the present study demonstrated that there is not only light at the end of the proverbial ‘tunnel’, but light along the way and in the future.
References


