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The Effect Of Crisscross Training And Crossovers Training Using Ladder Drill On Improving Dribbling Ability In Athletes Of Syekh Yusuf Football School

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ABSTRACT

This study is an experimental study that aims to determine: 1) The effect of crisscross training on improving dribbling skills in Syekh Yusuf football school athletes; 2) The effect of crossovers on improving dribbling skills in Syekh Yusuf football school athletes; and 3) The difference in the effect of Criscross training and Crossovers training on improving dribbling skills in Syekh Yusuf football school athletes. The population in this study were Syekh Yusuf football school athletes with a sample of 20 athletes using random sampling techniques and a group division system using matching ordinal pairing. The research instruments used were descriptive analysis, data normality analysis, homogeneity analysis, and t-test analysis with the help of the SPSS version 21.00 application. The results of the study showed that; (1) There is an influence of Criscross training on increasing dribbling ability in Syekh Yusuf football school athletes, as proven by an increase in speed from an average value of 26.6220 to 16.3340 with an observation value of 19.912 > ttable 2.262 and a significant value of 0.000 < α0.05; (2) There is an influence of Crossovers training on increasing dribbling ability in Syekh Yusuf football school athletes, as proven by an increase in speed from an average value of 23.5720 to 18.3890 with an observation value of 12.295 > ttable 2.262 and a significant value of 0.000 < α0.05; (3) There is a difference in the influence between Criscross training and Crossovers training on improving dribbling ability in football games in Syekh Yusuf football school athletes with a difference value of 16.3340 < 18.3890 with an observation value of 5.622 > ttable 2.101 and a significant value of 0.000 < α0.05. The conclusion is that Criscross training has a greater influence compared to Crossovers training on improving dribbling ability in football games in Syekh Yusuf football school athletes.

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A. Conception and design of the study;
B. Acquisition of data;
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INTRODUCTION

Football is a very unique sport and can provide a deep experience for its players. The speciality of football lies in its ease of play and its wide appeal in society. Football is the most popular sport in the world, including in Indonesia, for children, teenagers and adults. According to (Sandika Andhis, 2021): "Football is a type of game that involves the activity of kicking the ball with the main aim of scoring goals into the opponent's goal while protecting your own goal from attacks". In this game, players are allowed to use almost all parts of the body, especially the feet, except the hands, which are only allowed to guard the goal, According to (Ngolo Hamid, Ohoirat Mukhlis Nur, n.d.), divide the basic techniques of playing football into six parts, namely: "Kicking techniques, stopping the ball, dribbling the ball, feinting, Heading techniques and throwing techniques". To achieve a high level of skill, a deep understanding of how certain skills are developed or acquired is required. Continuous running for more than 30 minutes at a moderate pace, below the anaerobic threshold, can effectively increase the adaptability of the aerobic system (Saharullah et al., 2024). In addition, it is also important to understand the various factors that influence and support the process of mastering these skills.

In playing football, there are three types of skills, namely discrete, continuous and serial skills. According to (Effendi Awan and Roni, 2020): "To be able to play football well, is influenced by many factors. Physical, technical, tactical, and mental factors are components that are interrelated and influence in achieving achievement. To achieve an achievement, these components must be trained and developed optimally". Football can be divided into several skill classes (Sandika Andhis, 2021). When viewed from the clarity of the beginning and end of the movements that underlie various football game skills, such as running, jumping, jumping, kicking and shooting, the skills can be categorized as discrete skills. When viewed from the environmental pattern in which football is played, football is a game that relies on open skills. This means that football is played in an unpredictable environment, always changing all the time (Ananda Muhamad Tri Utama, 2022). Dribbling the ball is defined as the movement of the feet using the foot to push the ball so that it rolls continuously on the ground. Dribbling the ball is only done when it is advantageous, namely free from opponents (Aprianova, 2020). According to (Ridlo, 2019): "Dribbling is a basic skill in football because all players must be able to control the ball while moving, standing, or preparing to pass or shoot". When players have mastered the ability to dribble effectively, their contribution to the field will be very large. In most cases, novice players will choose to dribble using only the inside, In the world of sports, (Ridlo, 2019) the achievement of the training process carried out to achieve it is a very unique job and full of risks. It is said to be unique because the object of training is humans who are a totality of complex psycho-physical systems (Dahlan et al., 2022), meaning that the existence of humans as trainees in the training process cannot be treated like robots, who must obey every command from the centre of the button. According to (Wahyono et al., 2024) Ladder drills that require athletes to move their feet quickly in precise and precise movements are an important component of preparation for many team sports.

