Relationships Between Injury-Related Fear, Balance Self-Efficacy, and Dynamic Balance Performance in Those with Chronic Ankle Instability

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Introduction

- Chronic ankle instability (CAI) affects 40% of individuals who suffer an acute lateral ankle sprain[4] and is associated with a host of impairments.[6]

- Poor reach performance on a dynamic balance task is one of the most consistently reported impairments and is thought to contribute to the continuance of the condition.[7]

- Recently, injury-related (IR) fear has been recognized as an important psychological factor in those with CAI[8] and may cause these individuals to engage in protective movement strategies which could help explain the reach deficits in this population.

- IR fear may also impact one's perception of ability, or self-efficacy (SE), which has demonstrated positive associations with balance performance in other populations.[9-11]

- These relationships have yet to be investigated in the CAI population.

Purpose

To examine if there are relationships between IR fear, balance SE, and dynamic balance performance in those with CAI

Methods

PARTICIPANTS

n = 33 Individuals with CAI (F:18, M:15)	
Age (years)	22.8 ± 3.3
Height (cm)	170.2 ± 8.5
Mass (kg)	78.0 ± 13.6

OUTCOMES

- IR fear was assessed via the Tampa Scale of Kinesiophobia (TSK-11)[12]

- The Self-Efficacy of Balance Scale (SEBS) was utilized to capture participants' level of balance SE.[13]

- Dynamic balance performance was assessed on the involved limb with the Star-Excursion Balance Test (SEBT) in the anterior (ANT), posteromedial (PM), and posterolateral (PL) directions. A composite score (COMP) was calculated for overall performance. [7]

ANALYSIS

Pearson correlations were used to analyze associations between these outcomes with significance set at P<0.05.

Reference List

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Results

Significant negative correlations were identified between TSK-11 and SEBS scores (r=-0.34, P=0.050), indicating those with higher levels of IR fear demonstrated lower levels of balance SE

Significant positive correlations were identified between SEBS scores and SEBT-COMP (r=0.48, P=0.005), SEBT-PM (r=0.42, P=0.016), and SEBT-PL (r=0.48, P=0.005), indicating that individuals who perceived themselves as more confident in their balance ability demonstrated better balance performance

Click for all correlation data

Discussion

↑ levels of IR fear were associated with ↓ levels of balance SE; ↓ levels of SE were related to poorer balance performance.

Self-efficacy is modifiable[14] and may be an area to target in individuals with CAI to mediate IR fear and improve balance performance.

Conclusion

IR fear does not directly relate to balance performance in those with CAI, but may have an indirect relationship by impacting one's balance self-efficacy