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Psychological Barriers to Return to Sport After ACL Reconstruction in Female High School Athletes

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Abstract: High school female athletes can struggle significantly to return to their sport after an injury, even when they are physically cleared to play. This narrative review examines three psychological factors that affect an athlete's return to sport: athletic identity, confidence, and fear of reinjury. Much of the research discussed concerns anterior cruciate ligament (ACL) reconstruction. A healed knee does not automatically restore an athlete's confidence, sense of self, or belief that it is safe to play again. Fear, confidence, and athletic identity can also affect one another. This paper argues that psychological readiness should be valued as much as physical recovery in the injury recovery process. Some research draws on older and mixed-sex samples, which limits how directly the conclusions apply to female high school athletes. Future research should follow these athletes through recovery and a full season back in sport, examining whether they feel confident and comfortable playing as well as whether they return.

Keywords: Female High School Athletes, Anterior Cruciate Ligament Injury, Psychological Readiness, Athletic Identity, Self-Efficacy

Introduction

High school female athletes may have significant struggles returning to their sport after an injury, specifically because of psychological barriers. Although the body may be cleared to play, the athlete may not yet feel mentally ready. Physical recovery after injury is extensively studied to establish rehabilitation timelines; however, the psychological recovery process is often overlooked (Park et al., 2023). This narrative review examines three psychological factors that may influence an athlete's return to sport: confidence, self-identity outside of sport, and fear of reinjury. Research has linked a strong athletic identity to more severe depressive symptoms in injured athletes (Park et al., 2023). Injuries can disrupt an athlete's confidence if she worries about falling behind and believes she will be worse than non-injured players. When athletes return to sport, they go through readiness assessments. While physical assessments measure strength, mobility, and symmetry, they do not measure fear, confidence, or emotional readiness.

High school female athletes may feel particularly vulnerable when they return from injury. Athletes who have spent much of their lives playing sports may struggle with their identity when that core part of their lives is taken away. Rebuilding confidence is just as important for returning athletes as physical recovery. A sport psychologist may be helpful in the recovery process, and evaluations of fear and confidence can be used alongside evaluations of strength. Without this focus, some athletes may struggle to return to their sport and face long-term consequences for their confidence and identity.

This narrative review draws on 13 publications from 1977 to 2025. The research is grouped by the three concerns discussed in the paper: athletic identity, confidence, and fear of reinjury. Due to limited research directly involving female high school athletes, studies of adults, military cadets, and mixed-sex groups are included to provide additional evidence

regarding return to sport and psychological readiness. However, there are methodological limitations, as details such as the original search databases, specific search dates, search terms, and selection criteria for the included publications are not provided, which may impact the transparency and reproducibility of the methodology.

The Gap Between Physical Recovery and Psychological Readiness

Anterior cruciate ligament (ACL) tears are serious injuries that female high school athletes face. Many high school athletes with ACL tears undergo surgery (Joseph et al., 2013). After surgery, recovery can take many months. A return-to-sport physical assessment has several parts, often including whether the injured leg can perform at least 90% as well as the uninjured leg on strength and hop tests (Kuwik et al., 2024). These assessments test the healing leg's strength compared with the uninjured leg; symmetry in hops for distance, control, and agility; and full range of motion. A review of ACL reconstruction studies found that about 81% of athletes returned to some form of sport, 65% returned to their pre-injury level, and 55% returned to competitive sport (Ardern et al., 2014). These figures alone cannot explain why athletes do not return. A healed knee does not automatically restore an athlete's confidence, her sense of who she is, or her belief that it is safe to play again.

This problem does not affect everyone the same way. Female high school athletes have a higher rate of ACL injury than males in comparable sports (Joseph et al., 2013). Research has also found lower rates of return to pre-injury or competitive levels of sport in female athletes (Ardern et al., 2014). In a study of 20 athletes who were already cleared to play, male participants scored an average of 92.8 on a psychological readiness scale while female participants scored an average of 77 (Robby et al., 2024). Their average ages were 23 and 19.6, respectively, so these findings do not directly represent high school athletes. ACL tears can be particularly disruptive for high school athletes because they have only four years of high school sport, and missing just one season is 25% of that time.

