

The Effect of Training Methods and Eye-Foot Coordination on the Soccer Shooting Ability

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Abstract

The problem is SSB Tunas Kaili U17 players in Palu the low shooting ability. The purpose of the study was to analyzed the effect of shooting practice methods used motion balls and stationary balls, effect of high and low eye-foot coordination, and interactions shooting practice methods and eye-foot coordination on soccer shooting accuracy. This study uses an experimental method with a 2x2 factorial design, the data analysis uses Analysis Of Variance at the significance level (α : 0.05). The population in this study were SSB Tunas Kaili U17 players in Palu City in 2021, total 32 players. The results of this study: 1) the stationary ball shooting exercise got a mean of 14,40 while the motion ball exercise was 12,40 with a value ($p = 0.000 < 0.05$). 2) High eye-foot coordination obtained an average shooting of 14,10 while low-eye coordination obtained an average shooting of 13,00 with a value ($p=0.005 < 0.05$). 3) The stationary ball exercise method that has high eye-foot coordination has a shooting average of 15,80, while for low eye-foot coordination, it is obtained a mean of 13,00 ball movements that have high eye-foot coordination, the average shooting is 12,40, while the average eye-foot coordination is low. Shooting average is 10,80 with a value ($p = 0.003 > 0.05$) The conclusion is that stationary ball training shooting is better than motion ball training shooting on players who have high eye-foot coordination have better accuracy than players who have low coordination.

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INTRODUCTION

Hervi & Qoriah, (2021 : 231) Sport is a type of physical activity that is widely practiced by various groups of people, including children, adolescents, adults, men, and women. Soccer is a team sport played on an open field. It is played by kicking a ball toward the goal (Matondang & Tarmizi, 2017). According to Aji, (2013 ; 136) Soccer is a place where people from all walks of life come together; people from the lower, middle, and upper classes can all participate.

Soccer requires not just technique, but also physical fitness. According to Septiana Dita Sari, (2021 : 399) Physical fitness is one of the basic factors for all athletes and plays a role in the selection of risk factors for athlete's injury. Whereas Khairul Iqbal, Abdurrahman, (2015 : 116) Physical condition is a precondition for improving athletic performance; in fact, it may be regarded to be the first condition that cannot be delayed or negotiable.

SSB Tunas Kaili is a Palu-based SSB. The practice field is located on the sunju lotus field. Monday, Wednesday, and Friday are training days; the age groups are U-10, U-12, U-14, 16, and U-17. SSB was founded on the desire to promote talents and early childhood development in Palu.

According to observations made on December 1 and talks with coaches, there are still a large number of players who have not mastered shooting skills. This is because shooting exercise is typically not on the practice menu, and is frequently left off entirely. Given the critical nature of shooting skills in the SBB Tunas Kaili U17 soccer game, there are several factors that contribute to player performance decline, including a lack of teamwork, poor shooting, and psychological factors that affect athletes' motivation, mentality, and confidence to perform at their best. what actions the players take during the event. As a result, the SSB Tunas Kaili players continue to struggle to compete with players from other SSB, as researchers believe that the Tunas Kaili SSB Team's shooting training needs to be enhanced.

According to Alafgani & Rustiadi, (2021 : 79) Technique is a player's ability to develop an effective and efficient mindset; thus, players must master techniques both with and without the ball. Techniques with the ball include kicking techniques, controlling the ball (stopping), dribbling, heading the ball (heading), throw-in, snatch (tackling), and keeping the goal (goal keeping). According to Pratama, (2021 : 36) The ability to shoot the ball is a critical quality for a team to possess in order to win a match.

From a striker's perspective, the objective of Soccer is to be able to shoot toward the goal (Habibie et al., 2019 : 26). Shooting is a basic aspect of kicking the ball in a Soccer game that requires precision, speed, and accuracy in order to score a goal into the opponent's goal (Sukatamsi, 2007) in (Ipung Hari Adi et al., 2019) According to Ruslan, et al (2020) Kicking the ball is an attempt to shoot it into the goal in order to score a goal, offer a pass to a teammate, or even create security in his own area while being attacked by an opponent.

