



Contribution Of Limb Length And Brick Flexibility to Smash Ability In Volley Balls Lueng IE Aceh Big White

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*Syamsulrizal^{1abcde}, Muhammad Iqbal^{2abc}, Zahara^{1ade}

¹University of Syiah Kuala, Indonesia.

²STKIP Kusuma Negara Jakarta, Indonesia.

ABSTRACT

The purpose of the study. This study aims to study and find out this method is used to obtain information directly from informants regarding "The Contribution of Leg Length and Flexibility of Togok To The Ability Of Volleyball Smash At The White Eagle Club Lueng ie Aceh Besar 2021.

Materials and methods. as for the data collection technique using tests and measurements with 15 athletes (Jimenez et al., 2016). The samples available in this study were 12 athletes due to sampling where the number of samples was the same as the population. Using the total sampling technique because according to (Hendra, n.d.) the total population is less than 100 and the entire population is used as a research sample.

Results. the results of the calculation of t count smaller than t table or $-3.83 < 2.178813$. This means that the description shows that the hypothesis that the author formulated is that there is no jointly significant contribution between leg length and togok flexibility on the volleyball smash ability of the Lueng ie 2021 white eagle club athlete

Conclusions. There is no significant contribution between leg length and togok flexibility with volleyball smash ability in volleyball athletes at the white eagle club Lueng ie. Aceh Besar 2021.

Keywords: *Leg Length; Flexibility of the togok; Smash Volley Ball Ability.*

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INTRODUCTION

Volleyball is one of the game sports that is developing in Indonesia. Volleyball games are taught through physical education, it is hoped that students will benefit both physically and spiritually (Arifin, 2022), health and physical abilities. The benefits for spirituality are psychological, personality and character will grow in a direction that is in accordance with the demands of society.

*Corresponding Author Syamsulrizal, e-mail: syamsulrizal.jantho@unsyiah.ac.id

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The coaching and development of volleyball in essence cannot be separated from the coaching and development of sports nationally as stated in the pattern of development and development of sports (Barbero-Alvarez et al., 2016). Volleyball sports coaching is an effort as a breakthrough to increase acceleration in catching up with coaching and breeding sports achievements. Volleyball achievement is influenced by factors such as the availability of good early childhood players, good early childhood coaches, good facilities and infrastructure, and good management. The activities of players and coaches to achieve achievements will be achieved if they are supported by the availability of adequate facilities and infrastructure. Furthermore, a good exercise program will determine the success of the goals to be achieved(Iqbal, 2020).

Based on the situation on the field, the White Eagle club player Lueng le Aceh Besar in smashing the volleyball game still really needs physical exercises in this case the flexibility of the stick and also the length of the legs, the player has not been able to hit the ball hard so that a perfect smash is formed(Barbero-Alvarez et al., 2016). The White Eagle club player Lueng le Aceh Besar also doesn't know the techniques in smash and measurements are made directly in the field so that the *smashes* that are done are still often out of the field. For this problem, a solution must be found, because if the problem is allowed to continue, it will hinder the future goals of the volleyball players of the White Eagle Lueng le Aceh Besar club in achieving the expected achievements(Hassan et al., 2017). I got this source directly from the coach of the White Eagle club player Lueng le Aceh Besar.

MATERIALS AND METHODS

Study participants

Population i is the entire research subject. In this study, the population was all athletes of the White Eagle Volleyball Club, Lueng le, Aceh Besar, totaling 12 people (Razali & Iqbal, 2022). The sample taken in this study used a total sampling technique.

The samples available in this study were 12 athletes due to sampling where the number of samples was the same as the population. Using the total sampling technique because according to (Hendra, n.d.) the total population is less than 100 and the entire population is used as a research sample. The number of samples in this study was the



entire population, namely all athletes from the White Eagle Club Lueng le 2021 , which amounted to 12 people.

Study Organization

This research is a quantitative descriptive study. This study aims to study and find out this method is used to obtain information directly from informants regarding "The Contribution of Leg Length and Flexibility of Togok To The Ability Of Volleyball *Smash* At The White Eagle Club Lueng le Aceh Besar 2021". as for the data collection technique using tests and measurements with 15 athletes (Jimenez et al., 2016). Collecting data using a field test for the white eagle club, Lueng ie A ceh B esar, through 3 test items, namely the measurement of leg length, flexibility of the trunk, and the high school ability test.

