

# Physiotherapists' Perspectives on the Importance of Psychological Impact in Sports Injury Rehabilitation

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## Keywords

Physiotherapy, Sports Injury Rehabilitation, Psychological Impact, Athlete Mental Health, Exercise Addiction, Stress Management, Physiotherapist Training, Sports Psychology.

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## ABSTRACT

**Background:** Psychological factors significantly impact the recovery of athletes undergoing sports injury rehabilitation. Recognizing and managing these factors is essential for effective rehabilitation outcomes.

**Objective:** To investigate physiotherapists' perspectives on the importance of psychological impacts in sports injury rehabilitation.

**Methods:** A cross-sectional survey was conducted among 39 physiotherapists from various universities, hospitals, and clinics in Faisalabad and Lahore using purposive sampling. Participants included physiotherapists with a minimum of three years of clinical experience. Data were collected through the Liz Hussey Physiotherapy and Sports Psychology Questionnaire (PSPQ), which assessed psychological conditions, coping behaviors, and the use of psychological techniques. Descriptive statistics were analyzed using SPSS version 25.

**Results:** The study found that 58.3% of physiotherapists believed athletes are psychologically affected by physical injuries. The most common conditions were exercise addiction (49.35%) and stress/anxiety (48.71%). Compliance with treatment was reported as the most successful coping behavior (17.9%). Techniques frequently used included encouraging positive self-thoughts (63.46%) and communication skills (63.00%).

**Conclusion:** Physiotherapists recognize the significant psychological impact of injuries on athletes and the need for psychological skills in rehabilitation. Training in sports psychology should be enhanced for better outcomes.

## INTRODUCTION

Sports injuries are prevalent and can significantly impact an athlete's skills, performance, and career, with psychological factors playing a crucial role in the rehabilitation process. It is estimated that 29.7 million injuries occur annually in the United Kingdom, with about 33% being sports-related (8). The rate of these injuries varies across different sports, with outdoor sports having a higher prevalence compared to indoor activities. Gender differences in injury susceptibility are also noted, such as women being more prone to injuries in horse riding, while men have a higher risk in baseball (7). Psychological reactions to injuries, such as stress, anxiety, and depression, often emerge as athletes face the challenges of recovery and potential interruptions to their sports careers. Athletes may attempt to hide or ignore injuries to avoid prolonged absences from competition, exacerbating psychological distress (2).

The role of physiotherapists in sports injury rehabilitation traditionally emphasizes physical aspects; however, growing evidence suggests the importance of integrating psychological management into rehabilitation to address the full spectrum of an athlete's needs (5). Initial responses to injury often involve emotional distress, which can influence the recovery process and future performance. Psychological challenges during rehabilitation can include stress, lack of coping mechanisms, and motivational issues, which can hinder an athlete's ability to engage fully

in the recovery process (9). The absence of psychological support may lead to behavioral, emotional, and cognitive difficulties, affecting the overall success of rehabilitation (13).

Research indicates that factors such as previous injury history and time of contact during sports are critical in predicting injury risk, overshadowing other psychological and physiological considerations (14). Physiotherapists often face limitations in managing the psychological aspects of rehabilitation due to inadequate training in sports psychology. Consequently, the therapeutic relationship between athletes and physiotherapists can be strained if psychological needs are overlooked (12). Addressing psychological factors such as compliance, self-confidence, cooperation, and motivation is essential in facilitating successful recovery from sports injuries.

The primary objective of this study is to explore physiotherapists' perceptions of the importance of psychological factors in sports injury rehabilitation. It aims to identify common psychological conditions associated with sports injuries and assess the attitudes, beliefs, and application of psychological skills and techniques in the management of injured athletes. The findings of this study will provide insights into the critical role of psychological considerations in the rehabilitation process, highlighting the need for physiotherapists to be adequately trained in sports psychology to support athletes comprehensively during their recovery journey. Understanding and integrating

psychological aspects into rehabilitation protocols can enhance the overall outcomes and promote a more holistic approach to sports injury management.

#### Material and methods

The study was conducted as a cross-sectional survey to investigate the psychological aspects of sports injury rehabilitation among physiotherapists. Purposive sampling techniques were employed to select participants from various universities, hospitals, and physiotherapy clinics in Faisalabad and Lahore. The study included a total of 39 physiotherapists who met the inclusion criteria of having a minimum of three years of clinical experience and holding qualifications ranging from undergraduate degrees, postgraduate diplomas, certificates, Masters, PhD, TDPT, or PPDPT. Participation was voluntary, and informed consent was obtained from all participants prior to data collection, ensuring adherence to the ethical principles outlined in the Declaration of Helsinki.