Coordination is the capacity of the body to integrate different movements into a single functional movement (Amir Supriadi, 2015 : 8). According to Ramli, (2018 : 102) Coordination is the ability of the body to integrate different movements into a single, effective movement. This coordination component does not exist in isolation, but rather is a result of the interactions of several biomotor components. Speed," strength, endurance, agility, and balance are all components of this coordination. Efendi, (2016 : 101) Eye-foot coordination is where a person can change position and direction as quickly as possible according to the situation he is in." Edy Dharma Putra Duhe, (2020 : 94) that: "Coordination is the ability to combine different motor nervous systems into effective movement patterns".

METHODS

This study was conducted using an experimental design to determine the effect of treatment (treatment). The dependent variable in

this study was shooting ability; the independent variable was the form of exercise; and the moderator independent variable was eye-foot coordination.

The research design is a two-by-two factorial one, with each independent variable categorized into two categories (two). Exercise (A) was defined as the treatment independent variable, specifically the stationary ball training method (A1) and the motion ball training method (A2). The moderator independent variable was divided into two levels of eye-foot coordination (B), namely high eye-foot coordination (B1) and low eye-foot coordination(B2). The design can be seen in the following table:

Table 1. Research design

Eye-foot Coordination Category (B)	Shooting Training Methods (A)	
	Silent Ball (A1)	Motion Ball (A2)
High (B1)	A1B1	A2B2
Low (B2)	A1B2	A2B2

This research was conducted in Central Sulawesi, Palu City, for two months with the adoption of a three-day-a-week exercise regimen, namely Monday, Wednesday, and Friday, with training beginning at 15.00-18.00 West Idonesia Time.

The sample size for this study was 32 players, and eye-foot coordination tests will be done thereafter. Data on eye-foot coordination can be collected using the soccer wall volley test instrument in order to determine which players have a high or low level of eye-foot coordination. Players with a high or low level of eye-foot coordination can be ranked first and then given the initial test treatment.

(*pre-test*) To measure the accuracy of Soccer shooting, and to collect data on shooting accuracy using shooting accuracy instruments. Nurhasan, (2007) in Manurung, (2019 : 5) then provide treatment for shooting motion balls and shooting still balls, shooting motion balls, namely players shooting from outside the penalty box, after receiving feedback from

friends who are next to the left and right goal, the player controls 1 time then shoots then follows the direction the ball into the goal, if the goalkeeper reflects the ball the player may shoot again, after shooting the player immediately changes position from the right to the left then shoots with the left foot and so on and silent ball shooting practice, where the player shoots from outside the penalty box 16m away, the ball is placed on the numbered mark, then the player shoots at the numbers alternately quickly, shoots using a tortoise foot to the marked goal, each repetition must use alternating feet Juzzahri et al., (2017 : 48).

Finally, a post-test was conducted to determine the accuracy of soccer shooting with the goal of determining the influence of the training program and eye-foot coordination on the shooting ability of SSB Tunas Kaili U-17 Soccer in Palu City.

Inclusion criteria in this study:

SSB Tunas Kaili players with criteria aged 15-17 years totaled 32 people, male gender, height 140-170 cm, weight 50-65 kg, regular exercise for 6 weeks.

Exclusion criteria in this study:

Have a history of respiratory system disorders, refuse to be a research subject.

A two-way analysis of variance (Anova) technique was utilized to examine the gathered data at a significance level of $\alpha = 0.05$. The analysis of variance required tests of normality and homogeneity. Shapiro-Wilk test for normality. Meanwhile, use Leavene's test to determine the homogeneity of variation. Then, if an interaction exists, the test is continued using the Tukey test.

RESULT AND DISCUSSION

Data analysis was using IBM SPSS 20 variance analysis.

Description of Prerequisite Test

The prerequisite tests were normality and homogeneity tests, the following table describes the results of normality and homogeneity tests:

Table 2. Normality Testing

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for result_shooting	.107	20	.200*	.967	20	.698

It can be seen from the results of each group of participants, all significant results are greater than 0.05 then all data are normally distributed.

Table 3. Homogeneity test with *Levene's Test*

F	df1	df2	Sig.
1.893	10	21	.105

From the table 3, shown that significant results > 0.05 means that the data is homogeneous.

Hypothesis testing

Table 4. Two-Factor Anova Summary Table

Source	F	Sig.
Metode	9.908	0.000
Eye_Foot_Coordination	10.991	0.005
Methods *		
Eye_Foot_Coordination	6.181	0.003

Effect of stationary ball and motion ball method on shooting ability

Testing the first hypothesis shows that the significant value is less than 0.05 ($p = .000 < 0.05$), so it can be concluded that there is a difference in the effect of the stationary ball and 4vs4 motion ball training methods on shooting. The stationary ball shooting training method obtained a mean of 14,400 while the motion ball exercise was 12,400, so that the ball training exercise was better than the motion ball exercise.

