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**Exploring the Role of Emotional Intelligence during Rehabilitation  
from Anterior Cruciate Ligament Reconstructive Surgery**

by  
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The present thesis is submitted as Partial Fulfillment of the Requirements  
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## Abstract

The purpose of this study was to explore whether and how Emotional Intelligence (EI) plays a role during rehabilitation from anterior cruciate ligament (ACL) reconstructive surgery. A mixed-methodological approach consisting of a dominant (qualitative) and a less dominant (quantitative) method was used. Five athletes undergoing rehabilitation from ACL surgery were interviewed and asked to complete Brief Emotional Intelligence Scale (BEIS-10) upon interview closure. Qualitative data were content analyzed in order to identify words and phrases pertaining to each participant's EI as well as to investigate other emergent topics relevant to the injury rehabilitation experiences. A case was developed for each athlete to allow better description of the experience during rehabilitation. A descriptive analysis of the quantitative data followed, which was used to complement the participants' voices regarding EI. Findings revealed the presence of all four branches of EI across the five participants as well as different levels of EI branches for each athlete. Final conclusions about the role of EI in rehabilitation from the ACL injury could not be made due to manifold factors influencing one's recovery. Suggestions are offered for future research, injured athletes and practitioners.

## CHAPTER 1

### Introduction

*“I was in a hotel in Bexleyheath for four or five months, I wasn't even training because I was injured all the time. My family was back in Northampton, my wife, my kids, my life... I wasn't well, but I didn't know it. I would sit there, crying for a couple of hours, not calling anyone, not having anyone to speak to. I thought it would pass, but it got worse. When you're injured it's a lonely world... I was in a place where I didn't want to be and I wouldn't wish it on anyone. I wanted to end it, to end the pain...” (Ashton, 2011)*

This emotional reaction is an extract from an interview with a professional soccer player whose life spiraled out of control after a series of personal problems and career setbacks. Despite a seemingly successful career, he suffered from severe depression which resulted in a suicidal act. Luckily, he survived to tell his story and help others deal with similar problems.

A number of researchers and philosophers tried to define emotions (see Solomon, 2008, for a review), yet the definition remains equivocal (McCarthy, 2011). In the attempt to describe emotions in a traditional fashion, Lazarus (2000) produced the following: “an organized psychophysiological reaction to an ongoing relationship with the environment, most often, but not always, interpersonal or social” (p. 230). He further suggested that these responses have three levels of analyses: introspective reports or subjective experience, overt actions, and physiological changes. In other words, responses are usually physiological such as sweating or increased heart rate, cognitive such as changes in perception or attention, and behavioral such aggression towards the opponent.

As emotions are an inevitable component of everyday life, they also have an integral part in the sport context. Whether it is an important victory that brings joy and happiness, a devastating defeat resulting in disappointment and misery, or a different emotion evoked by personal hustles; athletes constantly encounter a variety of emotions. Unsurprisingly, emotions elicited in sport settings have manifold impact on athletes' performance, coping and overall behavior. Particularly, there is a wealth of evidence that both positive and negative emotions are related to athlete performances (McCarthy, 2011; Jones & Hanton, 2001; Ruiz & Hanin, 2004) as well as to athlete injury occurrence (Devenport, Lane & Hanin, 2005). On a related note, Crossman (1997) reported that negative emotions experienced as a result of injury can influence the athlete's attitude towards it, consequently influencing the outcome of the rehabilitation.

The words presented in the opening paragraph here, spoken by the soccer player in Ashton's (2011) article, reveal complex experience. Namely, feeling overwhelmed with personal problems and not able to cope with accrued negative emotions, he ended up trying to take away his own life. Hence, regulating one's emotions would be a vastly important asset for athletes. Besides plainly experiencing the emotional responses, athletes need also to reflect on them critically and constructively (Botterill & Brown, 2002). A relatively new construct, regarded as "motivational or self-regulatory intelligence" (Salovey, Detweiler-Badel, Detweiler-Badel, & Mayer, 2008, p. 540), encompasses this reflecting and criticizing, as well as regulation of emotions. In fact, several components of this construct (i.e., perceiving emotions, managing emotions) have been found to be important performance enhancers (Jones, 2003; Lazarus, 2000). The construct is called *emotional intelligence*.

Ever since its theoretical establishment (Salovey & Mayer, 1990), emotional intelligence (EI) attracted academic attention and was defined as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990, p. 189). EI is considered to be a subset of social intelligence that is comprised of abilities and skills divided into four main areas concerning one’s ability to: (i) perceive emotion, (ii) use emotion to facilitate thought, (iii) understand emotion, and (iv) manage emotion (Mayer & Salovey, 1997). These capabilities are ostensibly dissimilar to the purely cognitive capacities measured by the intelligence quotient (IQ) and complementary to an individual’s general intelligence. Goleman (1998) argued that emotional competences or EI is twice as important as IQ (p.31). Nonetheless, not all researchers have come to agree with such striking statement. Concerning the infancy of EI, it received only partial support in the literature. Particularly, some researchers questioned its validity, specificity and measurement adequacy (e.g., Becker, 2003; Davies, Stankov, & Roberts, 1998). However, evidence that EI is associated with a number of positive outcomes has grown throughout the years. For instance, EI has been linked with academic performance (Barchard, 2003), deviant behavior (Petrides, Frederickson, & Furnham, 2004), pro-social behavior (Lopes, Salovey, & Straus, 2003), leadership (George, 2000), and work performance (Lopes et al., 2006).

Although a wealth of studies exists in the organizational sphere, EI research in the sport setting is still scarce. Findings from the existing studies indicate that EI is significantly associated with sport performance (Zizzi, Deaner, & Hirschhorn, 2003), perceptions of coaching behavior (Thelwell, Lane, Weston, & Greenlees, 2008), as well as to emotions experienced before successful and unsuccessful performances



(Lane, Thelwell, & Devonport, 2009b). In the two meta-analyses published so far, EI positively related with health-related variables, including minimizing the effects of stress (Shutte et al., 2007) and performance variables (Van Rooy & Viswesvaran, 2004). Still, none of the studies in the field of sport psychology have explored any role that EI might have in the recovery process of severe athletic injuries.

Injuries often constitute a very traumatic event in the athlete's career. Besides EI the physical pain and discomfort, an athlete also experiences psychological and emotional reactions. These reactions differ from individual to individual, but are commonly based on the individual's perception of loss (Green & Weinberg, 2001). While some athletes struggle emotionally upon the injury, others do not experience significant emotional disturbance. Emotions prevalent in the reports of injured athletes are frustration, depression, anger and tension--they appeared more often than other ones (Smith, Scott, & Weise, 1990). Whereas, Cramer, Roh, and Perna (2000) have argued that high levels of depression and stress can impair the body's healing process.

Given the nature of EI and the undeniable importance of the psychological aspect in injury recovery, I viewed athletic injuries as a very challenging experience for exploring if being emotionally intelligent has any kind of a facilitative role for the athlete who is severely injured (i.e., out of his/her sport training and in the rehabilitation process). More specifically, the aim of the present study was to explore the potential role of EI for severely injured athletes who were in their rehabilitation phase. Athletes who had undergone knee surgery due to anterior cruciate ligament (ACL) tear and were at the stage of rehabilitation striving to fully resume training and playing were asked to share their stories for answering the main question of this

*inquiry: Does emotional intelligence play any role in successful rehabilitation after ACL reconstructive surgery?*

## CHAPTER 2

### Literature Review

The aim here is to delineate the theoretical platform that arises from the review of the existing literature. Several broad areas of knowledge were explored in order to establish a theoretical basis for the present study. Nonetheless, two major themes guide this review: (a) emotional intelligence, and (b) athletic injuries and rehabilitation. Although the literature presents these themes in a variety of contexts, the present study focuses primarily on whether and how EI contributes to the rehabilitation from an ACL tear injury. Therefore, it was deemed important to consider research and theory from broad fields of EI and athletic injuries while staying focused on the specific experience.

#### Emotional Intelligence

The philosophical debate over the emotion-thought relation goes back several thousands of years. In this argument, emotion has historically, taken an inferior position to cognition. A vast majority of ancient philosophers and scientists have sided and worshiped the analytic intelligence, whereas emotion has been often deemed trivial and even a disorderly segment of human nature (Salovey et al., 2008). This reasoning that equates emotionalism to unintelligence sustained until the mid-20<sup>th</sup> century. It was Charles Darwin who first challenged the idea of reason's dominance to emotion in his early observation *The Expression of the Emotions in Man and Animals* (1872/1965) (as cited in Salovey et al., 2008). Before this work, research in intelligence and emotions were two separate areas. However, a few decades later (i.e., period from 1970-1989) the first precursors of EI emerged as intelligence and emotions integrated into a new category named "Cognition and

Affect” (Mayer, 2001). In the early nineties the first manuscript on EI was published (for review, see Salovey & Mayer, 1990) and sparked a surge of scientific interest in the field. Moreover, the construct’s popularity notably increased after Goleman published his best-selling book *Emotional Intelligence* (1995). Today, the psychological importance of emotions is widely endorsed, while EI is undergoing theoretical and research refinements through voluminous research projects (Mayer, 2001; Salovey et al., 2008).

In order to be regarded as true intelligence, any potential intelligence must meet strict criteria. These criteria can be divided into three distinct groups: conceptual, correlational and developmental (Mayer, Caruso, & Salovey, 1999). Conceptual criteria infer that intelligence must consist of mental abilities rather than merely preferred behaviors or habits. Correlational criteria state that intelligence should be comprised of a collection of directly related abilities similar to, but distinct from mental abilities described in already-existing intelligences. The developmental criteria, suggest that abilities of the intelligence should develop with age and experience. According to Mayer, et al. (1999), EI meets all three typical criteria of a standard intelligence. In their seminal article, they conducted two studies where they tested EI against all three criteria using 732 subjects. The findings revealed that EI can be operationalized as sets of abilities, EI correlates moderately with a measure of verbal intelligence, and that EI ability levels increase with age. However, such scientifically sound evidence was not approved on a global scale. Namely, Locke (2005) argued that the concept EI is an invalid, vastly due to its broad and unsettled definitions and lack of convergence with intelligence. He further stated that constantly-changing definitions of EI are an insuperable problem, as well as that EI does not exist, although intelligence can be applied to emotions. Notwithstanding the

occasional questioning in the literature by the EI skeptics, the interest among researchers for EI maintained an ascending path. In fact, it has been reported that by now the research body on EI (scholarly books, chapters and articles) counts more than 10,000 publications (Furnham, 2011).

Although EI enjoys great popularity few can actually define it accurately. Indeed, since the construct's foundation, its definition has taken many shapes. For instance, the initial definition described EI through abilities to carry out accurate reasoning about emotions and to use emotions and emotional knowledge to enhance thought (Mayer, Roberts, & Barsade, 2008). Whereas, a popular press definition of EI incorporated additional dimensions to the construct, such as well-being, motivation and handling relationships (Goleman, 1995). As such, definitions of EI have been dichotomized into two branches: (a) the original approach that described EI as an intelligence involving emotion and (b) the popularized approach that coupled EI with other skills and characteristics (Mayer, 2001). Similarly, theoretical models that inform most of the research on EI are divided into two main categories: the mixed models and the ability models.

Mixed models propose that intelligence embraces both mental abilities (e.g., emotional self-awareness, empathy, problem solving, impulse control) and self-reported personality characteristics (e.g., mood, genuineness, warmth). The two most prominent mixed models are Goleman's model (1995) and Bar-On's (1997). Conversely, the ability model of Salovey and Mayer (1990) conceptualizes the construct as strictly a set of abilities that can be learned and developed over time. Advocates of the ability model define EI as "...the ability to perceive and express emotions, to understand and use them, and to manage emotions so as to foster personal growth." (Salovey et al., 2008, p. 535). The ability model is composed of

four branches: (1) perception, appraisal and expression of emotion (2) emotional facilitation of thinking (3) understanding and analyzing emotional information, and (4) regulation of emotion.

While researchers still hold different views on the definition of EI, there seems to be considerably less consensus on how to best measure it. A number of instruments have been developed through the years, while disagreement exists with regard to the most apt way to assess EI. Existing instruments may be generally categorized into (a) performance measures and (b) self-report measures. Objective performance-based tests require a person to answer the questions for which there are correct answers, whereas in subjective self-reported tests individuals are asked to contemplate on emotional experiences across diverse situations and report their subjective perception. An inventory that is most frequently associated with the performance based measures is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT, Mayer, Salovey, & Caruso, 2002), which is the successor of the Multi factor Emotional Intelligence Scale (MEIS, Mayer et al., 1999). This 141-item battery test is design to measure all four branches of EI. In addition, the MSCEIT bears a total score as well as a score for each one of the four branches (Salovey et al., 2008). The MSCEIT can be completed either on paper or on computer, with both methods demonstrating large homogeneity ( $r = .98$ ) (Mayer, Salovey, Caruso, & Sitarenios, 2003). Furthermore, the scoring of the instrument is based on consensual or expert norms, which technique has raised doubts among researchers over its effectiveness of providing accurate scores (Conte, 2005). Nevertheless, Meyer and Fletcher (2007) suggested considering the MSCEIT for research in the sport domain.