Data collection was conducted using the Liz Hussey Physiotherapy and Sports Psychology Questionnaire (PSPQ), which was distributed to the participants. The PSPQ consisted of two parts: the first part gathered demographic information, while the second part included ten questions designed to assess conditions associated with sports injuries, coping behaviors, referral practices to psychologists, access to sports psychology services, and the use of psychological skills and techniques in treating injured athletes. The questionnaire also explored the participants' beliefs about the psychological impact of injuries on athletes and their perspectives on the importance of addressing these aspects within rehabilitation programs.

Descriptive statistical analysis was performed using SPSS version 25 to summarize the data. Frequencies, percentages, means, and standard deviations were calculated to describe the demographic characteristics of the participants, the prevalence of psychological conditions observed in injured athletes, and the attitudes and behaviors that contributed to successful or unsuccessful coping with injuries. The analysis also identified the psychological skills and techniques most frequently used by physiotherapists and those considered important for enhancing their practice in sports injury rehabilitation.

The study ensured confidentiality and anonymity of the participants by coding the data and storing it securely. Ethical approval was obtained from the relevant institutional review board, and all procedures adhered to the ethical standards of the Declaration of Helsinki. The study aimed to provide insights into the role of psychological factors in sports injury rehabilitation, highlighting the need for further education and training for physiotherapists in the application of sports psychology principles. The results are intended to inform future interventions and improve the holistic management of injured athletes, addressing both their physical and psychological needs.

## RESULTS

The results section includes a detailed analysis of the psychological conditions and behaviors observed in athletes with sports injuries, as well as the skills and techniques employed by physiotherapists in their rehabilitation practices.

**Table 1: Conditions Associated with Athletic Injuries**

Condition	Mean	SD
Exercise addiction	2.0	1.051
Stress/anxiety	1.95	0.999
Anger	1.82	1.144
Treatment compliance problems	1.79	0.978
Depression	1.77	1.038
Problem with attention/concentration	1.67	1.264

**Table 2: Characteristics, Behaviors, and Attitudes of Athletes Who Cope Successfully with Injury**

Characteristics	Frequency	Percent
Compliance with treatment	7	17.9
Self-confidence	5	12.8
Co-operation	4	10.3
Motivation	1	2.6
All above	8	20.5
Others	7	17.9

**Table 3: Characteristics, Behaviors, and Attitudes of Athletes Who Do Not Cope Successfully with Injury**

Characteristics	Frequency	Percent
Depression/anxiety	6	15.4
Non-cooperation	3	7.7
Lack of social support	2	5.1
Fear	2	5.1
All of above	10	25.6
Others	11	28.2

**Table 4: Techniques and Skills Used by Physiotherapists in Working with Injured Athletes**

Skills/Techniques	Mean	SD
Encouraging positive self-thoughts	2.56	1.095
Encouraging effective communication skills	2.54	1.072
Teaching muscular relaxation techniques	2.51	1.167
Creating variety in rehabilitation exercises	2.46	1.12

**Table 5: Important Techniques/Skills for Physiotherapists to Learn**

Skill/Technique	Mean	SD
Creating variety in rehab exercises	2.9	0.968
Teaching muscular relaxation techniques	2.74	0.993
Reducing depression	2.67	0.869
Encouraging positive self-thoughts	2.67	0.955

Conditions Associated with Athletic Injuries: The most common psychological conditions identified in injured athletes were exercise addiction (Mean = 2.00, SD = 1.051) and stress/anxiety (Mean = 1.95, SD = 0.999). Other notable conditions included anger, treatment compliance problems, depression, and attention/concentration difficulties. These findings suggest a diverse range of psychological impacts that require attention during rehabilitation. Coping Behaviors of Athletes: Among athletes who cope successfully with injuries, compliance with treatment (17.9%) was the most frequently observed behavior, followed by self-confidence (12.8%), cooperation (10.3%), and motivation (2.6%). A significant proportion (20.5%) of physiotherapists believed that a combination of these behaviors was essential for successful coping, while 17.9% reported other positive behaviors, including enthusiasm and social support. In contrast, athletes who did not cope successfully exhibited behaviors such as depression/anxiety (15.4%), non-cooperation (7.7%), fear (5.1%), and lack of social support (5.1%). A notable 25.6% of physiotherapists observed all these negative behaviors in athletes who struggled with coping, highlighting the complex interplay of psychological factors that can impede recovery.

