



Fear of Reinjury and Pain Perception among Sportspersons: Perspectives from Sportspersons, Coach, Sports Psychologist, and Medical Professionals

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ABSTRACT

This study explores how fear of reinjury impacts pain perception in 65 sportspersons from Haryana, India. Insights from Sportspersons, coach, Sports psychologists and medical professionals reveal that fear intensifies pain and delays recovery through hypervigilance, avoidance behaviours, and catastrophizing. A multidisciplinary approach, combining psychological interventions like cognitive-behavioural therapy with physical rehabilitation, is essential for overcoming these barriers and enabling a confident return to sport.

Introduction:

Kinesiophobia, sometimes referred to as fear of reinjury, is an extreme and unwarranted fear of movement and physical activity that stems from a feeling of vulnerability to traumatic injury or recurrence. The ability of a sportsperson to resume sports following an injury and during their subsequent recovery might be significantly impacted by kinesiophobia, according to recent studies in sports medicine and athletic health care (Korie et al., 1990). A serious injury and the threat of further injuries can cause kinesiophobia, a profound, irrational, and restricting fear of movement. Even though there is a wide spectrum of psychological reactions to harm, from mild and moderate to severe and incapacitating illnesses like kinesiophobia, terms that describe these powerful reactions to trauma are helpful. Instead of



ignoring kinesiophobia, coaches, parents, and medical professionals should provide the same care, compassion, and sensitivity that less severe form of injury-related fear demand. This is especially true in contact sports. Despite common sense, sportspersons typically have a serious fear of reinjury. Even though phobias are lifelong conditions, many of the worries about playing again can be resolved in a few days or weeks as opposed to months or years. Like all emotions, fear serves a purpose since it lets us know how we're performing in respect to the opportunities and challenges around us (Flett et al., 2014). Sports medicine professionals need to realize that sportspersons aren't always as eager to compete again as we may think. The sportsperson must take part in this important conversation before deciding to cease therapy and return to sport. As a sportsperson gets closer to the time when they are physically prepared to resume sports, they should talk with their trainer about their feelings about it. Coaches, parents, scholarships, and other external factors frequently put pressure on sportspersons to compete again; in fact, they may be persuaded to do so before they are psychologically ready. It is the duty of the sports trainer to evaluate the sportspersons' level of physical and mental fitness because sportspersons' who return to competition too soon run the danger of suffering additional injuries (Stiller-Ostrowski et al., 2014).

The International Association for the Study of Pain defines pain as "an unpleasant sensory and emotional experience connected with existing or potential tissue damage, or defined in terms of such damage" (Merskey&Bogduk, 1994). Indeed, complex interactions between social, psychological, and biological factors influence the subjective perception of pain (Casella et al., 2016). Kinesiophobia, fear of movement/ (re)injury, pain-related dread, and fear-avoidance beliefs are the constructs that are most frequently used (Lundberg et al., 2011; Liu et al., 2021). In the 1980s, Lethem et al. (1983) developed the fear-avoidance model (FAM) to explain why some injuries resolve on their own while others progress from acute to chronic (Liu et al., 2021). Vlaeyen et al. (1995) were the first to enhance the FAM by providing a cognitive-behavioural perspective and renaming it the fear model of movement/(re)injury. Essentially, the model suggests that fear of movement or (re)injury leads in great part to depression, disuse syndrome, and disability in persons who have musculoskeletal pain. According to them, an exaggerated and erroneous interpretation of pain creates a maladaptive cycle in which the fear of pain causes avoidant behaviour, that is, fear of movement or fear of (re)injury (Liu et al., 2021).

Razor & Hall (2016) state that sportsmen's evaluation of the degree of pain and subsequent disability on experiencing muscle soreness is conditioned by trait anxiety and by fear-avoidance beliefs. Phansopkar (2021) looks at that fear-avoidance paradigm: kinesiophobia-the fear of movement and re-injury-on athletes' perception of pain and recovery. The fear of movement is commonly referred to as



kinesiophobia and is generated with anxiety-related brain mechanisms. According to the fear-avoidance paradigm, the emotional-biological and sensory facets of pain could encourage chronic musculoskeletal pain through anxiety. According to Parr et al. (2012), among all instruments that measure fear of pain, the FPQ-III was most significantly related with pain levels at baseline, at 48 hours, and at 96 hours after an injury. However, after the baseline measurement, kinesiophobia (TSK) and pain catastrophizing (PCS) make better predictors of pain intensity and disability. Furthermore, Badiei et al. (2023) inferred that kinesiophobia, or the fear of movement and reinjury, correlated with vigilance to pain and memorizing of previous injury-related pain in both active and former sportspersons. Thus, for patients undergoing primary ACL reconstruction, imagery training could be a psychological intervention to help diminish pain and fear of reinjury, alongside the physical therapy (Rodrigo et al., 2019). Fischerauer et al. (2018) found that pain catastrophizing was correlated with increased pain among injured athletes.