(Hikmah et al., 2023) The ladder is a form of physical training equipment that resembles steps placed on a flat surface or floor. Understanding this energy system is essential for designing a training program that suits the needs of the team and the position of the athlete (Bompa & Sarandan, 2022).

METHODS

The type of research used is quantitative research with an experimental approach, According to (Sudaryono, Margono Gagup, n.d.) said that: "A variable is anything in any form that is determined to be studied so that information is obtained about it, then conclusions are drawn. (Sugiyono, 2020) said: "A variable is a symptom that is the focus for observation or as an attribute of a group of people or objects that have variations between one and another in that group". The variables to be studied are; (a) the Independent variable; crisscross training, and crossovers training, and (b) the Dependent variable; dribbling ability in football games.

It is important to note that no need to use too many formulas or tables unless it is The experimental research design used in this study is in the form of a "two groups pretest posttest design", which selects samples randomly. Then a pretest will be given to determine the initial conditions and differences between the experimental group and the attribute group. A good pretest result is when the values of the experimental group and the control group do not show a significant difference.

The research sample is a part of the population that is taken as a data source and can represent the entire population". Meanwhile, according to (Supardi, 2021): "A sample is a part of the population that is taken as a data source and can be represented by the entire population (representative)". Thus, the considerations above from the concept, the sample used in this study were 20 SSB Syekh Yusuf athletes. The sampling technique is "Random sampling".

After the samples were obtained, an initial dribbling test was conducted in a soccer game, and then the results of the initial test were arranged according to ranking and then divided into two balanced groups, each consisting of 10 players per group. The division of the groups used the machine ordinal pairing technique. Data collection was carried out to obtain empirical data as material for testing the truth of the hypothesis. The data collected in this study used a dribbling test in a soccer game (Nurhasan, 2007).

RESULTS AND DISCUSSION

Result

Descriptive data analysis is conducted to provide an overview of the data, including the average, standard deviation, variance, maximum value, minimum value, and sum. Furthermore, testing is carried out on the requirements, and analysis, namely normality and homogeneity of data. Hypothesis testing uses the t-test to determine the effect and

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differences in exercise results, with the provision that the data must be normally distributed and homogeneous.

Table 1.
Results of descriptive data analysis

	Pretest Crisscross Training	Posttest Crisscross Training	Pretest Crossovers Training	Posttest Crossovers Training
Mean	23,6220	16,3340	23,5720	18,3890
Std. Deviation	1,37072	0,73781	1,29353	0,88971
Variance	1,879	0,544	1,673	0,792
Range	4,20	2,03	3,53	2,90
Minimum	21,77	15,34	21,89	16,82
Maximum	25,97	17,37	25,42	19,72
Sum	236,22	163,34	235,72	183,89

The results of descriptive data analysis show that in the initial test (pretest) of Crisscross training on dribbling ability in Syekh Yusuf Football School athletes, from 10 samples obtained a total value of 236.22 seconds with an average of 23.6220 seconds, a standard deviation of 1.37072, and a variance of 1.879. The range of values obtained was 4.20 seconds with a minimum value of 21.77 seconds and a maximum of 25.97 seconds, then, in the final test (posttest) of Crisscross training, from 10 samples obtained a total value of 163.34 seconds with an average of 16.3340 seconds, a standard deviation of 0.73781, and a variance of 0.544. The range of values obtained was 2.03 seconds with a minimum value of 15.34 seconds and a maximum of 17.37 seconds, meanwhile, the results of the initial test (pretest) of the Crossovers exercise on dribbling ability in the same athlete showed a total value of 235.72 seconds with an average of 23.5720 seconds, a standard deviation of 1.29353, and a variance of 1.673. The range of values obtained was 3.53 seconds with a minimum value of 21.89 seconds and a maximum of 25.42 seconds, in the final test (posttest) of the Crossovers exercise, from 10 samples a total value of 183.89 seconds was obtained with an average of 18.3890 seconds, a standard deviation of 0.88971, and a variance of 0.792. The range of values obtained was 2.90 seconds with a minimum value of 16.82 seconds and a maximum of 19.72 seconds.

