

Abstract

Title: Triple jump performance requirements

Aims: The aim of the thesis is to determine the key biomechanical parameters in triple jump for world-class performance. The sub-objective is to predict the performance of leading female athletes from Czechia and the inclusion of predicted performance level.

Methodology: Data collection was retrieved from publicly available biomechanical analyses from top, international athletic competitions available on the World Athletics website (n=28). Kinematic parameters were analysed using statistical methods, namely correlation, cluster and regression analysis.

Results: Research showed that there is no strong predictor of performance in the triple jump. Using 13 kinematic parameters, we can explain approximately 47 % of the variance. The strongest predictor appears to be velocity in the second step before the takeoff.

Key words: athletics; jumps; triple jump; performance; assessment; biomechanical parameters; performance indicator; performance prediction