

Effects of Self-Efficacy, Catastrophizing, Fear of Movement and Joint position sense in the maintenance of wrist unspecific pain in athletes. An observational study.

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Introduction

Pain is the most common athlete-reported symptom but the perception of pain is complex, differs between individuals and is not directly proportional to the extent of injury. Although different wrist injuries have been described in the literature as more prevalent in racket sport, unspecific chronic wrist pain is common problem on amateur population.

Material and Methods

The study was conducted between October 2021 to June 2022.

Participants were adults over 18 years, suffering wrist pain, currently playing in racket sports.

Procedure: This study followed a cross-sectional survey design. Participants were briefed on the purpose of the survey, any potential risks, and were given the option to be excluded from the study. The participants were also given a demographic sheet that would be able to identify the athletes' sex, sport, age, years played, presence of current injury, and previous injury history.

Variables	Assessment
Pain intensity	Numerical Rating Scale (NRS) (1)
Self efficacy (SE)	Question: How sure are you of your ability to play at this momento? (0: not sure and 100=completely sure) (2)
Catastrophizing pain	Pain Catastrophizing scale (PCS) (3)
Kinesiophobia	Tampa Scale of Kinesiophobia (TSK-11) (4)
Proprioception	Joint position sense test (JPST) (5)

Results

- 104 participants (54 men and 50 women), mean age of 26.9
- Moderate correlation between SE and pain during activity ($r=-0.3$; $R^2 0.09$; $P.03$)
- The correlation between the PCS score and pain rating was $r = .27$, indicating a significant but negligible correlation ($P < .01$).
- The TSK mean was $24.2 (\pm 6.63)$. A significant positive weak correlation was observed between kinesiophobia and pain intensity ($r = 0.138$, $p = 0.040$) and moderate correlations with JPS in flexion and extension ($p < 0.001$).
- JPS testing of flexion (MD 2.8 grades; $p < 0.01$) and extension (MD 1.2 grades; $p < 0.01$) were not correlated with values of pain intensity.

Conclusions

Our results suggested a complex interactions between cognitive-affective processes and wrist unspecific pain in athletes. No significant correlation between JPS and pain intensity was found, but kinesiophobia significantly correlated with JPS. This relationship suggests that fear of movement significantly affects the wrist motor control also if pain perception is no correlated. Future studies and analyzes should be carried out in order to establish predictive values regarding recovery and the influence of these psychological factors on the evolution of pain intensity.



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