Another commonly used self-report measure of EI is the Emotional Intelligence Scale (EIS, Shutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 1998).

The EIS is a 33-item measure designed to assess person's perceptions of the extent to which s/he can distinguish, understand, harness, and regulate emotions in self and others. The instrument developers reported acceptable reliability indices for internal consistency reliability ( $r = .87$  to  $.90$ ) and test-retest reliability ( $r = .78$ ). Confusion, however, exists regarding its dimensionality and correspondence to a distinct EI model. Although the developers of the scale initially suggested that the EIS is based on the Salovey and Mayer's ability model, subsequent studies (Petrides & Furnham, 2000) that used more sophisticated statistical methods proposed a multidimensional model which does not map onto the mentioned model. Unlike the MSCEIT, the EIS demonstrated high correlation with traditional personality and well-being measures, as suggested by Bracket and Mayer (2003). More specifically, significant correlations were found between the EIS and psychological well-being as well as four factors of the Big Five personality profile. However, earlier research of Shutte, et al. (1998) indicated that the EIS and four of the Big Five personality constructs did not show significant correlation.

Recently, Lane, et al. (2009) re-examined the validity of the scale in an attempt to adapt it for use with an athletic population. This resulted in removing 14 items that did not pertain to emotional content from the original pool of 33 items. The new, 19-item scale showed sound psychometric properties for use in sport and maintained a factor structure consistent with Salovey and Mayer's (1990) conceptualization of EI. Given the tradition of using self-report assessment in sport and exercise psychology (Vealey & Garner-Holman, 1998), the new scale was recommended for measuring perception of EI in athletes by Lane, et al. (2009). Last but not least, recently Davies, Lane, Davenport and Scott (2010) developed a Brief Emotional Intelligence Scale (BEIS-10), which is a 10-item instrument particularly

useful in situations where time is an issue. The BEIS-10 is inspired by the Salovey and Mayer's (1990) model and it demonstrated evidence of content validity, factorial validity, and test-retest reliability. Authors suggested BEIS-10 as a more efficient and psychometrically sound version of the EIS (Davies et al., 2010).

During the past two decades a wealth of information has become available on the relationship between EI and life outcomes. The breadth of existing literature now suggests that EI can predict better social relations in childhood and adulthood (Izard et al., 2001; Lopes et al., 2004), academic achievement (although this may be due to its overlap with cognitive intelligence) (Izard et al., 2001), health and psychological well-being (i.e., positive mood, self-esteem, maintenance of positive mood) (Slaski & Cartwright, 2002), use of psychological skills (Lane et al., 2009b), and workplace performance (i.e., better coping strategies for dealing with job insecurity and job-related tension, enhanced health and improved work performance) (Jordan, Ashkanasy, & Charmine, 2002; Lopes et al., 2006; Slaski & Cartwright, 2002). At least three of the outcomes cited above are equally important as successfully overcoming athletic injuries. More specifically, better coping strategies (Udry, 1997), general well-being (Jonson, 1996), mood states (Alzate Saez de Heredia, Ramirez, & Lazaro, 2004) and the use of psychological skills (Ievleva & Orlick, 1991; Theodorakis, Beneca, Malliou, & Goudas, 1997) have been found to correlate with a positive outcome over the occurrence of an athletic injuries. Hence, one can reasonably expect EI to play a significant role in the rehabilitation phase post a severe athletic injury.

### **Athletic Injuries and Rehabilitation**

It is estimated that the number of injuries in sport, exercises and recreational settings ranges from 3 to 17 million per year in the United States (Bijur et al, 1995;



Booth, 1987). The highest annual rates of all sport related injuries are reported for children aged 5 to 14 years and for individuals aged 15 to 24 years. Approximately two thirds of all sport related injuries occur between the ages of 5 and 24 years old (Conn, Annett, & Gilchrist, 2003). In Europe, the estimate is 5.8 million sport injuries occurring annually; with 25% of sports injuries occurring at the 15 - 24 years of old category (Bauer & Steiner, 2009). These startling statistics underscore the urge for research that scrutinizes causes and preventions of sport injuries.

Although physical factors, such as fitness level, equipment failure, severe collisions, and harsh playing conditions account for majority of exercise and sport injuries, psychological factors also contribute. There have been several attempts to identify psychological risk factors to athletic injuries in the past. The stress-injury model developed by Williams and Anderson (1998) offers a very comprehensive overview of the role of psychological factors in athletic injuries. The basic premise of the model is that psychological variables influence athletic injuries primarily through a linkage with stress and resulting stress response. In essence, a potentially stressful athletic situation (e.g., important competition, first practice in the new club, poor performance) can contribute to injury, depending on how stressful the athlete perceives it to be. At the core of the model is the stress response described through a bidirectional relationship between the person's cognitive appraisals and psychological/attentional changes. Furthermore, three broad categories were posited to influence the stress response. The first one, personality factors pertains to certain personality characteristics, such as hardiness, locus of control, sense of coherence, competitive trait anxiety, and achievement motivation that influence how a person reacts to stress. The second category, history of stressors includes major life events, daily hassles, and previous injury history. The third category addresses an individual's

coping resources and social support. These three factors may operate in combination or separately, in influencing the stress response and, ultimately, injury occurrence and possibly injury severity. The stress-injury model has received ample support for its features, and has been proven to be a practical theoretical framework for research in psychology of injury (Williams & Anderson, 2007).

An equally important aspect of athletic injuries is the athlete's psychological reactions post injury. Given that athletic injuries cannot be completely eradicated from sport and exercise, understanding the typical athletes' reaction patterns to injury as well as the psychological factors that might influence this response is crucial. What we know about psychology of sport injury rehabilitation is largely based upon two contemporary models: (a) the stage models and (b) the cognitive appraisal models (Brewer, 1994).

The stage models, originally adopted from the research on psychological reactions to terminal illnesses (Kubler-Ross, 1969), suggest that individuals who experience an injury or illness pass through a predictable and orderly set of stages in the course of rehabilitation. These stages include: denial, anger, bargaining, depression, and acceptance. Several authors (e.g., Astle, 1986; Lynch, 1988) have applied the Kubler-Ross's grief model to athletic injuries. The model has undergone several modifications in an effort to develop a sport specific stage model (McDonald & Hardy, 1990). However, regardless of its popularity in applied setting, empirical research has not supported the assertions of stage models for a common sequence of particular emotional reactions to injury (Brewer, 1994). It appears that psychological reaction to athletic injuries highly varies across individuals' and depends on diverse factors; contrary to what stage models would predict (Brewer, 1994).

On the other hand, cognitive appraisal models sought to explain individual differences that stage models could not account for. Several cognitive appraisal models have been suggested (e.g., Gordon, 1986; Weiss & Troxel, 1986; Weise-Bjornstal et al., 1998) in the literature. The basic scaffolding of these models ascribes the central role to cognition in determining psychological reactions to sport injury. Particularly, it is the way that an individual perceives or appraises an injury that determines the individual's emotional and behavioral response.

Perhaps the most advanced and well developed model put forth was by Weise-Bjornstal, et al. (1998). This model is an extension of the work done earlier by Anderson and Williams (1988), proposing the dynamic nature of psychosocial response over athletic injury. The authors synthesized the existing models of psychological response to injury to create an integrated model, and suggested that responses to injury are influenced by both pre-injury variables (i.e., personality, history of stressors, coping resources, interventions) and post-injury variables. From the post-injury variables, the way an individual interprets (or appraises) the injury and the rehabilitation process affects three interrelated parameters: the emotional responses, the behavioral responses, and the recovery outcomes (see Figure 1). The personal and situational factors are postulated to have direct influence on cognitive appraisal, and are continuously in the background of the dynamic process of recovery.

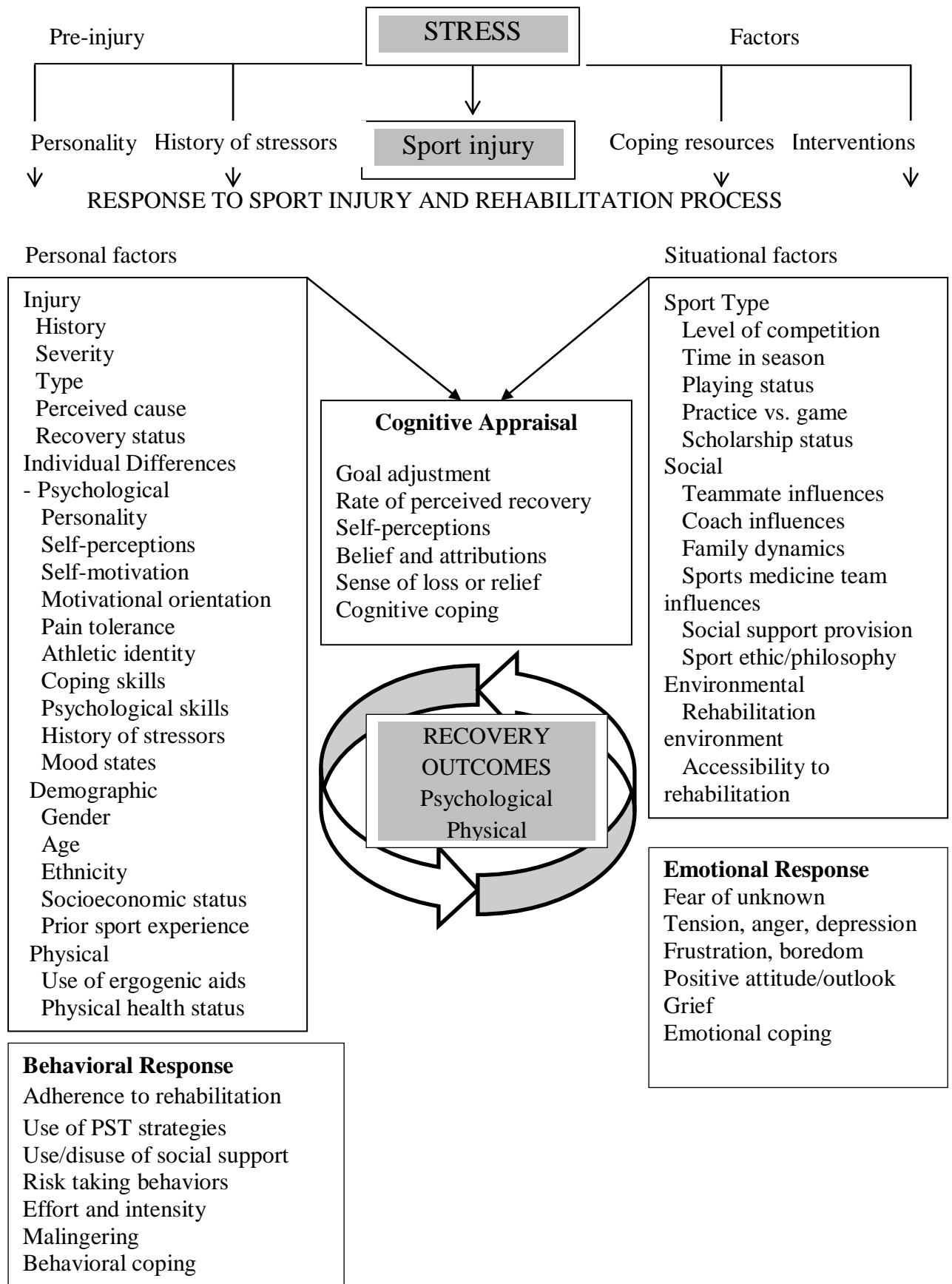


Figure 1. *Integrated model of the psychological response to sport injury and rehabilitation* Adapted from Weise-Bjornstal, et al. (1998), p. 49.

The integrated model (Weise-Bjornstal et al., 1998) is presented here for two reasons. First, the model has received a considerable empirical support in the field of sport psychology. Research has indicated that sport injury is a significant source of stress (Bianco, Malo, & Orlick, 1999), that personal and situational factors are associated with psychological responses to sport injury (Brewer, 1994) and that cognitive and emotional experiences were experienced and were dynamic through the course of recovery. Secondly, the model integrates the valid elements of other models into a consistent, testable, holistic conceptual framework that simplifies the understanding of psychological aspects of athletic injuries.

Once athletic injury occurs, psychological consequences involve cognitive, emotional, and behavioral responses (Wiese-Bjornstal, Smith, & LaMott, 1995). As noted earlier, all three parameters are influenced by personal and situational factors, whereas cognitive response is directly influenced by the two factors. Accordingly, rehabilitation outcome has been linked with all previously mentioned variables. Numerous correlational and experimental studies have been conducted to examine the hypothesized relationship between psychological factors and recovery from sport injury.

With respect to personal factors, previous injuries (Johnson, 1996), gender differences (Johnson, 1997a), and athletic identity (Brewer, et al., 2000) have been associated with sport injury rehabilitation outcome. The correlation between situational factors and rehabilitation outcome has been ambivalent. While Johnson (1997b) asserted the importance of social aspect in rehabilitative work, other researchers reported non-significant (Brewer, et al., 2000) and even inverse (Quinn & Fallon, 2000) relationships between social support and rehabilitation.

