

Psychological Perception Of Kinesiophobia And Barriers To Recovery In Injured Athletes

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ABSTRACT

This study aimed to explore the psychological perception of kinesiophobia and its impact on recovery barriers among injured athletes with chronic musculoskeletal conditions. A total of 65 athletes (50 males and 15 females) from Kerala, ranging from intercollegiate to national competitive levels, participated in the study. Inclusion criteria required participants to be aged 18–30, have experienced a musculoskeletal injury lasting more than three months, and have prior competitive sports experience. To assess the psychological impact of injury, six standardized tools were used: Tampa Scale of Kinesiophobia (TSK-17), Fear Avoidance Belief Questionnaire (FABQ), Pain Anxiety Symptom Scale (PASS), Injury-Psychological Readiness to Return to Sport (I-PRRS), WHO-5 Well-being Index, and Brief COPE Inventory. Data were collected both in-person and online and analyzed using SPSS. Descriptive statistics, Independent t-tests, Mann-Whitney U tests, and normality tests were conducted. Findings revealed that a significant portion of athletes experienced high levels of kinesiophobia and ongoing fear of re-injury despite completing physical rehabilitation. Gender differences in psychological responses were minimal, though males showed significantly higher FABQ scores ($p = 0.043$). Athletes with higher kinesiophobia reported lower well-being scores ($p = 0.001$) and higher fear levels ($p = 0.024$), confirming the psychological burden associated with injury. The study concludes that psychological factors, especially kinesiophobia, play a critical role in athletes' recovery and overall well-being. Despite limited psychological intervention in rehabilitation programs, many athletes expressed willingness to receive mental health support. These findings highlight the importance of integrating psychological assessment and intervention into sports injury rehabilitation to promote holistic recovery..

Keywords: Kinesiophobia, injured athletes, fear of movement, psychological readiness, coping strategies, pain anxiety, sports injury rehabilitation

1. INTRODUCTION:

The term kinesiophobia (fear of movement), is a psychological condition caused due to excessive fear of movement after an injury occurs. The word kinesiophobia derived from Greek words 'kinesis' which means movement and 'phobia' which means fear. The athlete experiences the fear of movement due to faith that such movements after the injury will cause pain and occur injury again. This fear is most common in people who experience injury with chronic pain.

Kinesiophobia affects both physically, mentally and emotionally in athletes. Physically, kinesiophobia leads to reduced movement and range of motion. After an injury occurs, athletes are afraid to do movements, and they try to avoid the physical activity. This can result in muscle loss, joint stability, and decrease their strength. For example, after an ACL injury a badminton player tries

to avoid leg workouts. This will result in the weakening of the thigh muscles and cause knee instability. This fear can even affect the athlete's body stability and balance. Sometimes, athletes try to prevent the injured area by changing the movement, like limping or putting more weight on the other leg. But this continuous movement for too long can result in new injuries. Kinesiophobia can also increase the feeling of pain. Even when the injury has healed, the mind might think the injury is still there. This fear can make the situation worse than it is. Because of this, athletes might avoid important strengthening exercises in rehabilitation time which help them to regain strength and movement.

Kinesiophobia also brings emotional challenges. Athletes might feel frustrated and become angry they can't do their physical activities and can't participate in games and sports competitions. They become sad or depressed. There is also a chance for the isolated situation among athletes when they watch teammate's practices while they sit out.

These emotions will make recovery harder, as negative emotions and thoughts will increase more fear and anxiety. The fear of movement can also affect motivation. When the athletes try to push themselves in recovery time, but kinesiophobia might hinder their recovery. They might skip exercises, worried that movement will cause pain and re-injury. This can slow down their recovery. To overcome kinesiophobia, athletes need psychological and mental support. Methods like counselling or visualization techniques can reduce fear and anxiety and helps the athlete to overcome the situation. Encouragement from coaches, family and teammates are keys to rebuild his confidence and regain his mental strength.

Socially, Kinesiophobia can make athletes feel alone from their friends and teammates. They might try to avoid team activities, practices, or games. This causes their friendships and team bonding makes them feel isolated, which also affects their mental health. Athletes may feel like they have to make his return faster to the field just to make their coach, teammates, or fans happy. Because of this, they hide their psychological problems like fear and anxiety. Seeing the faster recovery of others can also make them feel like they're not good enough. Psychologically, kinesiophobia is linked to anxiety, catastrophizing, and low self-efficacy. Individuals with low self-efficacy (low confidence in their ability to perform physical tasks) have high chance to develop fear-based avoidance behaviors. Emotional factors, such as depression can also increase kinesiophobia.