Table 2.
Data normality test results

Group	Kolmogorov Smirnov		α	Information
	Statistik	P		
Pretest Crisscross Training	0,137	0,200	0,05	Normal
Pretes Crossovers Training	0,142	0,200	0,05	Normal

The results of the data normality test using the Kolmogorov-Smirnov Test showed that for Crisscross training on dribbling ability in Syekh Yusuf Football School athletes, the Kolmogorov-Smirnov Test value was 0.137, with a probability level (P) of 0.200, which is greater than the α value of 0.05. This shows that the Crisscross training data on dribbling ability in Syekh Yusuf Football School athletes follows a normal distribution or is normally distributed, likewise, the results of the data normality test for Crossovers

training on dribbling ability in Syekh Yusuf Football School athletes show a Kolmogorov-Smirnov Test value of 0.142, with a probability level (P) of 0.200, which is also greater than the α value of 0.05. Therefore, the Crossovers training data on dribbling ability in Syekh Yusuf Football School athletes is also normally distributed.

Table 3.
Test of homogeneity of data for Crisscross and Crossovers exercise variables

Dribbling ability	Levene Statistik	Df 1	Df 2	Sig
Pretest of crisscross training groups and crossover training	0,068	1	18	0,797

The homogeneity test of pretest data for the Crisscross training group and the Crossovers training group in dribbling ability in Syekh Yusuf Football School athletes was conducted using Levene's Test, which produced a value of 0.068 with a significant value of 0.797. Because this probability value is greater than α 0.05, or a significant level of 95%, it can be concluded that the pretest for the two training groups is homogeneous or comes from the same population, furthermore, the homogeneity test shows that the pretest and posttest data for the Crisscross training group and the Crossovers training group are also homogeneous, which means that both training groups have similar characteristics in terms of dribbling ability in Syekh Yusuf Football School athletes.

Table 4.
The effect of Crisscross training on dribbling ability

Hypothesis	Mean	$t_{observasi}$	table	P	α	Information
Pretest	23,6220	19,912	2,262	0,000	0,05	Significant
Posttest	16,3340					

The results of the pretest and post-test data analysis on dribbling ability in Syekh Yusuf Football School Athletes, with a paired t-test in the Crisscross training group, it can be concluded that there is a significant effect on the Crisscross training group on dribbling ability in Syekh Yusuf Football School athletes, the observation value of 19.912 is greater than the t-table value of 2.262 (19.912> 2.262) with a significant value of 0.000 smaller than α0.05. So Ho is rejected and H1 is accepted, meaning there is a difference between the initial test (pretest) and the final test (posttest). Thus, it can be concluded that there is a significant effect of Crisscross training on dribbling ability in Syekh Yusuf Football School athletes. It can be proven that the average post-test value is lower than the average pretest value (μA1 23.6220 <μA2 16.3340) with a difference of 7.288. Thus, it can be concluded that there is a significant influence of Crisscross training on dribbling ability in Syekh Yusuf Football School athletes.

Table 5.
Crossovers training on dribbling ability

Hypothesis	Mean	$t_{observasi}$	table	P	α	Information
Pretest	23,5720	12,925	2,262	0,000	0,05	Significant
Posttest	18,3890					

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The results of the pretest and posttest data analysis on dribbling ability in Syekh Yusuf Football School athletes, with a paired t-test in the Crossovers Training group, it can be concluded that there is a significant effect on the Crossovers Training group on dribbling ability in Syekh Yusuf Football School athletes, the observation value is 12.925 greater than the t-table value of 2.262 (12.925> 2.262) with a significant value of 0.000 smaller than α0.05. So Ho is rejected and H1 is accepted, meaning there is a difference between the initial test (pretest) and the final test (posttest). Thus, it can be concluded that there is a significant effect of crossover training on dribbling ability in Syekh Yusuf Football School athletes. It can be proven that the average post-test value is higher than the average pretest value (μA1 23.57200 <μA2 18.3890) with a difference of 5.183. Thus, it can be concluded that there is a significant influence of Crossover Training on dribbling ability in Syekh Yusuf Football School athletes.

