

ABSTRAK

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Hubungan Kekuatan Otot Tungkai dan Daya Ledak Otot Tungkai dengan Kecepatan Tendangan *Dollyo Chagi* pada Atlet Taekwondo di Kabupaten Pekalongan

Pendahuluan: Taekwondo merupakan olahraga bela diri yang memiliki salah satu teknik tendangan yang sering digunakan yaitu tendangan *dollyo chagi*, untuk menghasilkan kecepatan tendangan maksimal diperlukan kekuatan otot tungkai dan daya ledak otot tungkai. Penelitian ini bertujuan untuk mengetahui hubungan kekuatan otot tungkai dan daya ledak otot tungkai dengan kecepatan tendangan *dollyo chagi* pada atlet taekwondo di Kabupaten Pekalongan.

Metode: Penelitian ini menggunakan desain kuantitatif korelasional dengan metode pendekatan *cross-sectional*. Sampel diperoleh secara total sampling dengan jumlah 35 responden. Analisis data menggunakan uji univariat dan bivariat dengan alat ukur *leg dynamometer* untuk mengukur kekuatan otot tungkai dengan nilai validitas 0,82 dan reliabilitas 0,93, *vertical jump test* untuk mengukur daya ledak otot tungkai dengan nilai validitas 0,978 dan reliabilitas 0,989, kecepatan tendangan *dollyo chagi* selama 10 detik dengan nilai validitas 0,977 dan reliabilitas 0,945. Uji normalitas menggunakan *Shapiro-wilk* serta uji korelasi menggunakan *rank Spearman* dan uji korelasi berganda.

Hasil: Hasil uji *rank spearman* menunjukkan hubungan kekuatan otot tungkai dengan kecepatan tendangan *dollyo chagi* didapatkan *p value* 0,021 ($<0,05$), hubungan daya ledak otot tungkai dengan kecepatan tendangan *dollyo chagi* didapatkan *p value* 0,007 ($<0,05$), dan hasil uji korelasi berganda hubungan kekuatan otot tungkai dan daya ledak otot tungkai dengan kecepatan tendangan *dollyo chagi* didapatkan *p value* 0,008 ($<0,05$).

Diskusi: Ada hubungan antara kekuatan otot tungkai dan daya ledak otot tungkai dengan kecepatan tendangan *dollyo chagi* pada atlet taekwondo di Kabupaten Pekalongan. Atlet diharapkan melakukan latihan penguatan otot tungkai dan peningkatan daya ledak otot tungkai untuk meningkatkan performa kecepatan tendangan *dollyo chagi*.

Kata kunci: Kecepatan tendangan *dollyo chagi*, kekuatan otot tungkai, daya ledak otot tungkai

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ABSTRACT

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The Relationship Between Lower Limb Muscle Strength and Explosive Power with the Speed of Dollyo Chagi Kick in Taekwondo Athletes in Pekalongan Regency

Introduction: Taekwondo is a martial art that includes various kicking techniques, among which dollyo chagi is one of the most frequently used. To achieve maximum kick speed, adequate lower limb muscle strength and explosive power are essential. This study aims to examine the relationship between lower limb muscle strength and explosive power with the speed of dollyo chagi kick in Taekwondo athletes in Pekalongan Regency.

Methods: This research employed a quantitative correlational design with a cross sectional approach. A total of 35 athletes were selected using a total sampling technique. Data were analysed using univariate and bivariate analyses. A leg dynamometer was used to assess lower limb muscle strength (validity: 0.82; reliability: 0.93), while the vertical jump test measured explosive power (validity: 0.978; reliability: 0.989). The speed of dollyo chagi kicks was measured over a 10 second period (validity: 0.977; reliability: 0.945). The Shapiro-Wilk test was used for normality testing, followed by Spearman rank correlation and multiple correlation analyses.

Results: Spearman rank test results showed a significant relationship between lower limb muscle strength and dollyo chagi kick speed ($p\text{-value} = 0.021 < 0.05$), as well as between explosive power and kick speed ($p\text{-value} = 0.007 < 0.05$). The multiple correlation test also indicated a significant relationship between both lower limb strength and explosive power with dollyo chagi kick speed ($p\text{-value} = 0.008 < 0.05$).

Discussion: There is a significant relationship between lower limb muscle strength and explosive power with the speed of dollyo chagi kicks among Taekwondo athletes in Pekalongan Regency. Athletes are encouraged to engage in lower limb strength and explosive power training to improve their dollyo chagi kick performance.

Keywords: Dollyo chagi kick speed, lower limb muscle strength, lower limb explosive power

References: 51 (2015-2025)