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Psychological interventions help athletes recover from ACL injury

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Abstract

Background: Anterior cruciate ligament (ACL) injuries are devasting for athletes physically, mentally, and socially. The return to sport and performance process is long, arduous, and athletes face many isolating and frustrating experiences. The treatment plan for athletes in clinical practice guidelines focuses on the physical recovery, whilst overlooking the psychological experience. **Purpose:** This article presents some of the psychological interventions that can support the athlete through the recovery process. Psychological support should be tailored to each athlete's needs to optimize return to sport. **Health & Fitness Journal of Canada 2022;15(2):3-6**.
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Introduction

Anterior cruciate ligament (ACL) injuries are serious musculoskeletal injuries that often lead to an athlete missing at least six months of their sport. The rehabilitation process after surgery is a long and arduous process to return to pre-injury levels of performance. The biopsychosocial model describes the influence of psychology and sociology on the experience of pain, alongside the physical experiences (Piussi et al., 2021). There is always a psychological response to injury. Psychological impairments faced during ACL recovery include frustration, lack of motivation, fear of the moment or re-injury, loss of athletic identity, anxiety, disorder eating, and culminate in serious physical consequences (Ellis et al., 2020; Gennarelli, Brown, & Mulcahey, 2020). The psychological experience is often overlooked and undervalued for the potential to improve recovery outcomes (Maddison et al., 2012). Psychological support for recovering athletes is beneficial, yet many do not have access to these services for many reasons that may include cost, stigma, and lack of accessibility (Ardern et al., 2014). There have been many advancements in the physical recovery strategies, yet 20-30% of athletes still do not return to sport (Ellis et al., 2020). In Sweden, Ardern and colleagues (2014) found that less than 50% of athletes returned to pre-injury level of sport after ACL reconstruction surgery. The primary reasons for not returning were psychological in nature, with 28% of athletes that did not return citing not trusting the injured knee, and 24% citing a fear of new injuries (Ardern et al., 2014).

Persevering through the injury experience can play a role in understanding self-growth and developing resilience (Trainor, Crocker, Bundon, & Ferguson, 2020). There are athletes who

have been able to turn their adversity into opportunity for personal growth. A high-quality support system and autonomous motivation are suggested to be important factors in enhancing adherence to the rehabilitation program, and in decreasing associated negative affective responses (Ivarsson et al., 2017). Sport injury growth can be an opportunity to improve one's self-acceptance and strength in well-being (Trainor et al., 2020).

Interventions

There have been many techniques and strategies developed for psychological support of athletes throughout the injury experience. Positive self-talk, modelling, relaxation, goal setting, and guided imagery have all been used to help athlete cope with injury (Smith, 1996). In a 2020 systematic review, Gennarelli et al. found that psychological interventions have the potential to help with the recovery process.

Table 1: Summary of psychological interventions and the associated outcomes (Gennarelli et al., 2020).

Psychological Intervention	Outcomes
Relaxation and guided imagery	• Leads to statistically significant improvements in mood elevation • Decreases in stress levels • Increases self-efficacy • Improves in pain management • Helps manage stress • Reduced re-injury anxiety
Positive self-talk and cognitive restructuring	• Significant positive correlation between self-talk and completion of home exercises
Goal setting	• Positive correlation between goal setting and exercise adherence at home • Elevates mood of athlete during and after physical rehab • Higher self-reported adherence • Significantly higher levels of self-efficacy
Counselling	• Source of listening and social support and coping with negative feelings • Promotes rehab adherence
Emotional written disclosure	• Commonly experience loss of AI (Please define/Spell out AI) • Helps counteract grief related negative emotions • Reduces athlete grief-responses • Increases self-reported motivation and acceptance of injuries
Modeling	• Reduces perceptions of expected pain • Improves self-efficacy • Significantly reduces required time on crutches • Better knee scores, less functional disability • Improves scores on knee function test scores and reduces functional disability

Table 1 summarizes the psychological interventions covered in the review by Gennarelli et al. (2020) and the associated outcomes.

Guided imagery involves mentally rehearsing physical skills learned and using visualization to cope with stress (Maddison et al., 2012). Goal setting and positive self-talk are correlated with increased adherence to the rehabilitation program (Scherzer et al., 2001). Modelling involves video of models performing the rehabilitation exercises and discussing their experiences during the rehabilitation process (Gennarelli et al., 2020). Counselling involves the athlete speaking with a professional throughout the rehabilitation process who provides an opportunity for reflection (Rock & Jones, 2002). Counselling can enhance recovery by using other psychological skills throughout the process and can meet the individualised and tailored needs of an athlete (Rock & Jones, 2002).

Conclusions

It is important for the athlete to learn to take responsibility and use problem-focused coping skills. Changing one's mindset to view injury as a challenge instead of a threat can help increase motivation and improve rehabilitation outcomes (Ivarsson, Tranaeus, Johnson, & Stenling, 2017). Ultimately, there is no one-size-fits-all approach and different athletes will have different psychological needs. The ACL recovery process is a long and traumatic experience, where the athlete may endure countless emotional highs and lows. Seeking support should be normalized throughout the injury process for a timely and safe return to sport.

Author's Qualifications

The author's qualifications are as follows: Kassandra A. Welch, BKIN.

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