RESULTS

In the following, the data obtained from the measurement research in the field will be presented and presented in tabular form as follows:

Table 1. Recapitulation of Raw Data Research Results

Sample	Leg length (X)	Flexibility of the stick (X)	Volleyball Skills		
			Smash		Index (Y)
			Speed	Point	
1	89	14	0.23	2	2.23
2	108	14	0.50	4	4.50
3	101	14	0.29	3	3.29
4	98	14	0.39	4	4.39
5	92	12	0.49	5	5.49
6	90	14	0.32	4	4.32
7	105	14	0.25	3	3.25
8	101	12	0.21	1	1.21
9	100	13	0.28	3	3.28
10	101	14	0.35	4	4.35
11	94	12	0.29	3	3.29
12	99	13	0.35	3	3.35
Amount		1.178	160	3.95	39

Table 2. Table 2 Test Value of Leg Length (X')

X ₁	Y	X ²	Y ²	XY
89	2.23	7921	4.9729	198.47
108	4.5	11664	20.25	486
101	3.29	10201	10.8241	332.29
98	4.39	9604	19.2721	430.22
92	5.59	8464	31.2481	514.28
90	4.32	8100	18.6624	388.8
105	3.25	11025	10.5625	341.25
101	1.21	10201	1.4641	122.21
100	3.28	10000	10.7584	328
101	4.35	10201	18.9225	439.35



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94	3.29	8836	10.8241	309.26
99	3.25	9801	10.5625	321.75
1178	42.95	116018	157,761	4211.88

Table 3. Values for the Flexibility of the Skewers (X^2)

X_2	Y	X	Y ²	XY
14	2.23	196	4.9729	31.22
14	4.5	196	20.25	63
14	3.29	196	10.8241	46.06
14	4.39	196	19.2721	61.46
12	5.59	144	31.2481	67.08
14	4.32	196	18.6624	60.48
14	3.25	196	10.5625	45.5
12	1.21	144	1.4641	14.52
13	3.28	169	10.7584	42.64
14	4.35	196	18.9225	60.9
12	3.29	144	10.8241	39.48
13	3.25	169	10.5625	42.25
160	42.95	2142	157,761	574.59

Product Moment Correlation Test

The test method used to see the level of correlation of the two variables using the product moment correlation formula .

Test X_1 Against Y: Based on the calculation, the correlation coefficient $r_{xy} = -0.78$. The percentage of the coefficient of determination can be used the following formula:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

$$r_{xy} = \frac{12(4211,88) - (1178)(42,95)}{\sqrt{(12(116018) - (1178)^2)(12(157,761) - (42,95)^2)}}$$

$$= \frac{-52,54}{\sqrt{66,95954}}$$

$$= -0,78$$

$$KD = r_{xy}^2 \times 100\%$$

$$KD = -0,78^2 \times 100\%$$

$$KD = -60,84\%$$

X_2 Test Against Y:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

$$r_{xy} = \frac{12(574,59) - (160)(42,95)}{\sqrt{(12(2142) - (160)^2)(12(157,761) - (42,95)^2)}}$$

$$= \frac{23,08}{\sqrt{986,75}}$$

$$= 0,33$$

$$KD = r_{xy}^2 \times 100\%$$

$$KD = 0,33^2 \times 100\%$$

$$KD = 10,89\%$$

Based on the calculation, the correlation coefficient $r_{xy} = 0.33$, The percentage of the coefficient of determination can be used the following formula:

X_2 Test Against Y

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

$$r_{xy} = \frac{12(15719) - (1178)(160)}{\sqrt{(12(116018) - (1178)^2)(12(2142) - (160)^2)}}$$

$$= \frac{148}{\sqrt{686,53}}$$

$$= 0,21$$

Based on the calculation, the correlation coefficient $r_{xy} = 0.21$ The percentage of the coefficient of determination can be used the following formula:



$$KD = r_{xy}^2 \times 100\%$$

$$KD = 0,21^2 \times 100\% \quad KD = 4,41\%$$

Overall Test X_1 and X_2 Against Y

$$R_{Y, X_1, X_2} = \frac{r^2_{yX_1} + r^2_{yX_2} - 2r^2_{yX_1} \cdot r^2_{yX_2} \cdot r_{X_1 X_2}}{1 - r^2_{X_1 X_2}} = \frac{(-0,78) + (0,33) - ((-0,78) \cdot (0,33) \cdot (0,21))}{1 - (0,21)} = \frac{(-0,48) - (-0,11)}{0,79} = \frac{-0,37}{0,79} = -0,46835443$$