A number of cognitive factors have been linked to the sport injury rehabilitation outcome. A positive correlation with rehabilitation outcome was documented for cognitive appraisals of the injury situation (Johnson, 1996, 1997a), denial (Quinn & Fallon, 2000), emotion-focused coping (Quinn & Fallon, 2000), management of thoughts and emotions (Gould, Udry, Bridges, & Beck, 1997), various rehabilitation goals (Johnson, 1996, 1997a), positive attitude toward the rehabilitation (Johnson, 1996, 1997a), recovery confidence (Quinn & Fallon, 2000), self-confidence (Johnson, 1996, 1997a), as well as for the use of psychological skills such as goal setting and imagery (Ievleva & Orlick, 1991).

Emotional variables were also associated with sport injury rehabilitation outcomes in four studies. More specifically, general well-being (Johnson, 1996, 1997a) and vigor (Quinn & Fallon, 2000) correlated positively with rehabilitation outcome, whereas injury rehabilitation anxiety (Johnson, 1996, 1997a), psychological distress (Brewer et al., 2000), anger (Alzate Saez de Heredia et al., 2004), mood disturbance, depression, fatigue, and tension (Alzate Saez de Heredia et al., 2004) correlated negatively with rehabilitation outcome.

A behavioral factor that has received considerable attention in the sport injury research is adherence to sport injury rehabilitation. Although several investigations reported a positive correlation with injury outcome (Alzate Saez de Heredia et al., 2004, Brewer et al., 2000, Pizzari, Taylor, McBurney, & Feller, 2005), negative and non-significant correlations were found in other studies (Brewer et al., 2000; Feller, Webster, Taylor, Payne, & Pizzari, 2004; Pizzari et al., 2005). Besides adherence, other behavioral factors have also been linked with better rehabilitation outcome. For instance, higher levels of active coping (Quinn & Fallon, 2000), lower levels of

physical inactivity (Gould et al., 1997), and seeking of social support (Gould et al., 1997; Johnson, 1996; 1997a).

Experimental studies in sport injury rehabilitation have focused primarily on the effects psychological interventions on rehabilitation outcomes. The findings indicated that biofeedback (Draper, 1990), goal setting (Theodorakis et al., 1997), imagery (Cupal & Brewer, 2001), relaxation (Cupal & Brewer, 2001), and stress inoculation training (Ross & Berger, 1996) have had a positive influence on rehabilitation outcomes among athletes with injuries.

One of the most common and debilitating sport injuries is an acute rupture of anterior cruciate ligament (ACL) of the knee (Derscheid & Feiring, 1987). The ACL plays a significant part in stabilizing the knee thereby preventing anterior gliding of the tibia on the femur. There is evidence that the rate of ACL ruptures may be rising (Nitri et al., 1995). It is estimated that approximately 200,000 ACL injuries occur annually in the United States, resulting in nearly 100,000 ACL reconstruction surgeries, one of the most prevalent orthopedic surgeries (Wilk et al., 2012).

Physically active individuals who sustain an ACL tear generally opt for surgical intervention over conservative treatment. The surgical reconstruction is the first phase of a successful recovery and it is followed by physical therapy, which is considered to be a pivotal phase for optimal rehabilitation (Wilk et al., 2012). The postoperative treatment normally involves cryotherapy, electro-stimulation and various exercises performed to regain strength and flexibility of the knee joint (Wilk & Andrews, 1992). According to Blair and Wills (1991) more recent accelerated rehabilitation protocols recommend a return to sport participation in 3 - 6 months, in contrast to traditional post-operational programs that suggested a 9 - 12 month recovery period.

Along with the physical challenges and the strict postoperative rehabilitation that follow an ACL surgery, difficulties in psychological functioning have also been reported. Particularly, pain (Tripp, Stanish, Coady, & Reardon, 2004), mood disturbance (Morrey, Stuart, Smith, & Wiese-Bjornstal, 1999), and re-injury anxiety (Aeschilmann, Bauer, Etter, Gysin, & Seiler, 2002) are among the reported psychological issues experienced by individuals who underwent ACL reconstructive surgery. According to Brewer, et al. (2007), pain and negative mood tend to decline during the early period of postoperative rehabilitation as a result of interaction of different personal and situational factors (i.e., age, athletic identity, neuroticism, optimism, perceived daily stress, physical activity during rehab). Webster, Feller and Lambros (2008) reported that negative emotions, lower confidence and fear of re-injury were more experienced by athletes who did not returned to sport after 12 months rehabilitation than the athletes who did returned.

Evidence exists for the emotional facet of athletic injuries. The integrated model of psychological response to the sport injury and the rehabilitation process by Weise-Bjornstal, et al. (1998) incorporated an emotional response in both pre- and post-injury phases; suggesting that once the injury occurs, cognitive, emotional and behavioral responses interrelate across the rehabilitation, leading to recovery. A person's appraisal of the injury further influences his/her emotional response which, in turn, influences his/her behavior. If in this dynamic process the emotional response consists of predominantly negative emotions, the recovery may become uncertain. For example, depression was found to have a negative influence on compliance with rehabilitation (DiMatteo et al., 2000), which can ultimately influence the outcome of an injury. Moreover, depression and anger have generally been associated with poor wound healing following surgery (Kiecolt-Glaser et al., 1998).



Taken as a whole, the existing literature suggests that emotional competences may serve as a useful tool for ensuring effective and successful recovery from athletic injuries, especially those that require surgical intervention and rigorous rehabilitation protocols. EI as presented above, if developed by an individual, is a construct that entails emotional competence. This study attempted to explore the potential role of EI in rehabilitation from ACL reconstruction.

## CHAPTER 3

### Methods

This chapter begins with a brief presentation of mixed method research, followed by the definition of mixed method research, the rationale for using mixed method in the present study, and the challenges in conducting mixed method inquiry. Participants that partook in this study are also presented and procedures are discussed in details. The chapter ends with a discussion on how trustworthiness was established.

#### **The Methodological Approach: Mixed-Methods**

The history of mixed methods is best described through five, often overlapping time periods (Creswell, & Piano Clark, 2010). The first is a formative period that marked the time between 1950 and 1980. In this period, the initial interest for using more than one method emerged. The pioneers of mixed methods were psychology researchers that tried to combine multiple quantitative methods in a study (Campbell & Fiske, 1959) and multiple methods more in general (Denzin, 1978). The second period was the paradigm debate period and lasted for a decade, between 1970 and 1980. During this period, first arguments were raised on whether or not qualitative and quantitative data could be combined. The qualitative researchers of that time were obstinate that different assumptions provided the foundation for quantitative and qualitative research (Creswell, & Piano Clark, 2010). Furthermore, the procedural development period began in 1980s when attention was drawn to methods of data collection, data analysis, research designs, and the purposes for conducting a mixed methods study. In a seminal study, Greene, Caracelli, and Graham (1989) laid the groundwork for mixed methods research design by developing a classification system of five purposes for mixed method evaluation. The

purposes are: triangulation, complementarity, development, initiation and expansion. In this period, specific types of mixed methods designs were also discoursed. The final stage encompasses the period from the year two-thousand to present days. In recent years, there has been an increasing interest in mixed method research. Many have advocated the idea of mixed method as a separate design in its own (Creswell, 2003). Several definitions of mixed methods research have put forth over the past years, yet the one proposed by Creswell and Piano Clark (2007) offers the broadest and the most accurate description of the approach:

Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection an analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process. As a method, it focuses on collecting, analyzing, and mixing both quantitative and qualitative data in single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone. (p. 5)

Qualitative and quantitative methods fundamentally differ in the way of understanding of a problem. While qualitative data provides detailed understanding, quantitative provides a more general understanding of a problem. Both methods have distinct advantages, limitations and provide different perspectives. Therefore, the primary reason for utilizing the mixed method approach in the study is to better understand the research problem by converging both qualitative and quantitative approaches to it in a concurrent manner. Following Creswell and Piano Clark's (2010)

suggestion, in the present study the dominant qualitative data will be complemented with a less dominant quantitative data to enhance the strength of the findings.

Despite the advantages of mixed methods research, conducting it is not easy. Time and resources pose the main issues in collecting and analyzing both qualitative and quantitative data. The procedures of research become more complicated as it requires clear presentation for a better reader understanding. In addition, researchers are often trained in only one of the two forms of inquiry (qualitative or quantitative) and mixed methods require that they know both approaches. However, these issues are not insuperable and the value of mixed methods research seems to outweigh the potential difficulty of this approach (Creswell & Piano Clark, 2007).

### **Participants**

Purposeful sampling was used to recruit participants because of the narrow profile required for the study. In addition, a snowball or chain sampling was also employed in order to obtain more information-rich participants (Patton, 2002). The recruitment criteria were that participants must (a) be competitive athletes currently undergoing rehabilitation from ACL reconstruction surgery, (b) with an intention to resume their sport career, and (c) willing to share their experiences. Through the use of personal and university contacts, nine (9) athletes were identified meeting the criteria. They were contacted through email or telephone and invited to participate.

From the initial pool of nine (9) potential participants, six (6) expressed the willingness to participate and three (3) did not respond to the invitation. Eventually, data was collected from six athletes, of which one (1) never returned a signed consent form, and consequently was excluded from the study, leaving five (5) athletes to be analyzed here. Participant ages ranged from 19 to 29, with an average age of 25.8 years. All participants were of different nationality (Greek, Swiss, German, Serbian,

Colombian), practicing and competing in four different sports (ultimate frisbee, volleyball, handball, and football). Of the participants, two had played for their country's national team and three had played their sport at the professional level. More detailed participant information is presented below allowing the reader to get to know them better.

The study was reviewed and approved by the researcher's departmental ethics committee. All participants signed the consent form (see Appendix A) and are presented in this inquiry by a pseudonym.

*Boris* is a 29 year old volleyball player from Serbia. He sustained ACL rupture<sup>1</sup> during a tournament game in France. At the time the interview, he was five months into his rehabilitation and was gradually introduced to a general and sport-specific physical preparation regime. During his career he played for several Serbian high level teams and spent two seasons playing for two 4<sup>th</sup>-division teams in France. When the interview took place he was affiliated to his hometown team that competed in the 2<sup>nd</sup> division of Serbian Volleyball league. In the past, Boris had suffered from partial lateral meniscus tear--the injury that preceded the ACL rupture. His doctors recommended six to eight months of rehabilitation; Boris fully recovered after six months and two days.

*Julia* is a 19 year Ultimate Frisbee athlete from Colombia. She sustained the ACL rupture<sup>2</sup> during a practice with her team few days before the meet with the national team of Colombia. She had been playing Ultimate Frisbee for two years and during this period she became a member of the Colombian national junior team. When the interview was conducted Julia was nine months into the rehabilitation.

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<sup>1</sup> Full diagnosis: Total ACL rupture combined with partial rupture of medial and lateral horn of meniscus of the right knee

<sup>2</sup> Full diagnosis: Complete ACL rupture, ruptured posterior horn and body of lateral meniscus, bucket-handle lesion of posterior horn of medial meniscus, chondromalacia grade one medial femoral condyle.

After six months of rehabilitation she completed a knee strength test that suggested she was not ready to return to sport; she reached full recovery after 13 months and 13 days, which exceeded the 10 months initially recommended by her doctors. Julia stated herself that she did not feel ready to return to the sport six months following the surgery. Regarding previous injury experiences, it is worth noting that she suffered from a twisted ankle (one month off her sport) two years before the ACL injury.

*John* is a 28 year old football player from Greece who is professionally engaged in a Super League (highest division) Greek team. John sustained the ACL rupture<sup>3</sup> in season during a friendly game. When the interview was carried out he was four months into the rehabilitation. John has a notable injury history. Specifically, three years ago he ruptured his Achilles tendon. The injury required a surgical procedure and recovery lasted five months. An injury of collateral knee ligaments also preceded the ACL rupture. He fully recovered from the ACL injury after five months, although his doctors recommended six months of recovery.

*Klaudia* is a 26 year old handball player from Germany. Klaudia was playing in the 5<sup>th</sup> division of the German handball league when she sustained her second ACL rupture<sup>4</sup> at the right knee. At the time of the data collection, she was two months into preparation for surgery phase. The surgery took place two weeks after our interview. Klaudia has a long history of knee injuries. She was fifteen when she first tore her right ACL. Until her latest injury she sustained two more knee injuries. First, she ruptured the lateral meniscus of the right knee, due to which half of it had to be removed surgically. Then, a rupture of the posterior cruciate ligament of the left knee was incurred during a competitive game. At the time of writing up this study, she was

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<sup>3</sup> Full diagnosis: Total ACL rupture, partial tear of the medial collateral ligament and partial tear of the lateral meniscus

<sup>4</sup> Full diagnosis: Right knee re-rupture.

still in rehabilitation. The doctors recommended to her six months of recovery time and termination of her handball career.

*Tom* is a 27 year old volleyball player from Switzerland currently playing professionally for a 1<sup>st</sup> division team in Germany. He is a regular member of the Swiss national volleyball team. He sustained the ACL injury<sup>5</sup> during one of the games he played for the national team. Prior to the recent injury, he had never experienced any severe injuries. Although he was initially recommended ten to twelve months of rehabilitation, he fully recovered within seven months and twenty one days.