Research spanning more than a decade has shown that an athlete's mental state matters in these situations (Ardern et al., 2013; Webster et al., 2008). Research has linked an athlete's psychological readiness, fear of reinjury, and sense of control with returning to her pre-injury level of sport one year after surgery (Ardern et al., 2013). The Anterior Cruciate Ligament–Return to Sport after Injury (ACL-RSI) scale asks athletes about their confidence, emotions, and their perceived risk of reinjury (Webster et al., 2008). Sports medicine experts emphasize that return to sport does not happen in a single moment; it is a process that includes both mental and physical aspects (Ardern et al., 2016).

There has been detailed research for years, but psychological assessments are still not used consistently. In a survey of 113 clinicians, 35% routinely used psychological tests when deciding whether an athlete was ready to return (Newmarch et al., 2024). Some of the research also comes from studies on adults and college athletes, which may not fully account for the challenges a sixteen-year-old girl may face when returning to her sport after a year without a major part of her identity. For a physically recovered female high school athlete, returning to sport may still depend on her confidence that she can play, her identity outside of sports, and her fear of getting hurt again. This paper examines each category and argues that psychological readiness should be valued as much as physical recovery in the injury recovery process.

Athletic Identity Disruption and Emotional Distress

Athletic identity is how much a person sees themselves as an athlete. Being an athlete provides drive, structure, and a simple way for someone to identify themselves as an individual. An athlete may define herself by the hours, days, and years of training she has

spent working toward her sport. However, being an athlete also means that when the sport disappears, the athlete's identity can feel threatened (Park et al., 2023). This can be particularly challenging during adolescence. Teenagers are constantly learning new things and figuring out who they are, and some athletes commit to their athletic role young and focus solely on that, rather than exploring other parts of themselves. This often happens to teenagers because they begin sports early on in life, play club sports all year, and spend countless hours training. Athletes with high athletic identity may struggle with identity foreclosure, which is the tendency to avoid exploring other interests and social experiences because of how committed they are to being an athlete (Clark et al., 2025). A study on 149 female high school volleyball players found that 54.4% of the athletes had high athletic identity, and high athletic identity was associated with higher anxiety and depression symptom scores among highly specialized players (Clark et al., 2025). The study suggests that how much of themselves athletes put into their athletic identity matters alongside the amount of training they do.

High athletic identity was not significantly associated with a history of knee injury (Clark et al., 2025). Strong athletic identity has been linked to more severe depressive symptoms after sports injuries (Park et al., 2023). Injury can take away the athlete role and disrupt a teenage athlete's sense of identity. The strength of an athlete's athletic identity may also affect how she feels during recovery. An athlete may want to return to her sport quickly even if she does not yet feel ready to play. Psychological assessments are not always used to test if the athlete is psychologically ready to return (Newmarch et al., 2024). A way to partially solve this problem would be to use existing psychological surveys and have regular mental health check-ins alongside physical health check-ins throughout recovery.

Loss of Confidence and Perceived Athletic Competence After Injury

Confidence is the second psychological factor that can affect an athlete's return to sport. In theory, rehabilitation is meant to reestablish confidence through building strength, running, jumping, and other physical activities, but physical progress does not always restore confidence. Self-efficacy is the belief that a person can perform a particular task, and it comes from four sources: successfully completing a task, watching others succeed, being told she can do it, and how the body feels while trying (Bandura, 1977). Rehabilitation that focuses mainly on completing physical tasks may not address the other factors.

An athlete can hop on each leg in an assessment, have 90% symmetry, and pass that part of the assessment. That assessment shows that she can hop. It does not show whether she can land suddenly after contact with an opponent or make a quick decision to sprint without the time to think about her knee first. This gap means that her hesitation could originate from two different places. The body may not actually be physically ready for the demands of fully returning to a sport, including all the unpredictable situations that come with it, and the test may have failed to catch it. In that case, the hesitation would be a response to true physical limitations. On the other hand, her body may be physically capable, but she does not believe that it is, so her hesitation comes from fear and low confidence. In both situations, simply passing a limited test does not prove she is capable of returning to her sport. Even if her body is recovered and capable, passing a test may not convince the athlete herself that she can perform in a game situation.