Objective: To examine the relationship between pain perception and the fear of reinjury in a sportsperson.

Hypothesis: it is hypothesized that there will be a significant relationship between pain perception and fear of reinjury.

Methodology:

Sample

65 sportspersons from different parts of Haryana, India, made up the sample (44 men and 21 women). Using the snowball sampling technique, the sample was selected. The majority of participants came from Sar Chotu Ram Stadium Rohtak and Bhim Stadium Bhiwani. A sports psychologist, physiotherapist, coach, and sports injury surgeon were also included in the sample.

Criteria for Inclusion

- Sportspersons who have already experienced at least one acute or overuse injury in the past.
- Sportspersons who have played in at least one state-level competition.

Criteria for Exclusion

- Pre-existing psychological problems have been diagnosed.
- Had major traumatic experiences over the last six months
- Abused or dependent on drugs at the moment



- Severe physical health issues
- Serious bodily wounds or surgical operations related to sports

Measures

Semi-structured interviews to gauge pain perception and fear of reinjury. Among the semi-structured interview questions are:

1. What is greatest fear when you getting back into sports after an injury?
2. How does your perception of pain change as a result of your fear of reinjury during exercise your game?
3. Can you give an example of a time when you were afraid of getting hurt again and didn't push through it?
4. How does your decision to tell coaches or trainers about pain or discomfort stem from your fear of reinjury?
5. How does your fear of getting hurt worsen or lessen your experience of pain?
6. Can you think of an instance where you altered your playing style or technique to prevent discomfort because you were afraid of getting hurt again?
7. How does your capacity to manage pain during competition become affected by your dread of reinjury?
8. Do you think that your fear of getting hurt again influences your willingness to take chances or endure discomfort when working out?
9. Can you describe how your fear of reinjury interacts with your perception of pain intensity or severity?
10. How does your fear of getting hurt again affect your post-injury rehabilitation or recovery plan?

The second semi-structured interview that asks questions to sports psychologist, sports injury surgeon, coach and physiotherapist. The second semi structured interview for all professionals that ask some questions regarding fear of reinjury and pain perception in athletes. Questions were:

1. What is the impact of fear of reinjury on process of rehabilitation of an athlete, both psychologically and physically?
2. Is fear of reinjury capable of changing pain perception of an athlete? Please tell me based on your experience?



3. Please tell how confidence, competitive performance and training of athletes are influenced by fear of reinjury?
4. To reduce or to cope on fear of reinjury is there any strategy that you use?
5. What do you think, if physiotherapist, sports psychologist, a medical professional and a coach work together to resolve this issue. It would be beneficial or not?
6. When an athlete or sportsperson return to their sports after successful recovery of injury. What is the biggest challenge for getting their pre injury levels of sports?
7. What advice will you give for enhancement of support system for an athlete who is battling with fear of reinjury?

The following participants in this qualitative study participated in semi-structured interviews:

1. Vajid manglan, a sports psychologist, offered theoretical insights about the relationship between fear and pain and elaborated psychological interventions for managing fear.
2. Sports injury surgeon Dr. Anand Bhushan, who described the physiological and medical facets of injury and recovery.
3. Coach Randhir Dhaka, who shed light on how a Sportsperson behaviour and performance during practice and competition are influenced by their fear of reinjury.
4. Dr. Anirudh Uniyal, a physiotherapist, spoke about how physical therapy and rehabilitation can help those who are afraid of getting hurt again.
5. International wrestler Vikash kumar talked about her experiences with injury, recuperation, and the mental difficulties that come with it.
6. Babita phogat, an elite female wrestler, discussed how her dread of getting hurt again affected her confidence and performance.
7. Other participants in contact sports, who offered a variety of perspectives on pain, fear, and injury throughout the healing process.

Thematic analysis was used to examine the interviews, with an emphasis on finding important trends pertaining to pain perception and fear of reinjury.