Effect of high and low eye-foot coordination on shooting ability

Testing the second hypothesis showed a significant value of less than 0.005 ($p = 0.005 < 0.05$), so it can be concluded that there is a difference in the effect of high and low eye-foot coordination on shooting. High eye-foot coordination obtained an average shooting of 14,100 while low eye-foot coordination obtained

an average shooting of 13,000, so that players who have high eye-foot coordination are better than those who have low eye coordination.

There is an interaction between training methods and eye-foot coordination on shooting ability

Testing the third hypothesis obtained a significant value less than 0.05 ($p = 0.003 < 0.05$) so it can be concluded that there is an interaction between exercise methods and eye-foot coordination. The stationary ball exercise method which has high eye-foot coordination has an average shooting rate of 15,800, the stationary ball exercise with low eye-foot coordination has an average shooting rate of 13,000, the motion ball exercise which has high eye-foot coordination has an average shooting rate of 12,400. Gersk who has low eye-foot coordination has an average shooting of 10,800.

Discussion

Based on the results of the Anova test, it can be concluded, the stationary ball training method is better than the motion ball method, this can happen because the factor that causes an increase in shooting results using the stationary ball training method is that the exercise is carried out with a stationary target and ball so as to make concentration in shooting to the target more efficient. The results in this study are in accordance with research conducted by Fajar, (2020) entitled "The difference in the effect of shooting practice with a stationary ball position and a running ball on the accuracy of kicks on goal" results that shooting practice with a stationary ball is better than shooting practice with a moving ball against shooting accuracy to the goal of Sungai Pinang school students..

The effect of high eye-foot coordination and low eye-foot coordination on the shooting results of the Tunas Kaili U17 SSB Team in Palu City. It can be seen from the results of the

ANOVA test that the increase in shooting where athletes who have high eye-foot coordination categories get much better shooting results compared to players who have low eye-foot coordination categories.

Players with high eye-foot coordination had an average increase in shooting results of 14,100, while soccer players with low eye-foot coordination experienced an average increase in shooting results of 13,000. The average increase in shooting results is better for players who have high eye-foot coordination than soccer players who have low eye-foot coordination, according to the results of a previous study conducted by Habibie et al., (2019) with the title Effect of Exercise Methods and Eye Coordination – Foot on Shooting Ability in Soccer, where the results of his research revealed that the shooting ability of players who have high eye-foot coordination is better than those who have low eye-foot coordination.

There is an interaction between shooting ball exercises and shooting ball motion and eye-foot coordination on soccer shooting accuracy, as evidenced by the results of the Anova test with $f_{count} : 6.181$ with a significance value of 0.000. With a significance level of $0.000 < 0.05$, SSB player Tunas Kaili U-17 in Palu City in 2021 from the above statement it can be stated that there is a significant interaction between exercises (shooting stationary balls and shooting motion balls and eye-foot coordination on soccer shooting accuracy).

CONCLUSION

The stationary ball training shooting scored higher than their shooting ability than those who received motion ball training shooting. There is a significant interaction of the training method and eye-foot coordination on shooting ability. Players with better eye-foot coordination who train with a stationary ball achieve higher shooting ability results in soccer than players who train with a motion ball. The motion ball training method has no discernible effect on players with poor eye-foot coordination, and the stationary ball training

method had no significant effect on shooting skills.

