

ABSTRACT

ARIEF MUNANDAR, Relationship of Leg Muscle Power, Arm Muscle Power and Back Muscle Flexibility to the Ability of the Regansu Volleyball Smash Club, Medan Sunggal District in 2021.

(Supervisor : M NUSTAN HASIBUAN).

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This study aims to determine the relationship between leg muscle power, arm muscle power, and back muscle flexibility to the volleyball smash ability at Club Regansu Medan Sunggal. The research method used is a correlation research method, using tests, namely vertical jumps, push-ups, back-ups, medicine balls and smashes.

The population is all athletes of the regansu volleyball club, Medan Sunggal sub-district in 2021, totaling 18 people. The number of samples of 18 people was obtained by using saturated sampling technique. Instrument of data collection with tests, measurements, and documentation. namely taking the test results, namely the vertical jump, push-up, and back-up tests. The data analysis technique used is using a correlation test with the help of SPSS 22.

Based on the first hypothesis testing which was calculated using SPSS 22, it was obtained that the hypothesis testing correlation coefficient = 0.739. Because the value of the correlation coefficient $r_{x1.y} = 0.739 > r_{table} 0.468$, the correlation coefficient is declared significant. From the results of testing the first hypothesis, it can be concluded that there is a significant relationship between Leg Muscle Power and the ability of the Regansu Volleyball Smash Club, Medan District in 2021.

Based on the second hypothesis testing which was calculated using SPSS 22, it was obtained that the hypothesis testing correlation coefficient = 0.775, because the correlation coefficient value $r_{x1.y} = 0.595 > r_{table} 0.468$, the correlation coefficient is declared significant. From the results of testing the second hypothesis, it can be concluded that there is a significant relationship between arm muscle power and the ability of the Regansu Volleyball Smash Club, Medan District in 2021.

Based on the third hypothesis test calculated using SPSS 22, it was obtained that the correlation coefficient hypothesis testing = 0.723, because the correlation coefficient value $r_{x1.y} = 0.723 > r_{table} 0.468$, the correlation coefficient is declared significant. From the results of testing the third hypothesis, it can be concluded again that there is a significant relationship between back flexibility and the ability of the Regansu Volleyball Smash Club, Medan District in 2021.

Based on the test of the third hypothesis calculated using SPSS 22, it was obtained that the hypothesis testing correlation coefficient = 10.38. The third hypothesis test used the F test, the test was carried out by comparing the values of Fcount and Ftable at a significance level of 5% with $df1 = 3$ and $df2 = 15$ obtained Ftable value of 3.29 because the value of Fcount = $9.27 > F_{table} 3.29$, it is stated that there is a relationship. From the results of testing the fourth hypothesis, it can be concluded again that there is a significant relationship between leg muscle power (X1), arm muscle power (X2), and back flexibility (X3) on the Smash ability (Y) of the Regansu Volleyball Club, Medan District in 2021.

ABSTRAK

ARIEF MUNANDAR, Hubungan Power Otot Tungkai, Power Otot Lengan dan Kelentukan Otot Punggung Terhadap Kemampuan Smash Club Bola Voli Regansu Kecamatan Medan Sunggal Tahun 2021.

(Dosen Pembimbing : M NUSTAN HASIBUAN).

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Penelitian ini bertujuan untuk mengetahui adanya hubungan power otot tungkai, power otot lengan, dan kelentukan otot punggung terhadap kemampuan smash bola voli di Club Regansu Medan Sunggal. Metode penelitian yang digunakan adalah metode penelitian korelasi, dengan menggunakan test yaitu *vertical jump*, *push-up*, *back-up*, *medicine ball* dan *smash*

Populasi adalah seluruh atlet club bola voli regansu kecamatan medan sunggal tahun 2021 yang berjumlah 18 orang. Jumlah sampel 18 orang diperoleh dengan teknik sampling jenuh. Instrument pengumpulan data dengan tes, pengukuran, dan dokumentasi. yaitu mengambil hasil *test* yaitu tes *vertical jump*, *push-up*, dan *back-up*. Teknik analisis data yang digunakan yaitu menggunakan uji korelasi dengan bantuan SPSS 22.

Berdasarkan pengujian hipotesis pertama yang dihitung menggunakan SPSS 22 diperoleh pengujian hipotesis koefisien korelasi = 0,739. Karena nilai koefisien korelasi $r_{x1.y} = 0,739 > r_{tabel} 0,468$ maka koefisien korelasi dinyatakan signifikan. Dari hasil pengujian hipotesis pertama dapat disimpulkan bahwa terdapat hubungan yang signifikan antara Power otot Tungkai terhadap kemampuan Smash Club Bola Voli Regansu Kecamatan Medan tahun 2021.

Berdasarkan pengujian hipotesis kedua yang dihitung menggunakan SPSS 22 diperoleh pengujian hipotesis koefisien korelasi = 0,775, Karena nilai koefisien korelasi $r_{x1.y} = 0,595 > r_{tabel} 0,468$ maka koefisien korelasi dinyatakan signifikan. Dari hasil pengujian hipotesis kedua dapat disimpulkan bahwa terdapat hubungan yang signifikan antara Power otot lengan terhadap kemampuan Smash Club Bola Voli Regansu Kecamatan Medan tahun 2021.

Berdasarkan pengujian hipotesis ketiga yang dihitung menggunakan SPSS 22 diperoleh pengujian hipotesis koefisien korelasi = 0,723, Karena nilai koefisien korelasi $r_{x1.y} = 0,723 > r_{tabel} 0,468$ maka koefisien korelasi dinyatakan signifikan. Dari hasil pengujian hipotesis Ketiga dapat disimpulkan kembali bahwa terdapat hubungan yang signifikan antara kelentukan punggung terhadap kemampuan Smash Club Bola Voli Regansu Kecamatan Medan tahun 2021.

Berdasarkan pengujian hipotesis ketiga yang dihitung menggunakan SPSS 22 diperoleh pengujian hipotesis koefisien korelasi = 10,38, Uji hipotesis ketiga menggunakan uji F, uji tersebut dilakukan dengan cara membandingkan nilai Fhitung dan Ftabel pada taraf signifikansi 5% dengan $df_1=3$ dan $df_2=15$ diperoleh nilai Ftabel sebesar 3,29 karena nilai Fhitung = 9,27 > Ftabel 3,29 maka dinyatakan terdapat hubungan. Dari hasil pengujian hipotesis Keempat dapat disimpulkan kembali bahwa terdapat hubungan yang signifikan antara power otot tungkai (X1), power otot lengan (X2), dan Kelentukan Punggung (X3) terhadap kemampuan Smash (Y) Club Bola Voli Regansu Kecamatan Medan tahun 2021.