### **Data Collection**

**Qualitative Interviews.** A semi-structured interview guide was developed and used for this inquiry. The interview guide combined multiple open-ended questions to ensure the direction and flexibility of the discussion (see Appendix B). The questions in the interview were designed to elicit information regarding participants' experiences, emotional reactions and statuses during the time being injured. At the onset of each interview a standardized orientation speech was provided pertaining to the purpose of the study and issues regarding participation, anonymity and confidentiality. The interviews commenced by asking participants basic information about their entry to sport and subsequent career. Moreover, particular questions probed the participants' ability to recognize and articulate their emotions (e.g., "How did you feel...?"), the emotions in others (e.g., "How could you tell that your friend is feeling...?"), to regulate emotions (e.g., "Now that you are injured, do you do something to make the time pass faster?"), to express emotions (e.g., Do you share your emotions with...?) and thereby, addressed the participant's emotional intelligence. For the purpose of better understanding participants' emotional reaction

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<sup>5</sup> Full diagnosis: Total ACL rupture of the right knee, partial tear of the lateral meniscus

in the moment when injury was sustained, the researcher devised a table of the eight most prevalent emotional responses of injured athletes; underpinned by the findings of Crossman (1997) (see Appendix C). It included frustration, depression, anger, tension, fear, relief, rage, and irritability. The table was incorporated in the interview schedule and participants were handed the table and asked to rate themselves on a scale from 1 to 5. After which the results were discussed with them. The final section of the interview summarized the experience and encouraged the participant to discuss any possible disregarded topics.

Throughout the interview clarification probes and member checks were used to ensure an accurate and in-depth understanding of what the participants were describing (Patton, 2002). One pilot interview with an injured athlete was conducted prior to data collection. Minor changes were made to some of the interview questions to enhance clarity. The interviews lasted between 50 and 83 minutes, and yielded 130 single-spaced typed pages. The interviews were tape recorded with the participants' permission.

**Quantitative Questionnaires.** To evaluate participants' EI I used the Brief Emotional Intelligence Scale (BEIS-10) (Davies et al., 2010). The instrument contains only 10 items and is designed to capture EI quickly while maintaining acceptable psychometric properties (test-retest reliability,  $r = .35$  to  $.48$ ). The relative low test-retest reliability was not a concern for the study since the BEIS-10 would serve as an one-time second source of information aiding the researcher develop a more complete image for each participant. The BEIS-10 is particularly useful for collecting data in conditions where time is an issue. The instrument was suitable for this study because of its brevity and short completion time (see Appendix D).



## **Procedure**

Participants were contacted either by telephone or email, informed about the nature of the study, and invited to participate. Once agreement was attained, participants were suggested to write a narrative about their sport careers and injury circumstances, though it was not compulsory. A convenient time and location was then arranged with each participant. Three interviews were conducted over the internet due to geographical constraints, and two in person. Consent and demographic forms were sent by email or administered in person prior to the interview. The BEIS-10 was administered one day before the interview to be completed latest one day following the interview. All interview recordings were transcribed verbatim and transcription copies were sent to each participant for additional validation and clarification. All participants read and confirmed their interview texts; two without edits, additions, or comments while three of them made some corrections.

## **The Researcher as Instrument**

Although the present study utilized mixed method research, the qualitative method took the dominant role in it. Given the importance of researcher-participant relationship in qualitative inquiry, it is valuable to provide some information about myself. I am a white, 27 year old male with a long history in sport participation. I grew up in a sport family and was always taught about the importance and benefits of physical activity and sport. At the age of 10, I was introduced to basketball, which was my first sport involvement. Throughout my career I have played three different sports, yet volleyball occupied the largest part of my sport participation. During the eight years of my volleyball career I competed at three levels; the highest being the 4<sup>th</sup> division in Serbia. I quit volleyball the year when I enrolled at the University, but remained physically active through recreational exercise.

I never experienced any major injury in my career. However, I have suffered from several overuse injuries. I can vividly recall the helplessness and uncertainty I went through, especially the emotions associated with such a persistent obstacle. I experienced slight difficulties to cope with limitations to my training. Though I was impatient to return to regular training, I could not think of a strategy to help myself recover faster. My own and other injured athletes experiences of whom I know, certainly contributed to my interest in psychological aspects of sport injuries.

I have a bachelor degree in Physical Education (PE) and brief experience in teaching PE and fitness coaching. In fact, I knew one of the participants through my work as fitness trainer. At the time of conducting this study I was at the second year of my Masters studies in Sport and Exercise Psychology. My studies prepared me for the mixed methods used in this study.

### **Data Analysis**

**Qualitative Interviews.** All interviews were transcribed verbatim and their content analyzed by the researcher following procedures recommended by Miles and Huberman (1994) and successfully applied to sport psychology research (e.g., Gould, Dieffenbach, & Moffet, 2002). The initial step included listening to the interviews and repeated literal reading of the transcripts that allowed me to become familiar with the participants and the data as a whole. Literal reading was followed by making notes and highlighting the words and phrases (raw data) that seemed relevant to the purpose of this study. Both predetermined (i.e., based on the existing literature) and emerging themes and categories in these highlighted words and phrases were noted. Truthfully, initially I delved into each interview text with a specific purpose: to identify words or phrases that would reveal some branch of EI for each participant. At a second stage, I

re-read the interviews open to other emergent themes that the participants deemed important for the injury and rehabilitation experience.

Raw data were then reviewed, reinterpreted and organized in a data format comprised of domains, themes and topics relevant to the research question. As suggested by Creswell (2007), descriptions for each case (i.e., participant) are also presented below to allow a detailed view of the aspects of each participant experience.

**Quantitative Questionnaires.** Scores for each participant were plainly calculated. The five dimensions of emotional intelligence (i.e., appraisal of own emotions, appraisal of others emotions, regulation of own emotions, regulation of others emotions, utilization of emotion) were examined through the magnitude of the participant's own responses to the instrument. During the process of content validity, the factor expression of emotion was excluded from the instrument due to lack of suitable items from in the initial 33-item questionnaire. Given also the absence of norms for this instrument, participants' scores are discussed in relation to the interview data and in relation to the scores for each factor of the scale.

### **Establishing Trustworthiness**

Several provisions were employed to ensure the trustworthiness of the study. To promote credibility of the study, triangulation of sources was used. Triangulation includes using different methods of data collection as well as using different informants or sites (Shenton, 2004). In the present study, different methods of data collection were utilized, quantitative and qualitative sets were collected. Measures were taken to ensure honesty of the informants, as each participant was given an orientation speech, informing them on the right to refuse participation or answering of any given question and the right to withdraw from the study at any moment. Accuracy of the information shared was checked both "on the spot" during interviews, and at

the end of data collection, when athletes were asked to read the transcripts and consider truthfulness of data. All five participants confirmed that they had checked their transcripts, while three of them made corrections. Frequent debriefing sessions with my supervisor took place during the completion of this study. In addition, this research project was subjected to peer scrutiny in several occasions. The peer debriefing was a classmate also trained on qualitative research methodology. To ensure internal validity, thick descriptions of the findings are provided. Finally, my background, experiences and biases were explored and discussed in the earlier pages.

## CHAPTER 4

### Results

Each participant is presented as a case in this section. Initially, a brief narrative for each one of them is opening the case to allow the reader to better understand the athlete, his/her diversity, experiences and reactions to the injury, before touching on each participant's EI themes. These short narratives were developed based on the stories of each athlete sport career, injury and rehabilitation experience. Following the brief narrative I elaborate on the participant's four EI branches using a blend of what I heard and the participant's voice as well as on the scores marked on the BEIS-10 and how these relate with their spoken words. Lastly, I report on other themes that emerged from the interviews as important during the injury rehabilitation phase experienced that did not directly relate to EI.

#### **Boris: Bad Timing**

**The story.** Boris entered sport before engaging in volleyball; he had tried two other sports: football is for most kids' the first choice sport; and basketball - since his father was a basketball coach. He trained in basketball for two years until about the age of 10-11 years old, after that the sport became boring to him and he looked for another outlet. He started playing volleyball shortly after for a small elementary school team. Most of his career years were spent at the local club where he played for all age categories (from youth to senior). When he reached the age of 17 a big decision was placed in front of him: Whether to quit volleyball and embark on an academic career or keep playing volleyball and disregard his education. Fortunately, he managed to combine both when he moved to a town in south Serbia where he signed a contract with a local team and enrolled at the local University. After three

years of studying and playing he got an offer from the club he was previously playing for, which had decided to strengthen its team with contracts offered to a couple of its former players. He accepted the offer, signed a 4-year contract and moved back to his home town, leaving his education aside. For two seasons, the team played unexpectedly well, and as a result they qualified for the highest level of volleyball in Serbia. Yet, Boris was not fully satisfied with his status; he was the second setter for the team who didn't get to play a lot. So Boris joined a neighbor's team on a loan deal, as he had 2 more years of playing under his contract. There he spent two seasons, one of which he describes as: "Maybe the most important year of my career"

His first engagement outside of Serbia was with a French club in 2009. He played for them for one year after which he was forced to leave due to financial cutbacks for their foreign player roster. He still wanted to play in France, so he participated in an off-season tournament in Nancy, where he could be seen and possibly recruited by another team. The plan didn't go as expected for he sustained a right meniscus injury. In Boris's opinion this is when the bad period in his career started; the damaged meniscus was just a first stage to a bigger injury, "My injury, you can say it happened in two parts, the first part at the tournament in Nancy and second part later"

Due to the injury he withdrew from the tournament and flew back to Serbia without a playing engagement. This event triggered a rather strong emotional reaction in him. He described his feelings saying: "It was more like the big pressure in my head. Anger, first of all. When the medical team at the tournament told me 'OK, this tournament is over for you.' That was a big hit for me, not pain, but the anger. ...Anger was the most present emotion for me and after that, the pain is not important, but it is the disappointment. Feelings of disappointment for I cannot play." Beside the

emotional, a cognitive reaction was also elaborated by Boris concerning his injury, “At that time, my head was like a big mess, lots of things passed through my head and lots of questions. First and most important, maybe I ruined the whole upcoming season, because I cannot play, so that means no one can see how I play, all that means I cannot negotiate with the clubs. So, everything, the injury itself was like a big question.”

After the diagnosis, he was prescribed with one month off sport and a specific exercise regime to strengthen his knee joint. He followed the instructions and once his knee recovered; he found a temporary position playing for a lower league club. In December of the same year he signed to play for another French team. This contract presented him with a big challenge, given the fact that his new team played at a level higher than his previous one. After only four games played and a sudden movement with his right leg, his world crushed. During a warm up he made an abrupt movement to the front and he felt excruciating pain: “I just felt the incredible pain, like never before. More in my head! So I knew this is the end; the Nancy tournament it was the beginning so I knew that this day might come, and at that moment I knew it: ‘OK, this is that moment.’”

He got examined in France and diagnosed with a torn ACL. His reaction to such a severe injury was somewhat deferent from the initial reaction to the meniscus damage (deemed lighter injury), “Surprisingly it was not like first time, there was no anger, I was calm... Yeah, it sounds a little bit strange but the bigger impact on me was the first time, at the onset of the injury. This second time the torn [ligament] did not have a big impact on me, maybe because I was prepared for that, and I was aware of what I needed to do.” Elaborating on his emotional reaction for the moment of realizing the injury’s severity, Boris said: “Frustration because, I could not play. I

came to this club to help, and I couldn't help. So, I was like frustrated because at that moment I thought I disappointed the whole team. And the irritating thing was that, I couldn't walk. And when you can't do some basic things, like walk, run, do lots of stuff at home in my room, you feel that this thing is irritating.”

**Boris' EI.** Boris' scores on BEIS-10 reveal maximum scores for regulation of own emotions; whereas in all other factors his scores were also on the high end (see Table 1). These scores indicated high emotion regulation in self in support to the information he shared during the interview.

***Perceiving emotions in self.*** His skills for perceiving emotions were apparent in situation where he dealt with post injury adversities, “It was more like the big pressure in my head. Anger, first of all... That was a big hit for me, not pain, but the, the anger... Surprisingly it was not like first time, there was no anger, and I was calmed.”

***Perceiving emotions in others.*** Boris explained how he appraised emotions of his close friend and former teammate who was also suffering from a severe shoulder injury, “He was disappointed not because he needed to wait two more months to play from what he had planned, but mostly because it's his 8<sup>th</sup> season in France and the first time he can play the real volleyball... you can compare how he talked about volleyball before and after, you see how he is not interested and because that's a Pro B [team] and you know that he is not happy.”

***Utilizing emotions to facilitate thought.*** Emotional facilitation of thinking, among all, refers to the ability to redirect one's thinking based on the feelings associated with objects, events, and other people (Salovey et al., 2008). Boris demonstrated such ability several times during the interview: “So in my head was a big mess, first anger, than disappointment and on the third place was like ‘OK after



one, two days I need to chill out and see what will happen next, that is the best I can do.’ When I saw all of that I talked to myself, I said ‘I must accept it’, you know, ‘I don’t get anything positive if I don’t speak to everybody, if I feel anger, if I feel disappointment.’”

