ABSTRAK

HUBUNGAN POWER TUNGKAI, PINGGANG, LENGAN DAN FLEKSIBILITAS TERHADAP KECEPATAN *JUMP SMASH* PELAJAR BULUTANGKIS KLUB PB. SWADHIPA

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Penelitian ini bertujuan untuk mengetahui hubungan antara power otot tungkai, kelentukan pinggang, power otot lengan, dan fleksibilitas terhadap kecepatan *jump smash* pada pelajar bulutangkis Klub PB. Swadhipa. Penelitian ini menggunakan metode kuantitatif dengan pendekatan korelasional. Populasi dalam penelitian ini adalah seluruh atlet Klub PB. Swadhipa dengan sampel sebanyak 30 atlet yang diambil menggunakan teknik total sampling. Instrumen penelitian meliputi Vertical Jump Test untuk power otot tungkai, Side Medicine Ball Throw untuk power pinggang, Two-Hand Medicine Ball Throw untuk power otot lengan, Sit and Reach Test untuk fleksibilitas, serta tes kecepatan *jump smash* menggunakan analisis video (Kinovea). Analisis data menggunakan korelasi Pearson Product Moment dan korelasi ganda. Hasil penelitian menunjukkan bahwa terdapat hubungan yang signifikan antara power otot tungkai ($r = 0,607$), kelentukan pinggang ($r = 0,484$), power otot lengan ($r = 0,673$), dan fleksibilitas ($r = 0,568$) terhadap kecepatan *jump smash*. Secara simultan, keempat variabel memiliki hubungan signifikan dengan nilai $R = 0,791$ dan kontribusi sebesar 62,6%. Dapat disimpulkan bahwa power otot tungkai, kelentukan pinggang, power otot lengan, dan fleksibilitas memiliki hubungan signifikan terhadap kecepatan *jump smash* pada pelajar bulutangkis Klub PB. Swadhipa.

Kata kunci: power otot tungkai, kelentukan pinggang, power otot lengan, fleksibilitas, kecepatan *jump smash*

ABSTRACT

THE RELATIONSHIP OF LEG POWER, HIP POWER, ARM POWER, AND FLEXIBILITY TO JUMP SMASH SPEED IN BADMINTON ATHLETES OF PB SWADHIPA CLUB

By

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This study aimed to determine the relationship between leg muscle power, waist flexibility, arm muscle power, and flexibility on the speed of jump smash in badminton players of PB. Swadhipa Club. This research used a quantitative method with a correlational approach. The population consisted of all athletes of PB. Swadhipa Club, with a total sample of 30 athletes selected using total sampling technique. The instruments used were Vertical Jump Test to measure leg muscle power, Side Medicine Ball Throw for waist power, Two-Hand Medicine Ball Throw for arm muscle power, Sit and Reach Test for flexibility, and jump smash speed test using video analysis (Kinovea). Data were analyzed using Pearson Product Moment correlation and multiple correlation. The results showed that there were significant relationships between leg muscle power (r = 0.607), waist flexibility (r = 0.484), arm muscle power (r = 0.673), and flexibility (r = 0.568) with jump smash speed. Simultaneously, all variables had a significant relationship with R = 0.791 and a contribution of 62,6%. It can be concluded that leg muscle power, waist flexibility, arm muscle power, and flexibility have significant relationships with jump smash speed in badminton players of PB. Swadhipa Club.

Keywords: *leg muscle power, waist flexibility, arm muscle power, flexibility, jump smash speed*