To overcome kinesiophobia, athletes need mental support from their family, friends, coaches, and teammates. More open communication with coaches, teammates, and family can reduce the fear and feel that they are not alone. It increases their trust and reduces isolation. By giving a supportive and comfort environment, the social impacts of kinesiophobia will be reduced, helping athletes to regain their confidence and interactions with their teammates. Early interventions are a key method to prevent these long-term social and emotional problems. Sports injuries like shoulder, wrist, spine, ankle, and knee are common in sports. Musculoskeletal injuries in sports are primarily caused due to improper training methods, no proper warm-up and stretching, overuse and over training etc... These factors can lead to various injuries like sprains, strains, dislocations, fractures etc. Sports like swimming, tennis, pitching in softball and baseball, weightlifting etc. which require repetitive overhead movements which is a main reason for shoulder injury. Some common types of shoulder Injuries are Rotator Cuff Injuries, Dislocations, Sprains or Strains, Fractures, Arthritis etc. Common spine injuries in sports are lumbar strains, herniated discs, spinal fractures, spondylolysis etc. Spine injuries are common in sports requiring twisting or lifting, like golf, weightlifting due to less core strength and improper form.

The current study found that kinesiophobia persists even after physical rehabilitation, with nearly 51% of athletes reporting ongoing fear of re-injury despite returning to sport. This finding aligns strongly with Ambegaonkar *et al.* (2024) and Norasteh *et al.* (2024), who reported that fear of movement remains a significant psychological barrier long after physical healing, particularly in athletes recovering from ACL and knee injuries. Similarly, Raizah

et al. (2022) observed moderate to high levels of kinesiophobia in post-ACLR patients, emphasizing that fear often remains even when athletes are medically cleared. The persistence of fear observed in the present study supports the idea that physical recovery and psychological recovery do not progress at the same pace, as highlighted by Norasteh *et al.* (2024). The influence of gender on kinesiophobia remains inconsistent across studies. While some research reports higher fear levels in female athletes (Bingöl *et al.*, 2025), others found no significant gender differences (Jedvaj *et al.*, 2021; Liu *et al.*, 2024). Additionally, coping strategies such as avoidance or problem-focused coping may not be sufficient to reduce fear unless supported by structured psychological interventions. Despite evidence supporting psychological support in injury rehabilitation, many athletes still do not receive such services (Podlog *et al.*, 2011).

The present study identified fear of re-injury as a dominant psychological barrier, particularly among athletes with high kinesiophobia levels. This is consistent with the qualitative findings of DiSanti *et al.* (2018), who reported that fear of re-injury, self-doubt, and emotional associations with injury were more prominent than physical limitations in young athletes recovering from ACL reconstruction. Furthermore, the significant difference in FEAR scores between low/moderate and high kinesiophobia groups in the present study supports the findings of Badiei *et al.* (2023), who demonstrated that pain vigilance and memory of past pain significantly contribute to fear of movement. Both studies highlight that psychological memory of injury plays a crucial role in sustaining kinesiophobia.

2. MATERIALS AND METHOD

The study was conducted among 65 male and female athletes aged between 18-30 years from Kerala who had competed at intercollegiate to national levels ($n = 65$). The sample comprised 50 male athletes and 15 female athletes. All participants met the inclusion criteria of having chronic musculoskeletal injuries, specifically involving the shoulder, knee, ankle, wrist, or spine. In this study, six standardized tools were used to assess the level of Kinesiophobia, fear, pain related anxiety, psychological readiness, well-being and coping strategies of an athlete after the Injury and the scales used for the assessment is Tampa scale of Kinesiophobia (TSK 17), Fear avoidance belief questionnaire (FABQ), Injury - psychological readiness to return to sports (I-PRRS), Pain anxiety symptoms scale (PASS), WHO-5 Well-being Index and Brief COPE inventory.