It would be reasonable to expect physical test performance and psychological readiness to improve together. If an athlete is more capable of performing, she will probably feel more confident. The relationship, however, is not always consistent. The ACL-RSI is a scale that measures psychological readiness to return to sport. It measures three things: emotions about playing again, confidence in performance, and how the athlete assesses the risk of getting hurt (Webster et al., 2008). One study of 26 military cadets, with an average age of 20.7, compared ACL-RSI scores, jump and hop symmetry, and quadriceps strength about a year after surgery. Jump and hop symmetry had moderate to strong correlations with quadriceps

strength symmetry. However, the relationship between ACL-RSI scores and strength symmetry was weak and not statistically significant (Kuwik et al., 2024). Although physical tests can agree with each other, they do not necessarily match how the athlete actually feels. This finding, however, comes from a single study, and it does not mean that physical and psychological recovery are completely unrelated. What this study suggests is that physical test results do not always reflect how ready an athlete feels.

Fear of Reinjury as a Barrier to Returning to Sport

The third psychological factor that can affect an athlete's return to sport is fear of reinjury. One way to measure this fear is the Tampa Scale for Kinesiophobia, and kinesiophobia means fear of movement (Paterno et al., 2018). Young athletes who return to a sport after ACL surgery face a high risk of another ACL injury, especially if they play a sport that involves cutting and pivoting (Wiggins et al., 2016). Hesitation to push off or plant may reflect a realistic concern about getting hurt again. Even when this fear is understandable, it may prevent the athlete from playing to her full potential. This fear can significantly impact the athlete. She may decelerate earlier, avoid making a cut that she would have made without hesitation before the injury, or play less aggressively because she is afraid of getting hurt. These changes can affect her performance and make her doubt that she will play as well as she once did. That can lower her confidence and increase her fear.

Although fear and confidence often appear together, there is a significant difference between them. Confidence concerns whether she believes she can perform well enough to compete. Fear of reinjury concerns whether she believes competing will hurt her. An athlete can have one without the other: she can know she is fully capable of sprinting down a field and yet still be worried that the action will reinjure her. On the other hand, an athlete can feel comfortable that she will not get hurt again, but instead doubt that she can keep up with other players. Because these are two very different concerns, they may need to be addressed separately. Still, they do affect one another: fear can play a part in low confidence; it can make an athlete think she cannot do something, and low confidence can increase fear because a player who doubts herself has more fear of what could go wrong. Athletic identity also factors into this cycle because for athletes whose sense of worth depends heavily on their sport, playing with fear can make them feel like they are no longer the person they used to be.

Conclusion

Physical clearance marks a stage in physical rehabilitation after ACL reconstruction, but for many female high school athletes it does not mean that they are truly ready to return to their sport. This paper addresses that gap and highlights three important but often disregarded, factors of an athlete's health before she returns to a sport. These factors are athletic identity, confidence, and fear of re-injury. An athlete whose sense of self is structured around her sport may experience an injury as a threat to who she is as a person. An athlete who no longer trusts her body and her abilities may hesitate to play to her potential again, even after full physical recovery. An athlete who fears reinjury may avoid certain aspects of a sport, and because reinjury does remain a true possibility, that fear is not necessarily unreasonable. Each of these barriers can reinforce the others. None of them is directly measured by the physical assessments used to decide if a player can return to her sport. As a result, return-to-sport protocols that rely only on physical benchmarks can declare an athlete ready long before she actually feels ready. Adding psychological screening and targeted support for confidence and fear to those protocols would give returning athletes more support.

This paper does not present original data, and some research draws on older and mixed-sex samples, which can limit how directly the conclusions apply to female high school athletes. High school athletes are still forming their identities, so an injury may disrupt their

sense of self. It will be important for future research to study this population directly, ideally by following athletes from an injury all the way through a full season back in sport. That research could help define a successful return as opposed to whether an athlete returns at all. An athlete may return while hiding pain, playing with fear, and lacking confidence. She would still be counted as a success if the only measure of success is simply playing the sport again, without any deeper analysis. Studies testing an athlete's success in recovery and return should therefore also examine whether an athlete stays involved in the sport long-term, and whether she feels confident and comfortable playing.

The importance of athletes' psychological health also extends beyond one single season. When an athlete's body is healed but her confidence, identity, and sense of self are not fully recovered, the effects can be long-lasting and shape how she views herself as a person. This raises a deeper question about what the real aim of recovery should be. A full recovery should not mean that an athlete returns to basing her identity on a sport, but rather should mean that she can stay committed to her sport while also realizing that her value is not determined by it, and her value does not disappear when she is without it.

AI Disclosure Statement

ChatGPT (OpenAI) was used to assist with literature research. The author reviewed all content and take full responsibility for it.

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