
Relationship Between the Eccentric Utilization Ratio and 20-meter Sprint Times in Division I Men's Soccer Players

Exercise Science

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Purpose

The purpose of this study was to examine the relationship between the eccentric utilization ratio (EUR) and 20-meter sprint (20m) times in Division I men's soccer players.

Methods

Twenty-one athletes (age = 20.7 ± 1.2 years, height = 179.38 ± 6.09 cm, 76.4 ± 6.5 kg) performed countermovement jumps (CMJ), squat jumps (SJ), and 20m testing during a single testing session. The EUR was calculated using the athletes' jump height (EUR-JH) and peak power (EUR-PP). Person product-moment correlations were used to examine the relationship between both EUR variables and 20m.

Results

20m displayed trivial and small, negative relationships with EUR-JH ($r = -0.041$, $p = 0.361$) and EUR-PP ($r = -0.118$, $p = 0.340$), respectively. No statistically significant relationships were found between 20m and either EUR variable.

Conclusions

The results of this study found both EUR variables to be weak predictors of 20m in Division I collegiate soccer players. It is important to note, however, that these data were collected during a single post-season testing session. Accordingly, future studies should aim to examine the longitudinal changes in EUR over the course of a training year to better understand its relationship to sprint performance.

Link: <https://s3.us-east-2.amazonaws.com/lagrangecollegecitations/LewisSEACSM.pdf>

Citations Journal of Undergraduate Research

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