Based on the calculation, the correlation coefficient $r_{xy} = -0.68$, The percentage of the coefficient of determination can be used the following formula:

$$KD = r_{xy}^2 \times 100\%$$

$$KD = -0,68 \times 100\%$$

$$KD = -46,24\%$$

Based on the calculation, the correlation coefficient $r_{xy} = -0.68$

Hypothesis testing, Based on the value of r_{xy} , it can be calculated the value of t as follows:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{-0,68\sqrt{12-2}}{\sqrt{1-(-0,68)^2}} = \frac{-12,15034881}{0,560742365} = -3,83$$

Based on the t-test calculation, the value of $t_{count} = -3.83$ and t_{table} at a significant level $\alpha = 0.05$ and degrees of freedom $= n - 2 = 12 - 2 = 10$ is 2.178813. Thus, t_{count} is smaller than t_{table} or $-3.83 < 2.178813$, then Reject H_a , accept H_o . Based on the results of the study, it can be concluded that "There is no jointly significant contribution between leg length and togok flexibility on the volleyball *smash ability* of the volleyball athlete of Lueng ie Lueng ie 2021 volleyball club.

DISCUSSION

Based on the research calculations above, it turns out that leg length does not contribute to volleyball playing skills based on the results of t_{count} smaller than t_{table} or $-3.83 < 2.178813$ then H_o is accepted, meaning that there is no significant contribution between leg length and smash ability. volleyball at the Lueng White Eagle Club volleyball athlete, 2021.

Based on the results of the research calculations above, it turns out that the flexibility of the togok does not contribute to the volleyball smash ability and gives the result that t_{count} is smaller than t_{table} or $-3.83 < 2.178813$, so H_o is accepted,



meaning that there is no significant relationship between stick flexibility and ability smash volleyball on atlit volleyball k lueng white eagle club ie 2001. The results show that there is no jointly significant contribution between leg length and togok flexibility on the volleyball smash ability of leg length and togok flexibility. This shows that the absence of volleyball smash ability is determined by the two independent variables together. The results of the hypothesis that the t - count value is smaller than t - table or $-3.83 < 2.178813$, it can be stated that there is no significant contribution between leg length and togok flexibility with volleyball smash ability in club volleyball atlit white eagle lueng ie 2021.

CONCLUSION

There is no significant contribution between leg length and togok flexibility with volleyball smash ability in volleyball athletes at the white eagle club Lueng ie. Aceh Besar 2021.

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APPENDIX**Information About The Authors:****Syamsulrizal, Universitas Syiah Kuala.**

Email: syamsulrizal.jantho@unsyiah.ac.id; Department of Physical, Health and Recreation Education, Faculty of Teacher Training and Education, Universitas Syiah Kuala; Alamat: Jl. Teuku Nyak Arief No.441, Kopelma Darussalam, Kec. Syiah Kuala, Kota Banda Aceh, Aceh 23111, Indonesia.

Muhammad Iqbal, Sekolah Tinggi Keguruan dan Ilmu Pendidikan Kusuma Negara.

Email: m_iqbal@stkipkusumanegara.ac.id; Orchid ID: <https://orcid.org/0000-0002-9747-9374>; Scopus ID 57203175456; Department of Physical Education and Sport, STKIP Kusuma Negara Jakarta; Alamat: Jl Raya Bogor Km. 24 Cijantung, Jakarta Timur, 13770. DKI Jakarta, Indonesia.

Zahara, Universitas Syiah Kuala.

e-mail. Zahara@unsyiah.ac.id Department of Physical, Health and Recreation Education, Faculty of Teacher Training and Education, University of Syiah Kuala, Banda Aceh 23111, Indonesia.

