

RELIABILITY OF COUNTERMOVEMENT JUMP PERFORMANCE ON CHRONOJUMP-BOSCOSYSTEM IN MALE AND FEMALE ATHLETES

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Abstract

The countermovement jump protocol is a common test for measuring leg power. In the recent decade, open source technology has been introduced to measure performance. The purpose of this study was to establish the relative and absolute reliability of the hands-on-waist countermovement jump protocol (CMJ) using the Chronojump-Boscosystem. 11 male (age, 31.0 ± 5.97 years; height, 174.3 ± 5.17 cm; body mass, 77.5 ± 8.3 kg; percentage body fat (%BF), 12.4 ± 2.42) and 9 female (age: 27.1 ± 3.17 years; height, 162.9 ± 3.25 ; body mass: 67.1 ± 6.15 ; %BF, 28.6 ± 4.56) national dragonboat athletes from the Philippines participated in the study. They performed two CMJ trials for two sessions separated by 7 days. Intraclass correlation coefficient with 95% confidence interval displayed as ICC (95% CI), standard error of measurement (SEM), minimal detectable change at 95% confidence interval ($MDC_{95\%}$) and smallest worthwhile change (SWC) were utilized in the study. Data revealed that males demonstrated ICC (95% CI) = 0.86 (0.54 – 0.96), SEM = 1.72, $MDC_{95\%}$ = 4.77, and SWC = 0.92. On the other hand, females showed ICC (95% CI) = 0.93 (0.74 – 0.99), SEM = 0.69, $MDC_{95\%}$ = 1.91, SWC = 0.52. In conclusion, CMJ performance on the Chronojump-Boscosystem displayed moderate relative reliability for males and high relative reliability for females. Absolute reliabilities of the CMJ performance were marginal for both groups.

Keywords: countermovement jump, open source technology, Chronojump-Boscosystem