REFERENCES

- Aji, R. N. B. (2013). Nasionalisme dalam Sepak Bola Indonesia Tahun 1950-1965 Sisi Sosial dan Politik Sepak Bola. *Lembaran Sejarah*, 10(2), 135–148.
- Alafgani, A., & Rustiadi, T. (2021). Pengaruh Metode Passing Triangle dan Metode Small Side Game Terhadap. *Indonesian Journal for Physical Education and Sport*, 2(1), 78–83.
- Amir Supriadi. (2015). Hubungan Koordinasi Mata-Kaki Terhadap Keterampilan Menggiring Bola Pada Permainan Sepakbola. *Jurnal Ilmu Keolahragaan*, 14(1), 2015.
- Edy Dharma Putra Duhé, R. S. M. (2020). Hubungan Daya Ledak Tungkai Dan Koordinasi Mata Tangan Terhadap Kemampuan Smash Bolavoli Mahasiswa Program Studi Pendidikan Keperawatan Olahraga Fakultas Olahraga Dan Kesehatan Universitas Negeri Gorontalo. *Jurnal Pendidikan Keperawatan Olahraga*, 12(2), 41–47.
- Efendi, R. (2016). Pengaruh Metode Latihan Practice Session, Test Session Dan Motivasi Berprestasi Terhadap Keterampilan Menendang Dalam Sepak Bola. *Jurnal Pendidikan UNSIKA*, 4(1), 91–106.
- Fajar, M. (2020). Pengaruh Latihan Shooting Dengan Posisi Bola Diam Dan Bola Berjalan Terhadap Akurasi Tendangan Ke Gawang. *Wahana Didaktika*, 18(1), 23–29.
- Habibie, M., Widiastuti, W., & Nuriani, S. (2019). Pengaruh Metode Latihan Dan Koordinasi Mata – Kaki Terhadap Keterampilan Shooting Dalam Sepakbola. *Multilateral Jurnal Pendidikan Jasmani Dan Olahraga*, 18(1), 25–31.
- Hervi, A., & Qoriah, A. (2021). Survei Manajemen Olahraga Petanque Pada UKM Petanque Unnes Kota Semarang. *Indonesian Journal for Physical Education and Sport*, 2(1), 230–234.
- Ipung Hari Adi, Moh. Agung Setiabudi, & Danang Ari Santoso. (2019). Perbandingan Kecepatan Dan Ketepatan Menendang Bola Dengan Menggunakan Awalan 1 Meter, 2 Meter, 3 Meter, 4 Meter. *Jurnal Kejaora (Kesehatan Jasmani Dan Olahraga)*, 4(1), 12–15.
- Juzzahri, J., Sukanto, A., & H, H. (2017). Pengaruh Metode Latihan Bola Diam Dan Bola Bergerak Terhadap Peningkatan Keterampilan Menendang Bola Ke Gawang Dalam

- Permainan Sepakbola Pada Klub BPG Pallangga Kabupaten Gowa. *SPORTIVE: Journal Of Physical Education, Sport and Recreation*, 1(1), 46–51.
- Khairul Iqbal, Abdurrahman, I. (2015). Kontribusi Daya Ledak Otot Tungkai Dan Keseimbangan Terhadap Ketrampilan Jump Shoot Dalam Permainan Bola Basket Pada Atlet Unit Kegiatan Mahasiswa Universitas Syiah Kuala. *Ilmiah Mahasiswa Pendidikan Jasmani, Kesehatan Dan Rekreasi*, 1(2), 114–120.
- Manurung, J. suman R. (2019). Hubungan Kekuatan Otot Tungkai Dan Koordinasi Mata Kaki Terhadap Hasil Shooting Bola Diam Ke Arah Gawang. *Jurnal Ilmu Keolahragaan*, 2(1), 1–11.
- Matondang, M., & Tarmizi, A. (2017). Perbedaan Pengaruh Metode Latihan Shooting After Dribble Dengan Latihan Shooting After Centering Pass Terhadap Hasil Shooting Pada Pemain Sepakbola Sejati Pratama. *Jurnal Prestasi*, 1(1), 17–22.
- Pratama, D. S. (2021). Pengaruh Box Step Up Jumps terhadap Tendangan Atlet Sepakbola PPLOP Jawa Tengah. *Journal of Sport Coaching and Physical Education*, 6(1), 35–40.
- Ramli. (2018). Kelincahan Dan Koordinasi Mata Kaki Dengan Kemampuan Menggiring Bola Dalam Permainan Sepakbola Pada Siswa Sma Negeri 5 Karawang. *Competitor: Jurnal Pendidikan Kepelatihan Olahraga*, 10(3), 99–104.
- ruslan, hamdiana, simon, hendry ismawan. (2020). Pengaruh Latihan Plyometric Terhadap Kemampuan Shooting Sepak Bola Pada Club Pdl Samarinda. *Jurnal Ilmiah Pendidikan Jasmani*, 4(1), 33–40.
- Septiana Dita Sari, A. W. S. (2021). Profil Kondisi Fisik Atlet Lari Jarak Jauh Klub Atletik Bima Cepu Kabupaten Blora. *Indonesian Journal for Physical Education and Sport*, 2(1), 398–402.