ABSTRACT

Background: The tuck jump assessment was developed to identify players at risk for anterior cruciate ligament (ACL) injuries or gauge a player's progress through rehabilitation after ACL reconstruction. A tuck jump score of ≥ 6 out of 10 has been labeled poor and thought to identify players with high risk landing patterns.

Purpose: The purpose of this exploratory study was to examine if there was a relationship between tuck jump score, particularly tuck jump scores ≥ 6, hopping performance, and patient-reported outcome measures in female soccer players with ACL reconstruction (ACLR) and knee-healthy controls.

Study Design: Secondary analysis of prospective cohort study

Methods: Female soccer players (117 after ACLR, 117 knee-healthy) performed the single hop for distance, tuck jump assessment, and drop vertical jump (DVJ). All players were categorized based on as having a total tuck jump score ≥ 6 or < 6. Analyzing all players together, Spearman’s rank correlations assessed if there were relationships between total tuck jump score or tuck jump scores ≥ 6 and single-legged hop limb symmetry or DVJ measures. Players with an ACLR also filled out the International Knee Documentation Committee 2000 Subjective Knee Form and the Knee injury Osteoarthritis Outcome Score. Spearman’s rank correlations assessed if there were relationships between total tuck jump score or tuck jump scores ≥ 6 and patient-reported outcome measures.

Results: The mean tuck jump scores was 4.8 ± 1.8 (tuck jump score ≥ 6, 6.7 ± 0.9, tuck jump score < 6, 3.7 ± 1.1) with 87 (37%) athletes having tuck jump score ≥ 6. There were no significant relationships between tuck jump score or tuck jump score ≥ 6 and hopping performance or patient-reported outcome measures.

Conclusion: The results of this current study indicate that tuck jump scores, including tuck jump scores ≥ 6, may not be related to functional or patient-reported outcome measures. Further work is needed to examine the clinical utility of the tuck jump assessment.

Level of evidence: 2

Keywords: Anterior cruciate ligament, ACL injury, prevention, ACL reconstruction, football, jump performance, rehabilitation, tuck jump, soccer, women

ORIGINAL RESEARCH
TUCK JUMP SCORE IS NOT RELATED TO HOPPING PERFORMANCE OR PATIENT-REPORTED OUTCOME MEASURES IN FEMALE SOCCER PLAYERS

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