***Understanding emotions.*** With respect to this branch, Boris showed decent understanding of the causes and consequences of particular emotions, which is one of the indicators of understanding emotions: “Frustration because I cannot play. You notice that you cannot do anything, but you want to do it. And, there is a thing that does not let you do something. And I feel the frustration I cannot do lots of other stuff, normal stuff. When Boris is frustrated, he is calmed and he doesn’t want to put that negative energy to something else.” “When I progress I am happy, when I progress even more I am happy even more.” “If you have negative thoughts and something depressing it is like a big brake. Because depression undermines your progress, but when you eliminate depression, very quickly you continue to progress”

***Manage emotions in self.*** The evidence for Boris’ ability to manage his emotions was captured when he described how he deals when he is frustrated: “So at that time I am calmed and I do things that I cannot do, I do things that cool me down and I know that after some time that feeling will be gone. And I didn’t look on the calendar I just look at my leg and see how I progress and if I progress well I am happy, I think it is normal.”

***Manage emotions in others.*** A glimpse of regulation of emotions in others was obtained from the part of the interview where Boris described how he helped his injured friend: “And I gave him lots of encouragement; I talked to him and say ‘Be patient you will play in January, February, it is not too late.’ I do speak [to him] but, I

do not say the usual things he listens every day. So, it was like encouragement but I think it was in some other way.”

Aside the predetermined EI branches identified in Boris’s rehabilitation experience, three themes emerged in our conversation, which are noteworthy in the context of injury rehabilitation: Boris’s positive attitudes, social support, and explanatory style. These are presented here with direct quotes from Boris.

***Positive attitudes.*** His positive outlook is especially prominent in the following statements: “So even now, when I am, I think already 90% ready to go back in the game I still have some problems, but I don’t look at these as problems, [I] just look at them as normal things because, the doctor said for a very long period I will have some things that will remind me that he fixed something in my knee. I think it is the most important thing to stay positive; if you stay positive you can do anything.”

***Social support.*** Once he sustained the injury and during his rehabilitation, Boris received vast support from his friends and teammates: “Lots of people gave me the courage to recover fast and be back on the court soon. Lots of friends from Serbia, France, of my ex-teammates; at that time I really felt some extra energy. I needed maybe the most [of energy] at that time.” He also had support from his family, who provided him with a distraction from the injury itself, “Parents and sister, from the beginning of injury were with me the most. And they helped me a lot because we didn’t actually talk about the injury, and it was a good thing for me.”

***Explanatory style.*** The following two statements portray how Boris appraised his injury in two different situations. First, at the onset of the injury: “I imagined it like a big pyramid in front of me. Every day is one step upstairs, closer to total recovery, and official approval from my doctor that I can go back on the court was the top of the pyramid.” Second, as his overview of the injury: “Since it is a big injury, I

don't think it's brought anything good [to me]. I did have maybe better connection with some people and saw the other side of sport, and I think it is just like one more experience, but not an experience that was a good one."

**Julia: Sensitive Lioness**

A noteworthy upside of the qualitative research method is the acknowledgement of participants' uniqueness and its concomitant promotion. More concretely, it allows each participant to bring something new to the study and thus, contribute to its broadness. In the Julia's case, what attracted my attention the most is her sensitivity (vulnerability) for "hard" topics, such as her injury. Several times during the interview she demonstrated this characteristic. For example, when I suggested switching the conversation to a "less happy part of the topic" (e.g., injuries in general), she responded "All right I am going to start crying now." This statement was indeed accompanied with a smile and said in a joking manner, however, later on at the end of the interview she revealed how she truly felt: "We were talking [her and me] and I was talking about the lion and I was happy, but when I began telling you my story I was like 'Oh my God I am going to cry.'" Her sensitive nature was also apparent in other occasions during her rehabilitation: "It was one class about Colombian history or something, we were watching a video about the Colombian soccer team and they were winners or something, like they had won the championship, I couldn't stand that, I had to leave the room because it was too soon, so [watching] that thing didn't help me at all." At that point she was moved by an external stimulus, a movie about a Colombian sport team, which she found unbearable to watch. Another quote that reveals her sensitivity especially during the time she was injured says: "I could become sad really quickly, if talking about my injury or if talking about Colombia [i.e., the injury period]." She explained this sensitivity

through the secrecy she held for the injury “I think it is because I am not talking about that with anybody.” When asked whether she felt comfortable sharing her emotions with her closest family members (i.e., biggest supporters), she responded: “About everything yes, but about my knee I didn’t talk to them. I just talked to my sister and she always said ‘Yeah, you can do it’ but I guess not the way I needed.” This last statement reveals her reluctance to share feelings with her parents during the rehabilitation and her choice over her sister for support. Julia’s entry to sport and subsequent career are narrated below.

Julia started her sport career playing basketball for her school team. She played for three years until she sustained an ankle injury. This injury kept her off the court for two months and during this time she decided to quit basketball. Her sister was playing Ultimate Frisbee (UF) at the time and had a great influence on Julia’s decision to change sports. Beside her sister’s influence, she also didn’t feel basketball was her ‘*thing*’ “It wasn’t a real, a real thing [for me].” Once she recovered from the injury she went to one UF practice with her sister and started to like the sport. In the beginning, it was not going very well but then she met her coach, Juan, who gave her the right momentum and motivation to improve. In her words: “Then I met Juan and he gave me the passion that I needed. I mean the heart and all the stuff, because I was just playing.” Soon after, she became a member of the national junior team of Colombia where Juan was the coach as well. In UF she likes running and the dynamism of the sport, the fact that she is playing with her sister and the travelling associated with playing for the national team. On the other side, she doesn’t like losing and team fights that occasionally escalate between players. Her biggest success was when she joined the national team thus the part of that ‘*dream*’: “Being in the junior team and being part of the big dream, and because they were also champions.”

Her first injury experience occurred during her basketball career, as mentioned earlier. She was pushed hard from another player during a game and her ankle twisted. She had to wear the cast, or a 'plaster' as she prefers to call it. While the injury was not very serious, her reaction was rather unusual: "Well, it was my first plaster so I was happy because everyone was signing [on] it. So I wasn't really sad for that". The recovery lasted for two months yet instead of returning to basketball she embarked on a UF career.

The second injury experience was a major knee injury when she ruptured her ACL and lateral meniscus and sustained a lesion on the medial meniscus. The incident happened in the last minutes of a practice with her club team. She and her friends decided to play an extra game before practice ended, which it turned out to be a bad decision. As she jumped to catch the high disc, while landing her shoe got stuck in the ground causing her knee to twist improperly, resulting to her severe knee injury. Her immediate reaction is depicted in the following quote: "And I began to cry. So I cried, I cried, I cried." Making things worse for her, was the fact that two days after the injury she was supposed to join the national team for a training session and a game, "That was on Saturday and on Monday I had meetings with the Junior team; we were going to see each other in the gym and all the stuff, we were going to play to get each other better". This fact further burdened the situation she was already in. Before she was finally diagnosed with the ACL rupture, she had to visit three different doctors in two different cities. Initially, one doctor prescribed her to put a cast, while the third doctor prescribed reconstructive surgery due to the size of the damage. She didn't take this prescription well as she elaborated during the interview "I was really angry when the doctor said that he needed to do the surgery." This anger affected her attentiveness while in the doctor's office: "The doctor actually said it but I wasn't really paying

attention of course. He said it, my dad listened, but I wasn't paying attention." She further explained that her dream was crushed and that she didn't care what was ahead of her: "Like, I didn't really care, I said 'Well, do the surgery I can't be [like this] anymore,' I said 'My dream is over now, so do whatever you want.'"

Looking at the emotions table, was the moment she realized what she is dealing with; frustration, depression, anger and irritability were the ones she scored the highest with 4's and 5's. This emotional reaction was explained with her unique way of handling adversities: "I get better with my shield, not talking to the people in that moment, so I was angry and said like, 'Don't talk to me,' but it was actually because I was going to cry again. So that's my shield saying 'I am really angry and don't talk to me.'" In essence, she tends to "place the shield of anger" around her in order to be protected herself from external harm. This statement also partially supports her high irritability score. On the other hand, the anger she was experiencing was due to the doctor's prescription for surgery: "Well the anger was with the doctor, of course, because he was going to do the surgery. And I said 'You don't have to do it, I can play' but of course he was doing it for my own good."

Julia's scores concerning her present emotional status differed vastly from those related to the onset of the injury. Particularly, her relief at the time of the interview was heightened and her irritability had regressed. While completing the table of emotions, she elaborated on her present emotional status saying "I am happy now." Julia's words portray that the successful surgical procedure and recovery along with the closer relationships with family and friends contributed to this emotional change: "I would say my recovery was a big part of it. Also with my friends and family I am really good [now], so I don't have reasons to be sad or frustrated or angry."

**Julia's EI.** Julia marked maximum score both on regulation emotions in others and utilization of emotions using the BEIS-10. A high score was also reported for appraisal of other emotions, whereas both regulation and appraisal of own emotions were reported as being on an average level (see Table 1).

*Perception of emotions in self.* Her perception of emotions was prompted through questions like “How can you tell when you are angry?” Julia described it through two distinct sensations: (a) her quietness--“I don't talk, and I am [normally] very talkative. When I am quiet I realize that I am angry for something.” and (b) her facial expressions--“And of course my face looks like Grrrr, like a lion.”

*Using emotions to facilitate thought & managing emotions.* In one particular statement she shares her utilization of emotions both to facilitate thought and to manage emotions: “When frustration came with tears or something, and then I began to talk to myself ‘No, you can do it, let's do it,’ the first reaction was crying, because I believed that I could not do it and then I realized that I can do it, so it is like ‘No, stop crying.’” Her words voice her first reaction to frustration tears, which then she harnesses frustration to engage in positive and motivational thoughts.

*Understanding emotions.* When asked to elaborate on the feeling of rage Julia said: “Well that joint with anger. And I think it has the same meaning for me.” This statement indicates her understanding of two similar emotions and their relation.

Aside the EI branches identified in Julia's experience, it is important to also note like I did for Boris, the social support she received from her family and friends. Interestingly, a previously unknown person offered her online support and became a friend to whom she felt comfortable sharing injury related setbacks, like “So if I was sad and I wasn't able to jump, I'd call him, and I said like ‘I can't jump, what can I do?’ And I began to cry and he was like my relief in that [moment]. Because of course

there were moment that I didn't know all the stuff but I wasn't able to talk to them [family and friends] then I would talk to him or my sister, so he helped me a lot." Her parents were also an important source of support: "It was my mother that I already told you and of course my father, and he saw me like a reflection of himself, because he got injured in one ankle and I got injured in the ankle. And then he injured his shoulder when he was young and I also got injured, and in 2011 he injured his knee and I also injured my knee last year. And of course my sister, she helped me a lot. Well my family, I guess."

In closing, Julia's general perception of possible losses and benefits that resulted from the injury was portrayed through the following words: "Now that I am thinking, I would say yeah, I made more friends, well the friends that helped me to my recovery, the new people I met and my family [we] got closer, OK, there was a little bit happy side."

### **John: Taking it Easy**

John started playing football when he was 6 years old in his elementary school. Before football he did not play any other sport. He got his first player's license at the age of nine playing for the local junior team. He played for this team for seven years, after which at the age of 16 he was recruited to play for a professional team. From then on he played professionally for five different Greek teams which played in three different divisions. Today he is still playing football professionally.

What John likes about football are the strong emotions experienced during successes, the sport's uniqueness, the technical aspect of the game, but most of all he likes the demands of the position he is playing. In his words: "If you win the emotions are great. You have a great time. Maybe outside is raining but your mind is clear and the feeling of victory is unbelievable and yes, outside-raining but in your mind [there



is] sun. People don't understand there is a technical ability [involved]. It is very unique; some people could never imagine. There is also a good feeling when your energy goes out when you are playing. You feel like you did psychotherapy! There are abilities, like you need to run a lot; you need to cover many time for your teammates, but you need also to support the offensive line. I think this position [midfielder] is the most important for a team that wishes to do well, improve, and play good football. This position is for smart players and with leader abilities also. You fight, you create, you destroy, you create, yes, you are in the game all 90 minutes.” On the other side, there are not many aspects of the game that he dislikes; besides hooligans; player misconducts on the court, and spectators who are indifferent and unsupportive. “Sometimes I get nervous from the fans that didn't come to watch a game; [they are there] like going to a theater, like going to a cinema movie.”

Concerning the theme of my inquiry, in the question whether he had experienced any major injury before the ACL torn, he shared that previously he had problems with his Achilles' tendon. Three years ago he ruptured it during an official game. The injury was preceded by several years of pain and discomfort in the lower foot region. Despite the numerous treatments he underwent to fix the problem, the pain would not be eradicated, eventually taking its toll. The day he sustained the Achilles' tendon injury, he was transported to the hospital and scheduled for surgery immediately. Given that this was his first major injury, he experienced it rather restlessly. The day spent at the hospital before the surgery he described it as: “I was sad and sorrow and an ambulance came to take me and drove me to the hospital. Yeah, I was nervous, I didn't sleep. The first night I didn't sleep, the next day I had the operation in the morning. The night after the surgery I slept, I was sleeping again. Terrible, terrible, my [blood] pressure was 210.” The thoughts that were crossing his

mind are depicted in the following words: “I cannot continue playing for six months; half of the year [is] wasted. My dreams for a better season were destroyed in that moment.”