Tampa Scale of Kinesiophobia (TSK 17)

The Tampa Scale of Kinesiophobia (TSK) is a tool used to measure fear of movement or Re-injury in people with chronic pain. The scale is a 17-item Questionnaire on a 4-point scale from "strongly disagree" to "strongly agree." Scores range From 17 to 68, with higher scores (above 37) indicating greater kinesiophobia

Fear Avoidance Belief Questionnaire (FABQ)

The FABQ is a 16-item self-report questionnaire where patients rate their Agreement on a scale from 0

(strongly disagree) to 6 (strongly agree). It has two parts: the Physical Activity subscale (FABQ-PA, items 2-5, max score 24) and the Work subscale (FABQ-W, items 6, 7, 9-12, 15, max score 42). Higher scores show stronger fear-avoidance Beliefs.

Injury – Psychological Readiness to Return to Sports (I-PRRS)

The scale consists of 10 Simple questions that ask athletes to rate their confidence in performing specific sport-Related tasks, such as playing without pain or re-injury fears. Responses are scored on a Scale from 0 to 100, with higher scores indicating greater psychological readiness.

Pain Anxiety Symptoms Scale (PASS)

PASS or Pain Anxiety Symptoms Scale, is a tool used to measure anxiety related to pain. The Pain Anxiety Symptoms Scale (PASS) has two versions: a full version with 40 items and a short version with 20 items. Each question is scored from 0 (never) to 5 (always), with higher scores showing more Anxiety.

WHO-5 Well-Being Index

The WHO-5 Well-Being Index is a simple, widely used tool to measure a person's mental Well-being. It consists of five straightforward questions that ask how someone has felt over the past two weeks. Each question is rated on a scale from 0 to 5. The score (0–25) is multiplied by 4 to give a final score from 0 to 100, where higher scores indicate Better well-being. A score below 50 suggests poor well-being, and a score of 28 or less may indicate depression.

Brief COPE Inventory

The Brief COPE Inventory is a short questionnaire used to understand how people deal with stress. It has 28 Questions, divided into 14 scales, each with 2 items. The scales cover strategies like active Coping (tackling the problem), denial (ignoring the issue), or seeking emotional support.

The data collection was done directly and online from the injured athletes. The questionnaire was shared through Google forms, email and WhatsApp to reach the athletes. The data were statistically analyzed. SPSS was used to generate descriptive statistics for all test variables. Independent t-test and Mann Whitney U-Test used to determine the difference between subjects.

3. RESULTS

Table I Shows the Normality Test Results For Study Variables (Kolmogorov-Smirnov and Shapiro-Wilk Tests)

Variables	Kolmogorov-Smirnov^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TSK score	.106	65	.066	.975	65	.209
FABQ score	.102	65	.092	.967	65	.077
PCS scale	.127	65	.011	.964	65	.054
PASS scale	.079	65	.200*	.967	65	.077
Fear score	.111	65	.045	.959	65	.032
Avoidance score	.110	65	.048	.971	65	.133
Cognitive anxiety score	.085	65	.200*	.969	65	.107
Physiological anxiety score	.111	65	.047	.966	65	.069
IPRRS scale	.164	65	.000	.846	65	.000
Who score	.104	65	.080	.978	65	.306
Avoidant coping	.095	65	.200*	.964	65	.057
Problem focused coping	.115	65	.032	.979	65	.351

Table I represents tests of normality being performed using the Kolmogorov-Smirnov and Shapiro-Wilk tests to assess the distribution of the collected data. The Shapiro-Wilk test, considered more appropriate for small to moderate sample sizes, was used to interpret normality. Results indicated that TSK Score, FABQ Score, PASS Scale, Avoidance Score, Cognitive Anxiety Score, Physiological Anxiety Score, WHO Score, Avoidant Coping, and Problem-Focused Coping, showed no significant deviation from normality ($p > 0.05$), suggesting that the data for these variables were normally distributed. FEAR Score ($p = 0.032$), IPRRS Scale ($p = 0.000$)

The Table II Represents Comparison of Variables between Male and Female Participants by Independent t-Test

Variables	Gender	N	Mean	Std dev	Std.error mean	t-value	p-value
TSK score	Male	50	38.44	6.902	.976	.457	.502
	female	15	39.33	6.309	1.629		

