



The Relationship Between Leg Power and Waist Flexibility with the Accuracy and Speed of Shooting in Baraya FC Futsal Players

Muh Nawval Aziz
1905005

**Sport Physical Coaching
Faculty of Sport and Health Education
Universitas Pendidikan Indonesia**



RESEARCH BACKGROUND

Futsal is a sport played by two teams, each consisting of 5 players. In futsal, shooting is the most powerful weapon to score a goal. Leg power contributes to the accuracy level of shooting towards the goal in futsal games. On the other hand, waist flexibility also plays a role during the shooting preparation. From this, it can be said that leg power and waist flexibility have an impact on maximizing the accuracy of a player's shooting. The purpose of this research is to determine the relationship between leg power and waist flexibility with the accuracy and speed of shooting in Baraya FC futsal players.

PROBLEM FORMULATION

1. Is there a significant relationship between leg power and shooting accuracy?
2. Is there a significant relationship between waist flexibility and shooting accuracy?
3. Is there a significant relationship between leg power and waist flexibility with shooting accuracy?
4. Is there a significant relationship between leg power and shooting speed?
5. Is there a significant relationship between waist flexibility and shooting speed?
6. Is there a significant relationship between leg power and waist flexibility with shooting speed?

RESEARCH OBJECTIVE

1. To determine whether there is a significant relationship between leg power and shooting accuracy.
2. To determine whether there is a significant relationship between waist flexibility and shooting accuracy.
3. To determine whether there is a significant relationship between leg power and waist flexibility with shooting accuracy.
4. To determine whether there is a significant relationship between leg power and shooting speed.
5. To determine whether there is a significant relationship between waist flexibility and shooting speed.
6. To determine whether there is a significant relationship between leg power and waist flexibility with shooting speed.



Research Design

The method used is descriptive quantitative with a correlational design.



Population

The population in this study were all Baraya FC futsal players.



Sample

The sample used was 16 futsal players of Baraya FC.



Sampling Technique

The sampling technique in this study used a purposive sampling.

Research Instruments

- 3 Hop Test
- Sit and Reach
- 10-meter shooting test
- Speed Radar Gun

Tabel 4. 2 Hasil Uji Statistik Deskriptif

Variabel	N	Min	Max	Mean	Std. Deviation
<i>Power Tungkai</i>	16	605	692	656	31,040
Fleksibilitas pinggang	16	9	22	15,24	4,570
<i>Akurasi Shooting</i>	16	21	44	34,13	7,126
<i>Kecepatan Shooting</i>	16	21	44	31,81	7,512
Valid N	16				

Tabel 4. 3 Hasil Uji Normalitas

Variabel	<i>Shapiro-Wilk</i>		
	Statistic	df	Sig.
<i>Power Tungkai</i>	0,893	16	0,062
Fleksibilitas pinggang	0,900	16	0,080
<i>Akurasi Shooting</i>	0,927	16	0,222
<i>Kecepatan Shooting</i>	0,931	16	0,252

The results of the normality test above show that all research variables have significance values greater than 0.05 (sig > 0.05), so it can be concluded that the research data are normally distributed

RESULT

		<i>Power Tungkai</i>	<i>Akurasi Shooting</i>
<i>Power Tungkai</i>	<i>Pearson Correlation</i>	1	.904**
	Sig. (2-tailed)		0,001
	N	16	16

From the results of Table 4.6 above, it is known that the Pearson correlation test results between leg power and shooting accuracy have a significance value of $0.001 < 0.05$, while the correlation coefficient for leg power is 0.904, which, based on the guidelines for interpreting correlation values, indicates a very strong relationship.

		<i>Power Tungkai</i>	<i>Kecepatan Shooting</i>
<i>Power Tungkai</i>	<i>Pearson Correlation</i>	1	.642**
	Sig. (2-tailed)		0,007
	N	16	16

From the results of Table 4.7 above, it is known that the Pearson correlation test results between leg power and shooting speed have a significance value of $0.007 < 0.05$, while the correlation coefficient for leg power is 0.642, which, based on the guidelines for interpreting correlation values, indicates a strong relationship.

		<i>Fleksibilitas pinggang</i>	<i>Akurasi Shooting</i>
<i>Fleksibilitas pinggang</i>	<i>Pearson Correlation</i>	1	.511*
	Sig. (2-tailed)		0,043
	N	16	16

From the results of Table 4.8 above, it is known that the Pearson correlation test results between waist flexibility and shooting accuracy have a significance value of $0.043 < 0.05$, while the correlation coefficient for waist flexibility is 0.511, which, based on the guidelines for interpreting correlation values, indicates a moderate relationship.

From the results of Table 4.9 above, it is known that the Pearson correlation test results between waist flexibility and shooting speed have a significance value of $0.173 > 0.05$, while the correlation coefficient for waist flexibility is 0.359, which, based on the guidelines for interpreting correlation values, indicates a low relationship.

		<i>Fleksibilitas pinggang</i>	<i>Kecepatan Shooting</i>
<i>Fleksibilitas pinggang</i>	<i>Pearson Correlation</i>	1	0,359
	Sig. (2-tailed)		0,173
	N	16	16

Model	R	Sig. F Change
1	.922 ^a	0,001

Based on the calculations in Table 4.10, it can be seen that there is a significant correlation between leg power and waist flexibility with shooting accuracy, with a Sig. F Change value of $0.001 < 0.05$ and a Pearson Correlation (R) value of 0.922.

Model	R	Sig. F Change
1	.630 ^a	0,038

Based on the calculations in Table 4.11, it can be seen that there is a significant correlation between leg power and waist flexibility with shooting speed, with a Sig. F Change value of $0.038 < 0.05$ and a Pearson Correlation (R) value of 0.630.

