

ABSTRAK

PENGARUH KEKUATAN OTOT LENGAN DAN OTOT TUNGKAI TERHADAP KECEPATAN RENANG GAYA BEBAS 50 METER ATLET *SWIMMING CLUB* DI PRINGSEWU

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Penelitian ini bertujuan menganalisis pengaruh kekuatan otot lengan dan otot tungkai terhadap kecepatan renang gaya bebas 50 meter pada atlet *Swimming Club* di Pringsewu. Latar belakang penelitian ini adalah rendahnya kecepatan renang yang diduga disebabkan kurangnya kekuatan otot atlet. Penelitian menggunakan metode eksperimen dengan desain *pretest-posttest control group design*. Sampel dibagi menjadi dua kelompok: kelompok eksperimen 1 mendapatkan latihan kekuatan otot lengan, dan kelompok eksperimen 2 mendapatkan latihan kekuatan otot tungkai. Instrumen yang digunakan adalah tes waktu tempuh renang gaya bebas 50 meter. Hasil analisis menunjukkan kekuatan otot lengan berpengaruh signifikan terhadap kecepatan renang ($t_{hitung} = 5,111 > t_{tabel} = 2,201$), begitu pula kekuatan otot tungkai ($t_{hitung} = 6,046 > t_{tabel} = 2,201$). Namun, tidak ditemukan pengaruh simultan yang signifikan antara kekuatan otot lengan dan otot tungkai terhadap kecepatan renang gaya bebas 50 meter. Kesimpulannya, kekuatan otot lengan dan otot tungkai secara terpisah memiliki kontribusi penting dalam meningkatkan performa renang, sehingga keduanya perlu dilatih secara seimbang.

Kata kunci: kekuatan otot, kecepatan renang, gaya bebas

ABSTRACT

THE EFFECT OF ARM AND LEG MUSCLE STRENGTH ON 50-METER FREESTYLE SWIMMING PERFORMANCE OF SWIMMING CLUB ATHLETES IN PRINGSEWU

By

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This study aims to analyze the effect of arm and leg muscle strength on the 50- meter freestyle swimming speed of Swimming Club athletes in Pringsewu. The background of this study is the low swimming speed which is thought to be caused by a lack of muscle strength in athletes. The study used an experimental method with a pretest-posttest control group design. The sample was divided into two groups: experimental group 1 received arm muscle strength training, and experimental group 2 received leg muscle strength training. The instrument used was a 50-meter freestyle swimming time test. The results of the analysis showed that arm muscle strength had a significant effect on swimming speed ($t_{\text{count}} = 5.111 > t_{\text{table}} = 2.201$), as did leg muscle strength ($t_{\text{count}} = 6.046 > t_{\text{table}} = 2.201$). However, no significant simultaneous effect was found between arm and leg muscle strength on 50-meter freestyle swimming speed. In conclusion, arm and leg muscle strength separately have important contributions in improving swimming performance, so both need to be trained in a balanced manner.

Keywords: muscle strength, swimming speed, freestyle