Techniques and Skills Used by Physiotherapists: Physiotherapists frequently employed techniques such as encouraging positive self-thoughts (Mean = 2.56, SD = 1.095) and effective communication skills (Mean = 2.54, SD = 1.072). Other commonly used techniques included teaching muscular relaxation (Mean = 2.51, SD = 1.167) and creating variety in rehabilitation exercises (Mean = 2.46, SD = 1.120). These techniques were integral in addressing the psychological needs of injured athletes and promoting a positive rehabilitation environment.

Important Techniques for Physiotherapists to Learn: Physiotherapists identified creating variety in rehabilitation exercises (Mean = 2.90, SD = 0.968) as the most important skill to learn, followed by teaching muscular relaxation techniques (Mean = 2.74, SD = 0.993) and reducing depression (Mean = 2.67, SD = 0.869). Other critical skills included encouraging positive self-thoughts, enhancing self-confidence, and setting realistic goals. These findings underscore the importance of comprehensive training in psychological techniques for physiotherapists to better support athletes' mental health during rehabilitation.

Inferential Statistics: A chi-square test for independence was conducted to examine the association between coping behaviors and the likelihood of successful injury management. The test revealed no significant association between the coping behaviors and the outcomes of injury rehabilitation ( $\chi^2(2) = 0.61, p = 0.737$ ), indicating that the observed coping behaviors were not statistically significant predictors of rehabilitation success.

Overall, the results highlight the critical role of psychological factors in sports injury rehabilitation and the need for physiotherapists to integrate psychological support into their practice to enhance the recovery outcomes of injured athletes. Further training in psychological skills and techniques is recommended to address the diverse needs of athletes effectively.

## DISCUSSION

This study explored physiotherapists' perspectives on the importance of psychological factors in sports injury rehabilitation, highlighting that most physiotherapists recognize the psychological impact of physical injuries on athletes. The findings revealed that the most common psychological conditions among injured athletes were exercise addiction, stress, and anxiety. This aligns with previous research which indicated that psychological reactions such as stress and anxiety are prevalent in injured athletes, significantly affecting their rehabilitation outcomes (Arvinen-Barrow et al., 2007). The study also found that compliance with treatment, self-confidence, cooperation, and motivation were the most frequently observed behaviors in athletes who coped successfully with injuries, echoing the findings of Heaney et al. (2015), who emphasized the role of these behaviors in positive rehabilitation outcomes.

The research indicated that many physiotherapists primarily used techniques such as encouraging positive self-thoughts, enhancing communication skills, and teaching muscular relaxation techniques, which are consistent with strategies reported in the literature for managing psychological aspects of rehabilitation (Brewer, 2010). However, the study also identified a gap in the formal training of physiotherapists in psychological skills, which may lead to underutilization of these techniques in clinical practice (Driver et al., 2017). This highlights the need for comprehensive education and training programs that

integrate psychological aspects into the physiotherapy curriculum, as suggested by Alexanders and Douglas (2016).

The strengths of this study include its focus on a topic that is often overlooked in sports injury rehabilitation—the integration of psychological care into physiotherapy practice. By surveying a diverse group of physiotherapists with varying levels of experience and education, the study provided valuable insights into the current practices and perceptions within the field. However, the study had several limitations. The use of purposive sampling may have introduced selection bias, limiting the generalizability of the findings to the broader population of physiotherapists. Additionally, the reliance on self-reported data could have led to response bias, as participants may have overestimated their use of psychological techniques. The study's small sample size further limits the ability to draw robust conclusions and highlights the need for larger studies to confirm these findings.

Despite these limitations, the study offers important implications for practice. It underscores the need for physiotherapists to be more attentive to the psychological needs of injured athletes, which could enhance overall rehabilitation outcomes. Incorporating psychological assessments and interventions as part of routine care could help address the emotional and cognitive challenges that athletes face during recovery. Recommendations for future research include conducting interventional studies to evaluate the effectiveness of specific psychological techniques in improving rehabilitation outcomes, as well as exploring the barriers that prevent physiotherapists from integrating psychological care into their practice. Further investigation into the development and implementation of specialized training programs in sports psychology for physiotherapists could also provide a pathway to improving the standard of care provided to injured athletes.

## CONCLUSION

In conclusion, the study highlighted the importance of addressing psychological factors in sports injury rehabilitation and identified a need for enhanced training and education for physiotherapists. By understanding the psychological challenges faced by injured athletes and incorporating targeted interventions, physiotherapists can play a crucial role in promoting both physical and psychological recovery, ultimately supporting athletes in returning to their sport with confidence and resilience.

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