DISCUSSION

- From the results of the Pearson correlation test, it is shown that the variable leg power (X1) and shooting accuracy (Y1) indicate that there is a relationship. Menurut Sajoto (1995 hlm. 58) menyatakan “power atau muscular power adalah kemampuan seseorang untuk melakukan kekuatan maksimum, dengan usaha yang dikerahkan dalam waktu yang sependek-pendeknya”. Sementara menurut Bompa dalam Syafruddin (1996), eksplosive power adalah produk dari kemampuan kekuatan dan kecepatan untuk melakukan tenaga maksimum dalam waktu yang cepat.
- From the results of the Pearson correlation test, it is shown that the variable waist flexibility (X2) and shooting accuracy (Y1) indicate that there is a relationship. kelentukan juga dapat terjadi dikarenakan ada faktor-faktor penentunya seperti: 1) Elastisitas dari otot, ligamentum, tendo dan kapsul, 2) Luas sempitnya ruang gerak sendi (ROM), 3) Tonus dari otot, tendo, ligmentum dan capsula, 4) Tergantung dari derajat panas semangat, 6) Kualitas tulang-tulang yang membentuk persendian, 7) Faktor umur dan jenis kelamin (Maidarman, 2009).
- From the results of the multiple correlation test, it is shown that the variables leg power (X1) and waist flexibility (X2) are jointly related to shooting accuracy (Y1). Accuracy is a fundamental technical aspect that every player must possess, including its application in futsal. Menurut Palmizal (2011 hlm. 143) untuk mengarahkan objek dengan tujuan diinginkan dibutuhkan akurasi yang merupakan kemampuan gerak yang tepat. Misalnya dalam sepakbola atau futsal, dalam melakukan teknik dasar seperti *passing, shooting, heading* sangat diperlukan akurasi, agar bola yang dituju tepat sasaran.

- From the results of the Pearson correlation test, it is shown that the variable leg power (X1) and shooting accuracy (Y1) indicate that there is a relationship. Menurut Sajoto (1995 hlm. 58) menyatakan “power atau muscular power adalah kemampuan seseorang untuk melakukan kekuatan maksimum, dengan usaha yang dikerahkan dalam waktu yang sependek-pendeknya”. Sementara menurut Bompa dalam Syafruddin (1996), eksplosive power adalah produk dari kemampuan kekuatan dan kecepatan untuk melakukan tenaga maksimum dalam waktu yang cepat.
- From all the problem statements, it is evident that there is a relationship between the independent and dependent variables, except for the variable waist flexibility (X2) and shooting speed (Y2), where no relationship is found.. kelentukan juga dapat terjadi dikarenakan ada faktor-faktor penentunya seperti: 1) Elastisitas dari otot, ligamentum, tendo dan kapsul, 2) Luas sempitnya ruang gerak sendi (ROM), 3) Tonus dari otot, tendo, ligmentum dan capsula, 4) Tergantung dari derajat panas semangat, 6) Kualitas tulang-tulang yang membentuk persendian, 7) Faktor umur dan jenis kelamin (Maidarman, 2009).
- From the results of the multiple correlation test, it is shown that the variables leg power (X1) and waist flexibility (X2) are jointly related to shooting accuracy (Y2). Shooting speed requires quick and powerful kicks, so players must have power when shooting. To achieve optimal shooting speed, they must also be in good physical condition when performing the shot.

- 1. There is a significant relationship between leg power and shooting accuracy.**
- 2. There is a significant relationship between waist flexibility and shooting accuracy.**
- 3. There is a significant relationship between leg power and waist flexibility with shooting accuracy.**
- 4. There is a significant relationship between leg power and shooting speed.**
- 5. There is no relationship between waist flexibility and shooting speed.**
- 6. There is a significant relationship between leg power and waist flexibility with shooting speed.**

REFERENCES

- Akbar, M. T. (2017). Kontribusi Kelentukan Pinggang Dan Explosive Power Otot Tugkai Terhadap Akurasi Shooting Atlet Sepak Bola SMA N 3 Bengkulu Selatan. *Jurnal Pendidikan Rokania*.
- Ardiansyah, M. (2020). Hubungan Kekuatan Otot Tungkai dan Otot Perut Terhadap Akurasi Shooting Pada Ekstrakurikuler Futsal. *Jendela Olahraga*, 5(No. 2).
- Atmojo, & Biyakto, M. (2010). *Tes & Pengukuran Pendidikan Jasmani Olahraga*. Surakarta: LPP dan UPT Penerbitan dan Pencetakan UNS.
- B. Travassos, D. Araujo, L. Vilar, & T. McGarry. (2011). *Interpersonal coordination and ball dynamics in futsal (indoor football)*.
- Basiran, Mustaqim, R., & Rimasa, D. (2020). Efektivitas Masase dan Terapi Latihan Fleksibilitas Terhadap Pemulihan Rasa Nyeri dan Kelentukan Ekstremitas Bawah Pada Atlet Bulutangkis. *Jurnal Terapan Ilmu Keolahragaan*, 152.
- Budiyana, A. T., Mulyana, B., & Purnamasari, I. (2021). Kontribusi Power Tungkai dan Fleksibilitas Panggul Terhadap Kecepatan 50m Apnea Olahraga Selam. *Jurnal Kepelatihan Olahraga*.
- Hidayat, T., Mulyana, & Hidayah, N. (2022). Kontribusi Power Tungkai dan Power Lengan Terhadap Kecepatan Jumping Servis Bola Voli Atlet Porda Kabupaten Sukabumi 2022. *Jurnal Kepelatihan Olahraga*.



THANKYOU

SPORT PHYSICAL COACHING 2019