

Hubungan Profil Somatotype dan Performa Atlet Sepak Bola di Indonesia

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ABSTRAK

Latar belakang: Sepak bola merupakan olahraga *stop and go* yang menuntut kombinasi kapasitas fisik, teknik, dan taktik unggul, di mana proporsi tubuh (*somatotype*) terbukti memengaruhi 25% hingga 60% variasi performa fisik atlet. Namun, riset empiris di Indonesia yang menguji signifikansi perbedaan performa fisik antartipe somatotype, khususnya tipe *balanced mesomorph* yang dikenal mendominasi olahraga berbasis kecepatan dan kekuatan, masih sangat terbatas karena studi terdahulu umumnya bersifat deskriptif.

Tujuan: Tujuan dari penelitian ini adalah untuk mengetahui perbedaan profil *somatotype* dan performa atlet sepak bola di Indonesia.

Metode: Penelitian ini mengadopsi desain analitik observasional dengan pendekatan *cross-sectional*. Pemetaan *somatotype* menggunakan metode Heath-Carter kemudian nilai *endomorphy*, *mesomorphy*, dan *ectomorphy* divisualisasikan menggunakan *somatochart*. Uji beda antarvariabel menggunakan uji *Independent Sample T-Test*.

Hasil: Hasil uji *Independent Sample T-Test* menunjukkan terdapat perbedaan signifikan pada performa fisik antara kedua kelompok ($p\text{-value} = 0,010$), di mana atlet dengan profil *balanced mesomorph* mencatatkan rata-rata persentase performa fisik yang nyata lebih tinggi ($90,57 \pm 2,76\%$) dibandingkan kelompok tipe tubuh lainnya ($88,05 \pm 2,21\%$). Keunggulan ini didorong oleh dominasi komponen massa otot kontraktile yang padat dan minimalnya hambatan beban lemak pasif pada tipe *balanced mesomorph*.

Kesimpulan: Terdapat perbedaan yang signifikan antara profil *somatotype* dan performa atlet sepak bola di Indonesia. Kelompok *balanced mesomorph* memiliki rata-rata persentase tes fisik yang secara signifikan lebih tinggi dibandingkan kelompok tipe lain sehingga profil *somatotype* berhubungan dengan performa atlet sepak bola.

Kata kunci: *Somatotype*; Performa; Sepak Bola

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The Correlation between Somatotype Profile and Football Athlete Performance in Indonesia

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ABSTRACT

Background: Football is a dynamic, stop-and-go sport that demands a combination of superior physical, technical, and tactical capacities, with body proportions (somatotype) proven to influence 25% to 60% of variance in athletes' physical performance. However, empirical research in Indonesia testing the significance of physical performance differences across somatotype types, specifically the balanced mesomorph type, known to dominate speed-and strength-based sports, remains highly limited, as prior studies have generally been descriptive.

Objective: This study aims to determine the differences in somatotype profiles and performance among football athletes in Indonesia.

Methods: This study adopted an observational analytic design with a cross-sectional approach. Somatotype plotting was conducted using the Heath-Carter method, and endomorphy, mesomorphy, and ectomorphy values were visualized using a somatochart. Differences between variables were analyzed using the Independent Sample T-Test.

Results: The Independent Sample T-Test results indicated a significant difference in physical performance between the two groups ($p\text{-value} = 0,010$), with balanced mesomorph athletes recording a markedly higher mean physical performance percentage ($90,57 \pm 2,76\%$) compared to other body type groups ($88,05 \pm 2,21\%$). This advantage is driven by the dominance of dense contractile muscle mass components and the minimal resistance from passive fat mass in the balanced mesomorph type.

Conclusion: There is a significant difference between somatotype profiles and the performance of football athletes in Indonesia. The balanced mesomorph group exhibits a significantly higher mean physical test percentage than other types, indicating that somatotype profiles are closely associated with football athletes' performance.

Keywords: Somatotype; Performance; Football

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