

HUBUNGAN ANTARA KESEIMBANGAN DINAMIS TERHADAP *FOOTWORK* PADA ATLET BULUTANGKIS REMAJA

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Abstrak

Latar belakang: Bulutangkis adalah olahraga cepat dan multidireksional yang menuntut keseimbangan dinamis dan *footwork* optimal pada atlet remaja, tetapi bukti hubungan keduanya masih terbatas dan tidak konsisten. **Tujuan:** Menganalisis hubungan antara keseimbangan dinamis dan kecepatan *footwork* pada atlet bulutangkis remaja PB Jaya Raya Rangunan. **Metode:** Desain observasional analitik potong lintang pada 52 atlet yang dinilai keseimbangan dinamisnya dengan Y-Balance Test dan kecepatan *footwork* dengan *Badcamp agility test*; analisis menggunakan korelasi Spearman ($\alpha = 0,05$). **Hasil:** Rerata waktu *footwork* $10,70 \pm 1,21$ detik (7,99–13,39 detik) dengan mayoritas kategori baik–sangat baik, namun korelasi antara keseimbangan dinamis dan waktu *footwork* tidak bermakna (tungkai kiri $r = -0,023$; $p = 0,870$, tungkai kanan $r = -0,095$; $p = 0,503$). **Kesimpulan:** Tidak terdapat hubungan signifikan antara keseimbangan dinamis dan kecepatan *footwork*, sehingga variasi performa *footwork* kemungkinan lebih dipengaruhi faktor lain seperti kelincahan, kekuatan tungkai, dan kecepatan reaksi.

Kata kunci: bulutangkis remaja, keseimbangan dinamis, *Y-Balance Test*, *footwork*, *Badcamp Agility Test*.

THE RELATIONSHIP BETWEEN DYNAMIC BALANCE AND FOOTWORK SPEED IN ADOLESCENT BADMINTON ATHLETES

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Abstract

Background: Badminton involves rapid, multidirectional movements that demand optimal dynamic balance and footwork quality in adolescent players, yet evidence on the direct link between dynamic balance and footwork speed in this population is still limited and inconsistent. **Objective:** To examine the relationship between dynamic balance and footwork speed in adolescent badminton athletes at PB Jaya Raya Ragunan. **Methods:** An analytical cross-sectional study was conducted on 52 adolescent athletes selected by total sampling; dynamic balance was measured using the Y-Balance Test for both limbs and footwork speed using the Badcamp agility test (time in seconds), with associations analysed via Spearman's rank correlation at a 5% significance level. **Results:** Most athletes demonstrated good to very good dynamic balance and footwork performance, with a mean footwork time of 10.70 ± 1.21 seconds (range 7.99–13.39 seconds), while Spearman's coefficients for left and right limbs were $r = -0.023$ ($p = 0.870$) and $r = -0.095$ ($p = 0.503$), indicating very weak, non-significant negative correlations. **Conclusion:** There was no significant relationship between dynamic balance and footwork speed in these adolescent badminton athletes, suggesting that footwork performance is more strongly influenced by other components such as agility, lower-limb explosive strength, and reaction speed, so training programmes should not rely solely on dynamic balance exercises.

Keywords: adolescent badminton, dynamic balance, Y-Balance Test, footwork, badcamp agility test.