Procedure

A relationship was built with the participants, and they were informed about the study's purpose. The individuals were then asked to provide their informed permission. Semi-structured interviews are done during sporting events, at sporting events, and at other locations, such as the homes or workplaces of sportspersons, Coach, Physiotherapist, Sports injury surgeon, and sports psychologist. To obtain information from some participants who were out of state or out of India, as well as from others who did not consent to a face-to-face interview, a telephone interview was also done. Demographic data and information about sports injuries were also gathered. The association between sportsperson perceptions of pain and their fear of reinjury was examined through the use of thematic analysis.

Results:

1. Psychological Fear and Pain: According to Vajid manglan's perspective, the fear of Reinjury activates the body's stress response, heightening the perception of pain. This psychological State leads to a feedback loop where sportspersons focus on potential threats, misinterpreting benign sensations at signs of reinjury, thus intensifying physical pain. He promoted techniques that can assist sportspersons in changing their attention from fear to healing, such as mindfulness and cognitive-behavioural therapy (CBT). He added that although there aren't many qualified psychologists who can do imagery intervention, it can lessen anxiety of reinjury.
2. Physiological Impact: The Views of Dr. Anand Bhushan emphasized that guarded movement patterns and tense muscles are common signs of reinjury fear. These physical responses not only contribute to secondary injuries but also delay recovery by keeping the body in a state of chronic pain. For a successful recovery, he emphasized the significance of integrating physical and psychological therapy.
3. Coach Randhir Dhaka's Viewpoint: The interviewed coach commented that sportspersons, mainly those involved in contact sports like wrestling, frequently exhibit fear, or even tend to develop it during training post-injury. For nothing higher than risk moves or hesitates during key points to the present moments of performance are sportspersons. Therefore, the coach mentions that the coach feels fear should be addressed right from early rehab so it doesn't engrain itself with long-term psychological and physical ramifications. The coach also described more approaches from motivating techniques and confidence-building activities to help sportspersons overcome their fear.
4. The role of the physiotherapist: Dr. Anirudh Uniyal noted that even after receiving clearance to resume training, many athletes still suffer from a psychological barrier to pain. Athletes, fearing even more



damage, tend to avoid damage-secondary behaviors, and these prevent them from engaging fully in rehabilitation. The physiotherapist said that sportsmen should work extensively on education about pain, and gradually expose themselves to movements that frighten them. This could help restore their confidence and make them feel less pain.

5. Experiences of Vikas Kumar and Babita phogat: Kumar stated that the major obstacle after his accident was overcoming the mental block created by his dread of getting hurt again. He described how the anxiety affected his training, making him cautious and preventing from expressing his natural aggressiveness toward the sport. For Kumar to heal, it was paramount to have mental toughness and continuous psychological support. According to Babita phogat, her fear of reinjury affected her competitive state of mind. The worry, she said, was normally accompanied by increasing anxiety and pain sensitivity. To help manage those concerns, phogat stressed the importance of having a support system of coaches, physiotherapists, and psychologists.

6. Experiences of Wrestlers and Contact Sportspersons: Interviews with a broader sample of professionals involved in other contact sports, including wrestling, boxing, and kabaddi, revealed that there is a common concern of reinjury, particularly among those who had experienced serious injuries. Many professional sportspersons continue to experience pain after their physical recovery, which they associate with fear and anxiety. Some admitted to the psychological cost of competing with reinjury constantly on their minds, whereas others spoke on the psychological toll of competing with such dread.

Discussion:

The study results point to the complex interplay of physiological and psychological factors in sports injury recovery, especially when reinjury risk is hinged on. Based on interviews with a sports psychologist, surgeon, coach, physiotherapist, and athletes, the fear of reinjury is a complex issue that requires attention to both its psychological and physical bases. Among the highlights of this study was the endorsement of the Fear-Avoidance Model (FAM) by Vajid Manglan. It is this perception of threat that produces a state of hyperawareness with bodily sensations, enhancing pain and initiating an avoidance-type cycle. Many sportspersons have increased discomfort sometimes even beyond medical clearance, which could be a manifestation of psychological problems. The alternate hypothesis for the investigation was accepted. This fills the gap left in the previous study by Razor & Hall (2016), which indicated that trait anxiety and fear avoidance beliefs contribute to the perceptions of pain and disability in sportspersons after muscle soreness.



Furthermore, the physiotherapist's comments demonstrate that the bodily expressions of this fear should not be underestimated. Long after their physical injuries has healed; many sportspersons still display protective movement habits. Muscle guarding and changed biomechanics are examples of compensatory responses that lead to persistent pain and, occasionally, secondary injuries. This research highlights the necessity of physiotherapists and sports psychologists collaborating to create rehabilitation programs that target the mental obstacles inhibiting complete physical participation in recovery. According to studies by Rodriguez et al. (2019), psychological therapies like imagery training in conjunction with conventional physical therapy have demonstrated potential in lowering pain perception and fear of reinjury in individuals undergoing their first ACL reconstruction.