Nevertheless, he found the way to tackle the emergent problems and received unselfish support from his coach and physical-therapist, “I tried to set goals every period, more improvement makes me feel better and more confident, makes me stronger and show me that I could do some things. It was the time when I graduated from the University, maybe this helped me because my mind was focused and maybe this helped me to change my mind toward thinking something else, not only a about the bad situation, the bad experience I had.”

Maintaining systematic contact with his team provided him with the necessary support he needed during his injury and rehabilitation experience. “My doctors and my physical-therapist advised me, yet I also worked on my mentality. I maintained contact with my teammates, I went to practice, I spoke with them, made jokes, even [joked] with my injury. Also [I maintained contact] with my coach, he advised me a lot of times. That is very encouraging for me and showed me that I am an important piece and member of the team.” Yet, John also experienced some moments of despair. He didn’t like the feeling of helplessness he was perceiving when watching football games, especially his team’s games: “Sometimes you think you cannot get out of this thoughts [injury ones], [like] when you watch football, especially your team [playing]. You watch a game, you want to support your teammates, you feel this energy, but you cannot. Irrespective of the game score, I feel sad, I feel that I don’t share the [same] feelings with my teammates, with the crowd.”

The experience of past serious injuries became particularly prominent when we discussed the circumstances of his latest injury (torn ACL). According to John, the

past experience of a severe injury substantially alleviated his stress response on subsequent injuries. In his voice: “[The] previous experience helped me. I was calmer this time, even more than the doctor was. I think that previous experience helped me, gave me important help to this reaction.”

The injury occurred at the friendly game against the club’s youth team. He was running when the ball went out of his control. In an attempt to retrieve the possession over the ball he made a long step forward and tried to stop. His foot plunged into the ground and the force generated on his knee was too much for his ACL. He heard a ‘*crack*’, “I was down, immediately. I heard the crack and immediately felt that something important [happened], something severe.” Compared to his earlier knee injury (collateral ligament) he described the ACL incident saying: “I felt that this was something more important, more severe, and something different.” He was then examined by the team doctor, sent home and recommended to have an MRI examination in the next day. However, John was sure that his ACL was torn, “I felt sure that something important, something severe happened. I did the magnetic [examination], I went to the doctor and he announced the results to me. My fears were confirmed.” The very moment of realizing the nature of his injury he felt slightly sad and disappointed, “I was little disappointed and I was sad but I tried, at the same time, I tried to change my point of view.”

Concerning the moment of realizing his injury’s severity, the emotions that were marked with highest scores in the table of emotions were frustration and fear. He elaborated on the frustration he felt back then as an inability to do his favorite activity, despite the significant investment and effort he had put into it: “Frustrated, I cannot continue to do my job, [the job] you would like to [do], you are stopped, not [in] my intentions and you think you do all the things right, you work, you train well, have a

good nutrition, a good life also, and you don't expect this to happen." The fear he felt was experience for two reasons; for the uncertainty over his career continuation and for the surgery expectations. "Fear, firstly [for] if I can overcome, if I can come back to the same the level, the same performance. Then fear about the surgery also; there is this feeling this emotion before a surgery will take place."

What changed on his emotional status since the onset of the injury to the time of the interview was that frustration and fear gave their place to relief and tension. "I am relieved because I began to run, to improve. I saw this improvement on my body, on my knee, and this relieved me a lot. This convinced me!" The sensation of tension experienced by John relates to the time of return to football that is approaching and the limited time left in the playing season: "Tensed because I started doing things, I am in a good level now, I could [have a] good performance. I need maybe one month to start normal training and this makes me feel [like] I want to run more, there are not many games left to be played."

**John's EI:** John's scores on the BEIS-10 revealed average values for all five factors (see Table 1). Nonetheless, the branches of EI were heard in his spoken words.

***Perceiving emotions in self.*** On how he recognizes a certain emotion when it occurs, John explained that his thoughts as expressed through his self-talk are the main indicator of how he feels in the moment. In his words, "Especially with self-talk, I say something bad like, 'your effort goes to the hell, you did a lot, you gave your life in this, in football and there is something holding you', something that doesn't let you to move on." This particular example depicts how John recognizes the feeling of frustration.

***Perceiving emotions in others.*** He showed a fair perception of his brother's emotions when he was suffering from the same injury. "He was angry for sure, more

than me. I saw his reactions at home. He was sad sometimes, but there was anger too, I could feel this. When I didn't do something he wanted, he screamed. When he is sad, if you are close to the person, you could see his face, his reactions.”

***Utilizing emotions to facilitate thought:*** With regard to this parameter John explained how he both understands and uses emotion to facilitate productive thinking: “I think it's also important to accept this feelings, maybe it's bad feelings, and to control it, to fight [for] positive strategy, to think [in a] positive way. You have to recognize these feelings and to become stronger.”

***Expression emotions:*** John shared that he voluntarily expresses his emotions to his girlfriend as this expression of feelings helps him feel better. “She helped me to find solutions to these feelings and it's good for my rehabilitation. She could understand me more, she knows me, understands me better, she knows how I react, when I am sad, when I am happy. And she also knows how to make me happier.”

***Managing emotions in self and others:*** Once the injury occurred, various emotions were experienced both by him and his significant people. His parents, for example, took his injury more seriously than he did, which is why he tried to manage their emotions: “I tried to relax my parents too; my parents were more scared than me and more pessimistic. My parents told me ‘OK, stop football, do something else.’ But then, I tried to relax more, to change the mentality. I was sad but at the same time I tried to change my point of view.” There are specific things he does to alter his emotions, including reading and playing guitar, “I like it so much to find my mental solutions from the books I read; I feel my mind is happy. After I do this [reading] I am happy and very calm. I could clear up my feelings with special readings. I think this action makes me feel better. And music also, music is better than psychotherapy for me.”

Beside the EI branches presented here, John's infinite *positive attitude* stood out in our conversations.

**Positive attitudes.** For example, when the major injury occurred, John described his feelings as "I was little disappointed and I was sad but I tried at the same time to change my point of view. I was joking with my doctor; he couldn't believe it, he was also happy with my behavior, my reaction." His positive stance for major life events perhaps is what enables him to cope well with adversities and to have a rational explanatory style, "I don't believe in bad luck, [I believe] more in possibilities, as a mathematician. I tried to find out what was my mistake and what I didn't do well, what was wrong with my feet, maybe with my mind, but more with my feet, and what increased the possibilities to this injury."

When asked about his general perception for the injury and whether there was anything positive about it, he shared the following: "I think I became little wiser in my mind. My mind began from a new position, a new start. I can say more clearly who my friend is, who helps me, and also [I can] clear my feelings, and I think I got stronger. [It] also showed me my weaknesses and I usually watch on video my games and I try to find my weaknesses and my strengths. And I think this is not negative, this is positive, what I earned." The above quotes revealed that John indeed recognized a brighter side of his injury in opening new perspectives, comprehending his strengths and weaknesses and finding his real friends.

### **Klaudia: The Disobedient Knee**

Klaudia started practicing handball at her school when she was nine. Given her talent for "ball" sports, she advanced quickly and enrolled in a local club soon after. From there she transferred to a bigger club as she also moved to a different school. Klaudia was one of the youngest on the team and she wasn't getting enough

playing, so at the age of 12 she wanted to quit handball: “Because I didn't see much going on there and my coach didn't let me play much”. Luckily, her mother convinced her to give it another try, or else quit by next year. Surprisingly, she started to develop (physically) very fast and as she got better, she got selected for the best team of their region. Simultaneously, she also progressed within the club she was playing for. From the youngest age category she moved to an older group. Three years later, at the age of fifteen, she got promoted to the A team, while still competing with her youth team. She did not enjoy playing for the youth team, because she thought her teammates didn't like her. These thoughts were constantly distracting her during games with the youth team, “I played for them and I wasn't actually there. I wasn't in the now.” In one of these games Klaudia was pushed by an opponent and fell on the ground overwhelmed with pain in her knee. The cause of the pain was the fluid in her knee. After four weeks of rehabilitation she returned to competition, only to tear her ACL during a practice session. She sustained the injury when executing a fake move. Given her age and inexperience with severe injuries, this event was very distressing for her. The following quote describe her reactions upon tearing her ACL: “I got to the ground and I was lying there and I was screaming in the gym”. Once she arrived to the hospital she broke into tears, “I was really crying as I was standing outside to get the new appointment or something. I was that fifteen year old girl standing there and crying. And I just thought I will never play handball again. I don't know why. Now, I can't play handball for the next half a year.” Recovery lasted around six months after which she started practicing and playing again. Although she was in a good shape and enjoyed the vast support from her teammates, she could not get rid of her fear for re-injury and the pressure in her head post the incident, “We went back to Leipzig and I started playing handball again, but I never played easily; easily in my head. I never

tried things with my knee for example. I was always scared to do that feint again. [It] stays in your head. That fear.”

During a practice warm up, she tried to kick the ball with the inside of her foot. This move cost her another severe injury. This time she tore her medial meniscus. Again, she underwent surgery and wore a brace for twelve weeks. Unfortunately, the meniscus didn't heal well so she had to have another surgery where half of her meniscus was removed. For the entire year of 2003 she was not able to play due to injuries and respective rehabilitations. Once she was fully recovered, she felt anxious to start playing again, “So afterwards I was really, anxious to play again.” Despite the anxiety she successfully returned to handball and started playing again. She was not really satisfied with her coach, whom she often argued with, “I was not content with the coach there as well. So I got into fights with the coach.” Few games later, while executing a fast break, Klaudia fell and tore her posterior cruciate ligament of her left knee. This time she seriously considered quitting handball, having her close family supporting this decision. She did quit handball at that point in time. After her recovery she started practicing golf. She became good in golf and played for three years. After three years of golf she felt longing for handball again, but instead of returning to handball she started playing floorball recreationally. Well, floorball was not really fulfilling her desire for competition, hence she returned to handball at the end of 2010. Klaudia's resumed handball career lasted for a year and a half, when she tore her right ACL during a game. It was the second rapture of her right ACL, which happened while trying to do the same right feint. Once she heard a snap she knew her ACL was torn again, “It snapped again and I knew what was going on. I was laying on the floor and I knew, ‘OK, your ACL's gone again” The reaction to her second ACL rapture was quite different than her first experience, “I was lying on the ground



and I was cursing. I actually felt even worse. I had like, two souls in my chest. One saying ‘Well, OK you have to stop; you’re old enough to stop. It’s OK, you played enough handball and maybe you shouldn’t be [playing anymore]’ On the other hand, I thought ‘Well, you won’t play handball. You won’t perform well on a handball field.’ That was pretty tough and even worse is that I couldn’t practice, that I have to stay at home in the evening when all others are practicing.” These statements reveal Klaudia’s two types of reasoning or explanatory styles confronted in her mind, a less negative one (former) and a devastating one (latter). Yet in our conversations appeared that one of these two “souls” prevailed, “ [The] depressive one was bigger.” This assertion is further elaborated in next statement: “I had to stop handball and I was really depressed and I was crying a lot. Because when I can’t play handball, what can I do? Everything I want do is performing with a ball.” On the other hand, these statements also suggest a strict identification as a handball player.

What Klaudia likes in handball is the pace of the sport, dictated by quick plays and fast thinking, “It’s that it’s fast sport where you have to think [fast]”. She also enjoys competing with others and the fact that she is good at it, “What brings me back is the competition. It’s exciting, or, well, playing against another team. And it’s the sport I was good in.” Yet, being caught up in her thoughts during the game is what she resents in handball, “That I started thinking too much on the field. That’s what’s problematic with handball and me.” Specifically, in her words: “I think about myself, how I perform. These are the things I think about.” Further elaboration about her thoughts during a game, Klaudia said: “[I Think] how I perform. What I could do, or that’s bad. I always think it wasn’t good. I rather think that than, ‘You have to do this [and that].’ I’m focused on my mistakes, my head is always running. Like, it’s not flowing [with the game].” Another downside of her sports is the teammates,

“Sometimes team members [is what] I also don't like about handball”, in particular being dependent on someone is what she disliked.

Results from the table created to capture participants' emotions in two distinct moments of their injuries are presented further. All Klaudia's scores on the Table of Emotions regarding her injury were somewhat high for the moment when she found out about the severity of the injury. Frustration, depression, anger and tension were scored on the high ends. Fear, relief and rage were scored on the low end of the scale. On the other side, the depicting her emotion at the time of the interview appeared to be lower. All emotional parameters in the table of emotions were marked lower except for fear. Fear was increased due to the upcoming surgery, “Fear, because the surgery is getting closer.”

**Klaudia's EI:** Klaudia's scores on BEIS-10 reveal below average scores for regulation of emotions in self. All other factors were scored around average value (see Table 1). These scores pointed out low emotion regulation in self, contrary to the information she shared during the interview.

***Perception of emotions in self.*** Perception of emotions includes the ability to identify emotion in one's physical and psychological states (Salovey et al., 2008). On Klaudia's perception of emotions she shared how she can tell when she gets frustrated, “I think [my] face kind of looks like a fist. It really gets tensed. I feel like all my effort was for nothing. Like, [it] felt unfair. Something like unfairness.”