FABQ Score	Male	50	11.94	4.587	.649	4.275	.043
	female	15	11.13	2.850	.736		
PCS Scale	Male	50	17.46	10.284	1.454	.066	.797
	female	15	18.67	10.814	2.792		
Pass Scale	Male	50	38.86	20.312	2.873	.383	.538
	female	15	41.40	20.636	5.328		
Avoidance score	Male	50	10.90	5.120	.724	.503	.481
	female	15	11.73	4.788	1.236		
Cognitive Anxiety score	Male	50	9.40	5.548	.785	.478	.492
	female	15	9.87	5.655	1.460		
Physiological Anxiety score	Male	50	9.28	5.707	.807	.110	.741
	female	15	9.40	5.527	1.427		
Who score	Male	50	48.80	24.378	3.448	.051	.822
	female	15	53.33	21.892	5.652		
Avoidant Coping	Male	50	16.32	4.761	.673	.877	.353
	female	15	17.20	4.475	1.156		
Problem focused Coping	Male	50	9.54	2.644	.374	.996	.322
	female	15	10.67	2.059	.532		

The table II represents the comparison of psychological variables between male and female athletes with chronic musculoskeletal injuries. The sample consisted of 50 male and 15 female athletes. The Tampa Scale of Kinesiophobia (TSK) scores revealed no significant gender difference ($t = 0.457$, $p = 0.502$). Similarly, no significant differences were found in Pain Catastrophizing Scale (PCS) ($t = 0.066$, $p = 0.797$), Pain Anxiety Symptoms Scale (PASS) ($t = 0.383$, $p = 0.538$), Avoidance behavior score ($t = 0.503$, $p = 0.481$), Cognitive anxiety ($t = 0.478$, $p = 0.492$), Physiological anxiety ($t = 0.110$, $p = 0.741$), WHO-5 Wellbeing Index (t

= 0.051, $p = 0.822$), Avoidant coping ($t = 0.877$, $p = 0.353$), and Problem-focused coping ($t = 0.996$, $p = 0.322$).

However, a statistically significant gender difference was observed in the Fear-Avoidance Beliefs Questionnaire (FABQ) scores ($t = 4.275$, $p = 0.043$), with male athletes scoring slightly higher than females, indicating greater fear-avoidance beliefs among males. Except for FABQ, most psychological measures did not show significant gender-based differences in this sample of injured athletes.

The Table III Represents Comparison of Variables Based On Kinesiophobia Levels by Using Independent t-Test

Variables	Gender	N	Mean	Std dev	Std.error mean	t-value	p-value
Tsk score	Low to moderate level	27	31.89	3.344	.643	.760	.387
	High level	38	43.45	3.681	.597		
Fabq Score	Low to moderate level	27	9.22	4.173	.803	3.667	.060
	High level	38	13.55	3.302	.536		
Pcs Scale	Low to moderate level	27	11.15	7.199	1.385	2.60	.112
	High level	38					
Pass Scale	Low to moderate level	27	29.00	15.77	3.036	.421	.519
	High level	38	46.87	19.96	3.238		
Avoidance Score	Low to moderate level	27	8.96	4.887	.941	.980	.326
	High level	38	12.61	4.600	.746		
Cognitive Anxiety score	Low to moderate level	27	6.78	4.501	.866		

	High level	38	11.45	5.421	.879	.316	.576
Physiological Anxiety score	Low to moderate level	27	6.22	4.136	.796	1.673	.201
	High level	38	11.50	5.55	.900		
Who Score	Low to moderate level	27	44.44	29.296	5.638	11.461	.001
	High level	38	53.68	18.31	2.97		
Avoidant Coping	Low to moderate level	27	14.33	3.772	.726	.479	.491
	High level	38	18.08	4.675	.758		
Problem focused Coping	Low to moderate level	27	8.96	2.504	.482	.345	.559

	High level	38	10.3	2.44	.397		
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This table III presents the mean differences and statistical comparisons of psychological and behavioral variables between athletes categorized into two groups based on their level of kinesiophobia: Low to Moderate Level ($n = 27$) and High Level ($n = 38$). Athletes with high kinesiophobia reported higher mean scores in fear-related measures such as TSK (43.45 vs. 31.89), FABQ, PCS, and PASS, as well as in anxiety subscales including avoidance, cognitive, and physiological symptoms. Although these differences suggest greater psychological

distress in the high kinesiophobia group, most were not statistically significant. However, a significant difference was found in WHO-5 well-being scores ($p = .001$), with the high kinesiophobia group showing better well-being, which may reflect complex coping or perception patterns. Coping strategies, both avoidant and problem-focused, were also slightly higher in the high-level group, but without significant variation.