The coach's observations offered yet another insightful viewpoint, demonstrating how a Sportsperson's cautious training habits are a direct result of their fear of reinjury. This behavioural expression of fear can result in sportsperson performing poorly during practice and competition, since they are reluctant to perform high-risk or high-impact motions that are essential to their success. Although the interviews showed a disconnect between what sportspersons psychologically want and what is now offered in many training situations, coaches frequently play a crucial role in helping Sportspersons rebuild their confidence. Despite the fact that coaches usually focus on physical readiness, they are not always equipped to deal with the psychological concerns that arise after an accident, which could extend performance limitations. Additionally, International wrestler Vikash kumar and famous female wrestler Babita Phogat's first-hand accounts confirmed how anxiety affects even the best performances. Despite their years of experience, both wrestlers admitted that their fear of reinjury had a major influence on how they perceived pain and how they felt during their recoveries. Their experiences are comparable to those of many of those questioned, particularly in regards to the ways that fear of reinjury can lead to overly cautious behavior, a prolonged recovery, and even a decline in performance .According to the remarks of the other male and female participants; reinjury was a widespread fear for both seasoned and inexperienced sportspersons. The fact that many sportspersons displayed fear of reinjury even after minor injuries suggests that the psychological effects of injury may be prevalent across different injury types and sport levels. It is noteworthy that this fear was not limited to severe injuries.

Vajid Manglan, in speaking to psychological treatment, made note of the benefits of cognitive-behavioral therapy (CBT) and mindfulness-based stress reduction. Sportspersons were able to greatly influence their perception of pain by simply using these techniques to alter their thought processes and, more importantly, to eliminate their natural tendency to catastrophize. This is supported by the present study, which found that pain catastrophizing correlated positively with pain intensity among injured



participants, and also by Fischerauer et al. (2018). Manglan also recommends gradual exposure treatment to assist athletes through their fears of specific activities so that both their physical self-esteem is fortified, and their brain is retrained to perceive healing pain versus actual injury. As we have seen, there are too many complexities associated with fear of reinjury to be dealt with by a single professional discipline. The fear of reinjury is backed up by an array of therapies and, hence, the proper psychological support must be offered to help each participant face their fear while being rehabilitated physically for recovery.

Conclusion:

This study places a strong accent on the problem of the relationship between fear of reinjury and perceived pain, principally in contact sports. It reveals that fear of reinjury is a psychological barrier that also directly impacts physiological recovery and performance. This is clarified by several interviews from different stakeholders such as sportspersons, coaches, physiotherapists, sports psychologists, and surgeons. The study says that a sportsperson's heightened fear of potential reinjury is a crucial contributor in magnifying pain perception, heightening rehabilitative delays, and restricting their complete engagement in sports activities. With this persistent fear, the person tends to rock back on the altered gait patterns, embrace avoidance behaviour, have tight muscular tension, and thus lead to an increase in chronic pain and performance grievances. This loop gets exaggerated by such psychological problems as anxiety, hyper vigilance, and catastrophizing, which only serve to make full trust in the body a difficult issue for sportsmen once injured. Physical rehabilitation must be reversed along therapeutic lines such as mindfulness, exposure therapy, GNAT, and CBT in order to break this cycle. Vajid Manglan and Anand Bhushan emphasized that the fear has to be addressed early during the rehabilitation phase to help reduce chronic pain and improve recovery outcomes. From the distance, the coach assists sportspersons in fighting psychological battles and reclaiming their confidence, a task that is vital and yet often underestimated. The coaches might work alongside physiotherapist and psychologists in allowing sportspersons to overcome fear and reclaim their skill set in competition. Even the most professional can undergo the psychological impact of injuries, Babita phogat and Vikas kumar's firsthand accounts testify in corroboration. The experiences of various sportspersons demonstrate that a comprehensive, individualized rehabilitation plan must consider both the mental and physical aspects of recovery.

A multidisciplinary and integrated approach in sportsmen rehabilitation has been advocated in the study under concluding remarks, treating their fear of reinjury with the same importance afforded to the physical injuries sustained. Upon addressing the psychological fears besides the physical recovery, the



sportspersons are likely to suffer less pain, gain in confidence, and return to competition faster and better. Future directions include examining the potential effect of fear of reinjury on the perception of pain and the possible influence of other sports, injury severities, and cultural perceptions on injury.

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