***Understanding emotions.*** With respect to the ability to understand how different emotions are related and to perceive the causes and consequences of emotions, Klaudia voiced traces of emotional understanding follows: “Frustration and unfairness also always come together.” Elaborating on her experience feeling

depressed, Klaudia said: “I feel really sad, sadness, and ruination. When I'm depressed, it's like typical depression. After that I lay in bed pretty much.”

***Managing emotions in self.*** In the following quotes Klaudia shares how she controls her emotions: “I can control them. But I can't control them inside; I can control not to show them. I would think of myself as a controlled person. When I don't want people to see me depressed, I can easily laugh.”

***Expressing emotions.*** Klaudia also shared in our conversation how she chose to express what she was going through, thinking and feeling, “With my best friend I actually share everything. With my boyfriend, I share everything too, but in a different way.”

Beside the EI branches recognized in Klaudia's shared experience, few more parameters appear to have facilitated her coping with the injury. For instance, staying busy with school work, “Last time I was pretty busy writing my thesis. So, that's one thing that didn't let me think of handball”. In addition, she tried to do certain things in order to make her rehabilitation less painful, “I watch men's handball, when my boyfriend plays”, yet, “I can't watch women's handball. That's pretty tough. Especially when my own team plays.” She also shared things that got her in the positive mood during the rehabilitation, “When I handed in my thesis, I had a pretty positive mood; and [when] learning new things. I like that. Like the seminar I attended last week; getting to know new people; working as a sports psychologist, spending time with friends.” Klaudia's overall impression on the injury's negativity differed. For her, there is nothing positive in sustaining an injury like this, “Actually it's just the negative. It's an injury, I can do less afterwards. I have more things to organize around it.”

**Tom: Master of his destiny**

Tom's sport career begins when he was very young. He was barely able to walk when he hit his first tennis balls, at the age of 2. Tennis was his first sport, and his biggest preoccupation until the age of fourteen. He really wanted to become a professional tennis player but his parents did not agree with his desires. When he turned fourteen, Tom had to choose between going to a tennis academy and signing into a regular school. Because of several reasons pointed out by his parents, he decided to enroll at a regular high school. He continued to practice tennis and added one more sport to his life - football. After some time football began taking over tennis with regard to time spent playing the sport, so Tom quit football to devote more time to tennis. Nonetheless, Tom still wanted to practice two sports simultaneously, so he started playing volleyball. He chose volleyball as almost all members of his family had been at once or still were volleyball players. He rapidly progressed and soon reached the junior national volleyball team Switzerland. As he advanced in volleyball, tennis was neglected due to lack of time, eventually leading to a complete withdrawal from tennis. Tom was lucky to be in the right environment that enabled him to progress fast and eventually succeed, "I was actually in an environment, like [being] in a car that is rolling and I just went with the flow." At the age of eighteen he joined the senior national team. When he enrolled at the University, he transferred to a local team that played in the first division of Switzerland. He played five seasons there, graduated from university and then spent a season in Qatar before ending up in a German first division volleyball team.

What makes volleyball appealing is the feeling of invincibility, the experience of flow when everything works flawlessly, "I like this feeling when you feel like you are invincible and you know you are going to 'kill' every ball. And you have this

fighting spirit in you, and you feel that you are in the game, you are concentrated, you are there and nothing can happen. I love that feeling.” On the other side, what he dislikes is when he is unable to perform up to his potential, “Knowing our potentials and not doing the effort necessary to reach our best potential, this is frustrating for me.”

Tom hadn't suffered another severe injury before the ACL rupture. He twisted his ankle once and was off the court for two and a half weeks. The ACL injury came to him as a surprise. According to his thinking prior to its occurrence such a thing could not happen to him, “I was kind of surprised that this can happen to me. I was feeling kind of invincible.” These words also reveal his high self-confidence and self-belief.

The injury happened at a qualifying game for the European Cup. His team lost the first match 3:0 while the winner of the second match would about to be decided at the tie break. When the score was 8:4 with the opponent leading it, he landed improperly and tore his ACL. At first, he heard a crack but didn't feel pain, thus he continued to play thinking it was just a minor injury. But when he tried to block, he realized that something more severe was the case. Immediately he was substituted hoping his injury is not too severe. The next day, his knee swelled and he was almost sure that the ACL was injured. Upon his return to Germany he went to the doctor who confirmed his fears. A week and a half later he was on the surgery table. His general emotional reaction following the injury onset is portrayed in these words: “I was not devastated, I was sad but I was not, devastated. I knew it was not the end of my career. I am somebody who likes challenges and I guess I took it as a challenge. I had never been in a hospital before and I was also curious about this how it would happen and everything was fine. So I took it as a challenge, and I like to achieve my best

when I have a challenge and objective so I took it like this.” Also, his explanation over the injury incident quite rational: “I think an injury never comes by itself. It always comes with psychological reasons also and, I was basically having my fifth year without real holidays, without long summer breaks, and these last two seasons in Germany were very, very tiring. I played a lot, practiced a lot. Then I had the national team all summer long, so my body was exhausted.” He further explained that he had put a lot of pressure on himself, as he didn’t want to let down his coach and teammates, “I was feeling responsible, because I was the captain of the national team. And, I was feeling sorry for my coach who came from the US to coach us, and he’s very old and I really wanted to have success with him. And it didn’t work out the way I wanted. So I guess placed myself [under] a lot of pressure.”

On the Table of Emotions concerning the moment of the injury frustration, anger, fear and relief were marked to be on the high end of the scale. He was frustrated as it was an important game for his team and their qualifications to the Euro Cup, “Because it was really big deal for me to have this first game against [the other national team] and then go to Europeans. Even if the team qualified I wouldn’t be able to play for it so I was feeling frustrated.” Tom elaborated on his anger being high since he had big plans for the upcoming summer, “I was feeling anger that happened at bad time before my summer and I had a great summer coming up and I was a bit pissed.” Interestingly, relief was also marked on the high end of the scores. He shared that he was relieved because of the pressure that was placed on him, “Relief is more a psychology thing I felt because I had a lot of pressure. I was captain, my coach really trusted me to lead the team to victory. It’s like, if you analyze it now, you can take it as a relief that I didn’t have to do that [play under pressure] anymore. All this tension is not on my shoulders anymore because I’m injured. I cannot be on the court.” In

essence, heavy expectations were placed on him, thus he perceived his injury as a way out of this unpleasant state, “I had big expectations. I had very big expectation in many different levels. Personal levels and the biggest one probably was that my coach was proud of me.” Moreover, fear was also experienced due to his uncertain future and unfamiliar injury procedure, “I was afraid of the injury. I was afraid of what it is. I've never been badly injured before. But it was [also] a fear for [the] future. What should I do? How it will happen. It was all totally new for me, so this kind of fear.”

Over the course of his injury he experienced several adversities; temporarily he broke up with his girlfriend, two of his family members passed away and his club cancelled his contract. Number of things crushed for him at the same time. Nevertheless, he managed to tackle the problems well and eventually come out feeling as a winner. The vast support he received from his family and his physical therapist was especially appreciated: “Luckily, I still had my ‘physio’ who was unbelievable the whole time. I think a big part of my recovery is my physio and the influence he had on me. He was always positive and always in a good mood, always laughing and giving me amazing exercise perfectly fitting the moment.”

**Tom’s EI:** Tom’s scores on the BEIS-10 revealed average values for all five factors (see Table 1). Nonetheless, several branches of EI were extracted from his statements.

***Perceiving emotions in self.*** How Tom recognizes specific emotions when these occur is depicted here: “I’m frustrated when I cannot reach my goal and I cannot do what I want to do. [When I am angry] my pulse goes little higher and it's getting on my mind, yeah. It's more in my mind.”

***Perceiving emotions in others.*** Regarding his perception of other people’s emotions, Tom shared an incidence between his good friend and him when they

discussed his friend's injury (ruptured ACL): "I was there and he didn't have anger, he didn't have fear at all. He was just confident and he was maybe sometimes careful. But, he didn't have fear and he was confident and everything happened perfectly."

***Expression of emotion.*** This branch is defined as the "ability to express emotions accurately and to express needs related to those feelings" (Salovey et al., 2008, p.535). On whether he shared his feelings with other people during the rehab, Tom said: "With him [physical therapist] I was talking about everything. He was taking care of physical, mental [issues]; I could say when I was depressed, when I had a little pain, when I had fear. It was a holistic therapy. And on the other side I have my mom, whom I can call anytime, when I'm depressed, and she will have exactly the word I need."

***Utilizing emotion to facilitate thought.*** Concerning this branch, Tom recognizes his feeling and uses it to find solutions, "I know if I'm feeling bad, I'm going to find solutions. I have people around to talk to and to care [for me] and this is very important."

***Managing emotions in self.*** Tom believes he has a grasp over his emotions, "I'm always pretty in controls of my emotions. I feel them but I control them usually. I guess I don't want to show anger." He gave an example of when he controlled his emotions successfully, at the time when he was pulled out of the game due to the injury: "I didn't want to show that I'm angry because at that time we still had [a] chance to win and I didn't want to put a very bad feeling on the team. I didn't want to bring depression on the court and then nobody can play. So at that time I was trying to control it and keep cheering for the team."

Alongside the EI branches identified in Tom's experience, other themes regarding his rehabilitation emerged during our conversation. Thus, Tom emphasized



the support he received from his physical therapist several times across the interview, “This guy was really holding me during my whole recovery and helped me a lot. I had a very strong connection with him. So this guy was definitely the most involved guy in my injury.” Besides his physical therapist, the support from his coach and the club’s president was also helpful, “What also really helped me is that the president and my coach were very involved too. They were very caring. They liked me a lot at the two last seasons. That also helped me to know that the coach is on my side, the president is on my side.”

Two other themes that appear to have a strong effect on his recovery and particularly his adherence to the rehabilitation protocol were a friend’s injury experience and the rehabilitation environment. The injury experience lived by his close friend had a significant impact on Tom, “I had a good example of somebody who broke his ligament and had a good recovery and played again, for me a good example, a good motivation.” Concerning the environment of rehabilitation process he liked to work with his physical therapist and had a good time with other patients in the rehabilitation center, “He [The physio] was always in a good mood and I knew that I would have a good time. And in this center I knew every masseuse, and the guys and the girls at the reception I knew everyone in the center. So I was just having a good time there. There were a lot of old people in this center, so I was just talking to them, exchanging experiences and it was a nice time actually. I really liked that time.”

Another theme that possibly contributed to his recovery may be the use of psychological skills, specifically goal setting, “This is something very important I guess when you are injured - to have a goal, to have a clear objective to reach. You can have middle term goals to be able after three months to do this and that. So, we set with my physio a big goal: to be able to play at Christmas.” Tom also talked about

the imagery he used, “People who think positive, who imagine their body again doing things like before, and a healthy body, I’m pretty sure there is a connection between the brain and the body. So I tried as soon as I could to watch movies of myself playing, to see how I was moving before. And imagine myself doing it again. And, yeah, it helps, for sure.”

In closing, his overall appraisal for the injury portrays him as a positive and optimistic person, “I had a lot of good experience with it. First, I learned to work hard, and I learned a lot about my anatomy. I learned a lot about my body, my psychology. It’s just a general experience that you have a big mountain in front of you. You are on the very beginning of this mountain; you don’t know how to climb it, but step by step, you finally reach it and after it’s just a memory. Not even a bad memory. It’s a memory, it’s an experience, I would say.”

	<b>Boris</b>	<b>Julia</b>	<b>John</b>	<b>Klaudia</b>	<b>Tom</b>
Appraisal of own emotions	8	7	7	8	8
Regulation of own emotions	10	8	8	6	7
Appraisal of others’ emotions	8	9	8	7	8
Regulation of others’ emotions	8	10	8	7	8
Utilization of emotion	8	10	7	8	7
Total	M=8.4	M=8.8	M=7.6	M=7.2	M=7.6

Table 1. Participant factor score and total scores (i.e., ability to understand how different emotions are related and to perceive the causes and consequences of emotions).

## CHAPTER 5

### Discussion

The present inquiry focused on exploring if and how emotional intelligence was present during five athletes' rehabilitation phase from anterior cruciate ligament surgery. Overall, evidence for EI being present in all five participants' post injury experiences was captured. The most evident of all four branches in the qualitative data reported before were perception of emotions and managing emotions. Participants in this study showed a variety in ways of perceiving, understanding and managing emotions. A quantitative measure was also used to additionally substantiate the participants' voices regarding EI. In certain cases, the collected data revealed some inconsistencies between what participants reported in the interview and the questionnaire. Based on information collected, EI appeared to be present in all five participant experiences; however, at this point it is difficult to deliver concrete conclusions regarding the role of EI in rehabilitation from ACL rupture. Since EI as a construct is concerned primarily with the emotional competences one possesses, it addresses only one aspect of the injury experience, the emotional. In turn, emotional response is a single aspect of the multidimensional experience termed as injury rehabilitation, which is interrelated with cognitive and behavioral responses that have a dynamic relationship. These three factors accompanied with personal, situation and pre-injury factors influence each other culminating in recovery (Weise-Bjornstal, et al., 1998). Therefore, if one wishes to determine a very specific role for the EI in rehabilitation, controlling of other factors would be recommended.