Table IV Represents Comparison of Variables Based on Gender by Mann Whitney U-Test

Variables	Gender	N	Mean	t-value	p-value
Fear score	Male	50	32.41	-.461	.645
	female	15	34.97		

	Total	65			
IPRRS Score	Male	50	31.86	-.889	.374
	female	15	36.80		
	Total	65			

The table IV presents gender-wise comparisons of fear and IPRRS (Injury-Psychological Readiness to Return to Sport) scores among injured athletes. Female athletes reported slightly higher mean fear scores ($M = 34.97$) compared to males ($M = 32.41$), though the difference was not statistically significant ($t = -0.461$, $p = .645$). Similarly, the mean IPRRS score was higher among females ($M = 36.80$) than males ($M = 31.86$), but this difference also did not reach statistical significance ($t = -0.889$, $p = .374$). Overall, the results indicate no significant gender-based differences in fear or psychological readiness to return to sport.

Table V Represents Comparison of Variables Based On Kinesiophobia Level by Mann Whitney U-Test

Variab les	Kinesiop hobia level	N	Mean	t- value	p- value
Fear score	Low to moderate levels	23	25.85	-2.263	.024
	High levels	42	36.92		
	Total	65			
IPRRS Score	Low to moderate levels	23	37.04	-1.277	.201
	High levels	42	30.79		
	Total	65			

The table V shows a comparison of fear and IPRRS (Injury-Psychological Readiness to Return to Sport) scores between athletes with low to moderate and high levels of kinesiophobia. Athletes with high kinesiophobia reported significantly higher fear scores ($M = 36.92$) compared to those with low to moderate levels ($M = 25.85$), with the difference being statistically significant ($t = -2.263$, $p = .024$). However, in terms of IPRRS scores, athletes with low to moderate kinesiophobia showed higher psychological readiness to return to sport ($M = 37.04$) than those with high kinesiophobia ($M = 30.79$), although this difference was not statistically significant ($t = -1.277$, $p = .201$).

4. DISCUSSION

This study was conducted to explore the psychological perceptions of kinesiophobia in athletes who sustained chronic musculoskeletal injuries. The analysis focused on understanding psychological barriers, fear-related behaviors, pain anxiety, readiness to return to sport, and the role of coping strategies. The findings offer important insights into how psychological factors interact with physical injury and affect athletes' recovery journeys.

The demographic profile revealed that the majority of participants were male athletes (76.9%), with most having competed at either intercollegiate, state, or national levels. Shoulder and knee injuries were most common, and notably, a significant portion of participants (70.8%) reported recurring injuries. While more than half had completed their rehabilitation (55.4%) and were actively participating in sport again (either fully or partially), nearly 51% still reported a persistent fear of re-injury. Interestingly, only 38.5% had received any psychological support during their recovery, though a large portion of athletes expressed openness to psychological intervention. When examining the psychological variables in relation to gender, the study found that most scores including TSK, PCS, PASS, and anxiety scores did not significantly differ between males and females. This suggests that fear of movement and pain related anxiety are experienced similarly across genders. However, the FABQ score showed a statistically significant difference between genders ($p = 0.043$), indicating that male athletes may exhibit stronger avoidance behaviors due to fear of pain or re-injury.

The comparison based on levels of kinesiophobia low to moderate and high yielded meaningful patterns. Athletes

with high levels of kinesiophobia scored higher across most psychological scales, including FABQ, PASS, PCS, and anxiety measures, although most of these differences were not statistically significant. One key finding was that WHOQOL (quality of life) scores significantly differed based on kinesiophobia levels ($p = 0.001$), showing that athletes with higher fear of movement tend to report poor overall well-being. This confirms that kinesiophobia does not just affect physical behavior but also impacts broader aspects of mental health and life satisfaction. Fear and psychological readiness to sports variables that were not normally distributed (such as FEAR and IPRRS scores), Mann-Whitney U tests were applied. A significant difference was found in FEAR scores based on kinesiophobia level ($p = 0.024$), indicating that athletes with higher kinesiophobia also reported more intense fear levels. However, the difference in psychological readiness to return to sport (IPRRS scores) was not significant between groups, suggesting that despite high fear, some athletes may still feel mentally prepared to return to sport.

