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**EXTENDED  
ABSTRACT**

# Post-Traumatic Stress Disorder and Its Influence on Fear Return to Sports Among Injured Athletes

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## I. INTRODUCTION

Post-traumatic stress disorder (PTSD) is a psychological condition triggered by traumatic events, including severe sports injuries [1]. Injured athletes may suffer from intrusive thoughts, hypervigilance, and avoidance, which can delay recovery and hinder return to sport (RTS). The prevalence of PTSD among athletes is a significant concern, with rates reported as high as 13%-25% in certain populations [2]. Negative perceptions of themselves and fear of reinjury serve as psychological barriers during the RTS process [3]. This study examines the relationship between PTSD severity and fear of RTS, highlighting the importance of integrating mental health assessments into return-to-play (RTP) protocols.

## II. METHODS

A cross-sectional design was chosen by using purposive sampling. Forty-two athletes aged 18–30 with a sports injury in the last month were selected. Two instruments were used: the PTSD Checklist (PCL-5) for the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) [4] and the Fear of Return to Sport Scale (FRESS) [5]. Descriptive and inferential statistics were analyzed using Jamovi v2.3.28.

## III. RESULTS AND DISCUSSION

### A. Scoring Summary for PTSD and FRESS

Table I presents the PTSD mean of 29.55 ( $SD=19.04$ ) was below the cutoff score of 31, showing that the population has a low probability of PTSD symptoms. The PTSD symptoms were present, although they did not meet a full PTSD diagnosis, which can negatively impact the psychological readiness in RTS. However, in another study, 28.8% of baseball players had probable PTSD and 18.3% had severe PTSD [6]. As for FRESS, the mean 57.22 ( $SD=23.48$ ) showed a moderate level of fear in returning to sport. Fear of reinjury, anxiety of RTS, confidence level, and social pressure were the key elements measured in FRESS. Additionally, an elevated level of Kinesio phobia and pain catastrophizing is less likely to RTS among Autologous Chondrocyte Implantation (ACI) patients [7]. Nevertheless, athletes with a successful RTS were associated with more social support, making it easier to maintain their pre-injury psychological state [8].

Table II showed that the most reported cluster among the athletes was Avoidance 1.76 ( $SD=1.36$ ). Fear avoidance is

usually elevated in the early rehabilitation but improves over time in most patients [9].

### B. Relationship Between PTSD and Fear of Returning to Sport

There was a significant positive correlation between PTSD and fear of RTS among injured athletes ( $r = +0.60, p < 0.001$ ; Table III). This indicates that athletes with higher PTSD scores tend to experience greater psychological fear when considering RTS. Supporting findings revealed that athletes characterized by high anxiety, high depression, and low self-esteem and optimism scores had the highest rate of non-RTS [7]. Therefore, psychological barriers hinder athletes' progression in RTS after experiencing a sports injury. In contrast, athletes with higher self-confidence and intrinsic motivation showed better adherence to rehabilitation [8].

TABLE I  
SCORING SUMMARY FOR PTSD AND FRESS

Variables	Percentage (n)	Mean	Std. Dev.
PTSD	42	29.55	19.04
FRESS	42	57.22	23.48

TABLE II  
PTSD SYMPTOMS CLUSTERS

Variables	Percentage (n)	Mean	Std. Dev.
Intrusion	42	1.67	1.09
Avoidance	42	1.76	1.36
Mood	42	1.31	1.0
Arousal	42	1.42	0.99

TABLE III  
PEARSON'S CORRELATION BETWEEN PTSD AND FRESS

		FRESS
PTSD	Pearson's R	+0.60
	Sig. (2-tailed)	<0.001
	N	42

## IV. CONCLUSIONS

It confirms that PCL-5 and FRESS are relevant and measurable assessment tools for psychological response to sports injury. Addressing psychological factors is equally

important as physical recovery, where we can better support injured athletes in making a confident and prolonged RTS in their respective sports. Establishing a gradual RTS protocol that also consists of group support and spreading awareness of their injury can determine their recovery speed.

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