The present inquiry was a first attempt in exploring the presence of EI in five athletes who were in rehabilitation post ACL rupture. And it did come up with some "evidence" regarding the presence of EI and how different athlete, with different

levels of EI experienced their injury and recovery phases. Although the present findings do not allow explicit conclusions to be drawn regarding the role of EI in rehabilitation from the ACL surgery, several instances of potential links between EI and injury rehabilitation are worth noting.

Specifically, all participants who experienced either early or timely recovery reported the use of psychological skills which have been associated with both EI and positive sport injury rehabilitation outcomes (e.g., Ievleva & Orlick, 1991, Lane, Thelwell, Lowther, & Devonport, 2009). Those participants that used psychological skills also reported moderate to high scores for EI on the BEIS-10 and more positive attitude.

On the other side of things, Klaudia expressed that the fear of re-injury had always been present in her performance since she first torn her ACL. Moreover, in the moment of sustaining the latest injury she stated that the negative part of her reasoning (which she referred as a “soul”) took over the positive and more accepting reasoning. It can therefore be assumed that her inability to regulate her own emotions and convert negative emotions to positive led her to this unfavorable position. Though one’s emotional state has been correlated with prior the ‘injured’ performance (Davenport, Lane, & Hanin, 2005, Kolt & Kirby, 1994) and negative emotions have been associated with poorer response to rehabilitation (Alzate Saez de Heredia et al., 2004), caution is advised when determining whether her emotional incompetence played a role in injury reoccurrence or following rehabilitation.

Pennebaker (1997) suggested that sharing traumatic personal experiences can often help people achieve emotional resolution, leading to better long-term emotional and physical health. In the same vein, Salovey et al. (2008) described an emotionally intelligent individual as someone who discloses his/her emotional experiences more

often. With respect to expression of emotions, Julia stated she did not like to share her injury-related emotions to her closest family. Since the BEIS-10 does not provide scores for the 'expression of emotions' subscale, it is not clear whether this emotional competence is Julia's 'weak link' or whether it influenced her rehabilitation outcome. In Tom's case, few emotionally disturbing events occurred during his rehabilitation. On top of the injury problems, he lost two members of his family, got in a conflict with his girlfriend and his club wanted to cancel his contract. Nonetheless, he kept the positive outlook and succeeded in his recovery. One could reasonably assume that regulating emotions in these situations would be an important asset. It may be the case therefore, that Tom possesses and effectively uses the ability to regulate his own emotions and prevent negative emotions from affecting his rehabilitation.

Overall, EI was indeed present in numerous situations across all five cases. Whether through accurate perceiving of emotions in a specifically emotional event, or harnessing emotions towards various cognitive activities, or simply through managing emotions and maintaining good mood, EI competences can be advantageous for individuals undergoing emotional events.

During the interviews, several other themes related to sport injury rehabilitation emerged. The factors discussed below were marked as important contributors to participants' emotional reactions and overall rehabilitation.

Participants in this study reported various sources of social support: support from family members, partners, coaches, physical therapists and sport club personnel. While in the existing literature, the evidence association between social support and rehabilitation outcome has been inconsistent (Brewer, 2007), some of the athletes in this study overemphasized the role of their support providers in the rehabilitation outcome.

Several distinct coping strategies were also reported from the five participants. That is: the use of psychological skills such as goal setting and imagery, staying busy with school work, socializing, and seeking social support. These ways of coping have been reported in the existing literature and are all positively associated with recovery outcome (Gould et al., 1997; Ievleva & Orlick, 1991; Johnson, 1996, 1997a).

How injured athletes appraise their situation has been said to potentially have more impact than the fact that the injury itself has occurred (Brewer, 1994). The appraisal of the injury appears to influence one's emotional and behavioral response throughout the rehabilitation process. Interestingly, Boris and Tom appraised their injuries as another challenge (“pyramid”, “mountain”) to be tackled in this life. Correspondingly, another cognitive factor positively associated with the rehabilitation outcome is positive attitude towards the rehabilitation (Johnson, 1996, 1997a). The stories of Boris, Tom and John shared in this study display their positive attitudes towards the injury and in general.

Despite a psychological upheaval that can accompany sport injury, perceptions of benefits associated with injuries have also been reported by several studies (e.g., Tracey, 2003; Ievleva & Orlick, 1991). Ievleva and Orlick (1991) found that athletes who recovered quickly reported more positive comments about their injuries. Some of the participants in this study perceived their injuries as some kind of benefit for their well-being. Tom thought that the injury was not bad experience, and that it was an opportunity to learn more about his anatomy. John perceived the injury experience as an appropriate venue for exploring his weaknesses and strengths, and believes he came out wiser and stronger. Boris and Julia recognized slight benefits of being injured in gaining network of friends, whereas Klaudia did not see any positive side of her injury. According to the stories shared in this inquiry, one observes that those who

saw a positive side in their injury recovered faster than it was initially estimated by their doctors.

Previous injuries record has been suggested to influence the way an athlete psychologically adjust to the injury (Gordon, Milios, & Groove, 1991). This assertion is vastly supported by the findings of this study. Specifically, three (3) of the athletes in this study had a history in severe injuries reported less turbulent emotional reactions and more accepting attitude towards the latest injury.

From a practical perspective, findings from this study offer several implications for injured athletes, athletic trainers or sport psychologists. Given that sport injuries are rather emotional events for all athletes, and that negative emotions may impair rehabilitation, it seems that emotion management training should be incorporated in any program aimed at maximizing recovery effectiveness. However, in order to be able to effectively regulate emotions one should first develop essential emotional competences, such as perception and understanding of emotions (Salovey et al., 2008). Hence, improving self-awareness skills appears to be prudent strategy for tackling an athletic injury. Further, the use of psychological skills such as goal setting and imagery are highly recommended as it can contribute to the quality of rehabilitation.

My research had several limitations. The timing of data collection was not unanimous among all participants, meaning they were all in a different stage of rehabilitation when the interviews took place. In addition, the retrospective scope of this study bore a doubt on the accuracy of participants' responses regarding their emotional states. Given the dynamic nature of sport injury rehabilitation, a longitudinal, multi-assessment method has been suggested. This study used only one-time data collection. The use of self-reported measure of EI is another limitation of

this study. The questionnaire used in this study could have been administered prior to the interviews in order to prevent potential contradictions between qualitative and quantitative data. Nevertheless, the material presented above suggests that the role of EI in rehabilitation from athletic injuries is worthy of further investigation. Further research may therefore examine EI quantitatively in a larger sample size with a more reliable instrument. In order to control for other factors of recovery outcome, future researchers may consider conducting the study within only one rehabilitation facility that provides the same environment for all athletes suffering from the same injury. Specific personal factors could be examined as well (e.g., coping strategies, adherence to rehabilitation, personality), possibly from a different source (e.g., physical therapist) and in several points across the rehabilitation (e.g., onset of the injury, post-surgery, before return to sport).



## CHAPTER 6

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## APPENDIX A

### Consent Form

**1. Title of the study**

Emotional intelligence and rehabilitation from severe athletic injury

**2. Aim of the Study**

To explore the role of emotional intelligence (EI) in rehabilitation and coping of injured athletes. Emotional intelligence is the ability to perceive, utilize, understand and manage emotions in self and others.

**3. Description of research activities**

You will be asked to fill two questionnaires, one after another, and to participate in further interviewing if you are willing to share personal experiences.

**4. Risks/ discomfort involved**

There are no risks involved in this study whatsoever. However, if you get uncomfortable sharing information about your emotions, thoughts and acts please let me know and I will withdraw the question(s).

**5. Expected impact**

The findings from this study can point out another valuable facet of sport injury recovery. It could also illuminate the importance of EI in sport setting - hence provide new implications for practitioners.

**6. Dissemination of results**

Pseudo-names will be used instead of real ones. All data obtained will be kept in the researcher's PC and nothing will be published without the interviewees' approval. Please choose your pseudo-name here: .....

**7. Further Information**

Do not hesitate to make questions regarding the aim of this study or the implementation of study design. If you have any doubts or questions, do ask us for clarifications.

**8. Freedom of consent**

You are a volunteer participant. You are free to withdraw your consent now or later.

### Participant Declaration

I read this form and I understand the procedures involved. I agree to participate in this study.

Date: \_\_/\_\_/\_\_

[Name and signature  
of participant]

[Name and signature  
of researcher]

[Name and signature  
of witness]

## **APPENDIX B**

### **Interview Guide**

#### **Orientation Talk**

Thank you for agreeing to participate in this study and your willingness to share your personal experiences related to your sport career. I am fully aware that the nature of this subject is private and, therefore, appreciate your courage to take a part in this study.

The purpose of this study is to explore your emotional world on the course of your injury. During the interview I may ask additional questions in order to obtain more details about your experience. I hope that your participation in the study may be useful for you as well, as it might enhance your self-awareness and increase your understanding of your experience.

I assure you that information you share with me will remain confidential. I will use pseudo-names, thus your identity will not be uncovered, unless you require differently. You have a right not to answer to any questions you find uncomfortable and you can withdraw from the study at any moment without being penalized.

Do you have any questions before we begin?

#### **Interview Questions**

1. For the start, I would like to hear your story, first how you got into (chosen sport)? Then, if you wouldn't mind sharing the rest of your career plot up until now?
2. What is in your sport that makes you feel happy, what is it that you enjoy in your sport the most? (Special moment, situation etc.)

3. Let's turn the question around, could you please tell me is there anything you don't like about your sport? Something that gives you pain, discomfort, something that you are, perhaps, afraid of?
  - a. If injury is the biggest fear: Try to comfort her/him by saying that injury is one of the biggest fears of athletes, and that it is in human nature to be afraid of harming one self. They are, unfortunately, an integral part of almost every sport, but thankfully, today's advanced medical practice substantially increases the possibility of fast and successful recoveries.
4. Now, had you experienced any injuries before this one?
  - a. If yes: Could you please elaborate it for me? When happened? How severe?
  - b. How did you feel?
  - c. How did you overcome it?
5. Now, how did this (current) injury happen? Do you feel comfortable talking about it? Are you familiar with the nature of your injury and rehabilitation process? Could you please describe how did you feel when you found out about the severity of your injury? I will now give you the list of the most common emotions athletes experience after sustaining injuries and you will tell me if you experienced any of those and score it how strong was it on the scale from 1 to 5.
  - a. Discuss about his/her scores. Pick one emotion from the list (preferably one with the highest score) and ask: How do you know when you are ... (add emotion), or how can you tell? Can you control it (the emotion)?



6. Was there any specific event, situation or thought that has fairly shaken your emotional world?
  - a. If yes: Please describe.
7. Has anyone close to you, who you care about (teammate, another athlete, friend, family) ever got injured?
  - a. If yes: Could you please tell me how did it happen? Are you familiar with what that person was going through and her/his feelings and moods throughout the course of injury? How did that person deal with it, eventually overcome it?
    - i. If she/he mentions any emotions (e.g., sadness): Ask how could you tell that the injured person was sad? Facial expression, listening or any other source...
    - b. Had you done something to make her/him feel better?
8. Now that you are injured, do you do something to make the time pass faster? To make recovery less annoying and painful, simply to make your life better?
  - a. If yes: What kind of activities? Do they get you in the positive mood?
    - i. If yes: When the good mood comes, can you make it last? Is it easier to fight against problems and setbacks?
9. Who, by your opinion, cares most about you? Who is visiting you most often? Family members, friends, teammates... Do you talk to them about your feelings and what are you going through right now (or, are you comfortable sharing your emotions with them?).
  - a. If yes: How does it feel to do that? Does it help you to feel better?
10. Did this injury bring any good to you (or it was plain negative)?

11. Now, before we finish this interview, is there anything you forgot to say or would like to add on this, or wanted to ask me?

Thank you very much for your time and sincerity. It has been my pleasure talking to you.

**APPENDIX C****Table of Emotions**

Name of Interviewee:

	<b>Not present at all</b>		<b>.....</b>		<b>Very much present</b>
Frustration	1	2	3	4	5
Depression	1	2	3	4	5
Anger	1	2	3	4	5
Tension	1	2	3	4	5
Fear	1	2	3	4	5
Relief	1	2	3	4	5
Rage	1	2	3	4	5
Irritability	1	2	3	4	5

Instructions: Circle your answer or bold the chosen answer if you are completing this on a PC.

**APPENDIX D****Brief Emotional Intelligence Scale (BEIS-10)**

A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel *right now*, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I know why my emotions change	1	2	3	4	5
2. I easily recognize my emotions as I experience them	1	2	3	4	5
3. I can tell how people are feeling by listening to the tone of their voice	1	2	3	4	5
4. By looking at their facial expressions, I recognize the emotions people are experiencing	1	2	3	4	5
5. I seek out activities that make me happy	1	2	3	4	5
6. I have control over my emotions	1	2	3	4	5
7. I arrange events others enjoy	1	2	3	4	5
8. I help other people feel better when they are down	1	2	3	4	5
9. When I am in a positive mood, I am able to come up with new ideas	1	2	3	4	5
10. I use good moods to help myself keep trying in the face of obstacles	1	2	3	4	5