Both avoidant coping and problem-focused coping scores were higher among those with higher kinesiophobia levels, but the differences were not statistically significant. This implies that while athletes may engage in various coping mechanisms, the intensity of their fear may still ignore these strategies without proper psychological support. The present study found that kinesiophobia remains prevalent among athletes even after physical rehabilitation and return to sport. This finding is consistent with studies by Ambegaonkar *et al.* (2024), Norasteh *et al.* (2024), and Raizah *et al.* (2022), which reported that fear of movement persists despite successful physical recovery, particularly in athletes with knee and chronic musculoskeletal injuries. A significant proportion of athletes in the present study reported persistent fear of re-injury. This supports the findings of DiSanti *et al.* (2018), who identified fear of re-injury as a dominant psychological barrier during return-to-sport, and Badiee *et al.* (2023), who highlighted the role of pain memory and vigilance in sustaining kinesiophobia.

Quality of life was significantly lower among athletes with higher levels of kinesiophobia in the present study. This result is in agreement with Pitchai *et al.* (2017) and Comachio *et al.* (2018), who found that increased kinesiophobia is associated with reduced quality of life and greater functional limitations in individuals with musculoskeletal pain. The present study found no significant gender differences in most psychological variables, including kinesiophobia, pain catastrophizing, pain anxiety, and general anxiety. This finding aligns with Jevvaj *et al.* (2021) and Liu *et al.* (2024), who also reported minimal or no gender-based differences in kinesiophobia levels across injured populations. A significant gender difference was observed in fear-avoidance beliefs (FABQ), with male athletes showing higher avoidance behavior. This partially contrasts with findings from Bingöl *et al.* (2025) and Kizilay & Burkay (2023), where female athletes demonstrated higher fear-related responses, suggesting that fear-avoidance behavior may vary depending on sport type, injury characteristics, and cultural context.

Athletes with high kinesiophobia scored higher on fear, pain anxiety, and avoidance-related measures compared to those with low to moderate kinesiophobia. This finding supports the conclusions of Badiee *et al.* (2023) and Bingöl *et al.* (2025), who reported strong interrelationships between fear of pain, kinesiophobia, and injury-related anxiety. Psychological readiness to return to sport did not differ significantly between athletes with high and low kinesiophobia. This finding is similar to the observations of Podlog *et al.* (2011) and Justus & Abraham (2021), who emphasized that readiness to return to sport is influenced by multiple factors such as motivation, external pressure, and social support, rather than fear alone. Coping strategies were not sufficient in reducing psychological distress among athletes with high kinesiophobia. This finding supports Kabasakal *et al.* (2024), who reported that athletes with ongoing pain and injury history exhibit higher kinesiophobia despite using coping strategies, and those mindfulness-based approaches may be more effective.

A majority of athletes in the present study had not received psychological support during rehabilitation, despite being open to such interventions. This finding is consistent with Podlog *et al.* (2011) and DiSanti *et al.* (2018), who emphasized the lack of integrated psychological care in sports injury rehabilitation programs. The present study highlights that psychological recovery often lags behind physical recovery in injured athletes. This observation supports the conclusions of Norasteh *et al.* (2024) and Rosenblum & Resch (2025), who demonstrated that unresolved kinesiophobia can delay recovery outcomes and prolong return-to-play timelines.

The findings emphasize the crucial role that psychological assessment and intervention play in sports injury rehabilitation. While many athletes physically recover and return to play, unresolved psychological fears, especially kinesiophobia continue to hinder their full recovery and quality of life (Sathees *et al.*, 2024). The study also revealed a willingness among athletes to receive psychological support, indicating a gap in current rehabilitation practices that should be addressed in future sports medicine and psychological care programs.

5. CONCLUSION

Within the limitation and delimitation of the research, the following conclusions were drawn

Kinesiophobia remains a major psychological barrier for athletes even after physical rehabilitation, affecting their confidence and readiness to return to sport.

High levels of fear of re-injury were observed in a significant portion of athletes, regardless of their gender or type of sport.

Psychological well-being was significantly lower in athletes with higher kinesiophobia levels, indicating the deep impact of psychological fear.

No significant gender differences were found across most psychological variables, except for fear-avoidance beliefs (FABQ), which were higher in male athletes.

Psychological readiness to return to sport (measured by IPRRS) did not show significant differences between high and low kinesiophobia groups, suggesting that readiness is influenced by multiple factors.

Most coping strategies used by athletes were not sufficient in reducing psychological distress, particularly in those with high fear scores.

A large majority of participants (over 60%) had not received psychological support during their rehabilitation, even though many were open to such interventions.

There is a clear need to integrate psychological support into standard sports injury rehabilitation practices to address kinesiophobia and related mental health issues effectively.

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