Table 6.
Differences in the effects between Crisscross training and crossover training on improving dribbling ability

Hypothesis	Mean	$t_{observasi}$	table	P	α	Information
Posttest Crisscross Training	16,3340	5,622	2,101	0,000	0,05	Significant
Posttest Crossovers Training	18.3890					

The results of the post-test data analysis showed a significant difference between the effects of Crisscross training and crossover training on the dribbling ability of Syekh Yusuf Football School athletes. The observation value obtained was 5.622, which was greater than the t-table of 2.101 (5.622> 2.101), with a significance level of 0.000, which was smaller than α = 0.05. This caused the null hypothesis (Ho) to be rejected and the alternative hypothesis (H1) to be accepted. The average post-test value of the Crisscross training group was 16.3340, better than the average of the Crossovers training group of 18.3890, with an average difference of 2.055. These data indicate that Crisscross training provides more effective results in improving athletes' dribbling abilities than crossover training. This proves that Crisscross training is better at improving athletes' dribbling abilities.

Discussion

The Effect of Crisscross Training on Improving Dribbling Ability

According to the results of the t-test of the initial test data and the final test data of dribbling ability in Syekh Yusuf Football School athletes in the Crisscross training group, it turns out that the calculation results obtained a greater observation t value than the t-table value at a significant level of 95%. This proves that the first hypothesis proposed is accepted at a significant level of 95%. The prediction that can be put forward is that systematically programmed Crisscross training, will be able to improve soccer dribbling ability.

Crisscross training is a training method that focuses on improving agility, speed, and coordination of foot movements. In this training, athletes use ladder drills to perform

a crossing movement pattern (Crisscross) quickly. The purpose of this training is to improve dribbling ability in soccer. Crisscross training targets motor coordination, agility, and reaction speed, which are crucial elements in dribbling ability. This exercise involves moving across stairs with a certain foot pattern that requires players to move in a direction quickly while maintaining body balance. Crisscross training also serves as a nerve stimulation that helps improve the athlete's motor and reflex responses when facing changing situations on the field. Through consistent training, athletes can improve their dribbling skills, especially in situations that require quick reactions and sudden changes in direction.

The effect of crossover training on improving dribbling ability

According to the results of the t-test of the initial test data and the final test data of dribbling ability in the Syekh Yusuf Football School Athletes in the Crossovers Training group, it turns out that the calculation results obtained a greater observation t value than the t table value at a significant level of 95%. The prediction that can be put forward is that providing Crossovers Training in a systematic and programmed manner will be able to improve football dribbling ability. This proves that an athlete is given crossover training movements to achieve dribbling ability in football. Crossover training is a movement that involves a pattern of jumping across alternately forward through a ladder drill.

This exercise is designed to train body stability and control of forward and backward movements. From a physiological aspect, this exercise involves muscles such as the tibialis anterior, which works to stabilize the ankle, and the gluteus maximus, which provides thrust to the pelvic movement. In addition, core muscles such as the rectus abdominis and obliquus are active in maintaining body balance during exercise. Crossovers tend to use energy from the aerobic system, so they not only train explosive power but also endurance. From a cardiovascular perspective, this exercise produces a more gradual increase in heart rate compared to crisscrossing, making it suitable for training for long-term stability. In this exercise, the cerebellum function is more focused on planning and executing structured forward and backward movements. Sensory activity is also strengthened, especially visual and vestibular coordination, to ensure that each step is carried out with precision. With better body stability, crossovers are very helpful in dribbling the ball effectively on the field, especially in situations that require smooth and consistent ball control.

Differences in the influence of Crisscross training and crossover training on improving dribbling ability

According to the results of the t-test of the final test data on dribbling ability in Syekh Yusuf Football School athletes in both groups, it turns out that the calculation results obtained a greater observation t value than the t-table value at a significant level of 95%. This proves that the third hypothesis proposed is accepted at a significant level of 95%. Crisscross training is better at improving dribbling ability in football games than crossover training.

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Crisscross training and Crossovers training are almost the same form of training, namely using ladder drills and can improve dribbling ability in football games, but the difference is that Crisscross training is designed to improve agility and coordination of footwork by utilizing fast and repetitive cross movement patterns. This exercise helps improve dribbling ability through nerve athlete stimulation that focuses on increasing reaction speed and agility in responding to changing game situations.

Meanwhile, Crossover Training focuses on jumping over stairs with a crossing pattern that aims to improve agility and balance. This exercise involves rapid lateral movements, which help athletes to control dribbling while maintaining body balance. The ladder jump movement of this exercise is designed to improve motor response and accelerate athletes' reactions to changes in direction, which is very important in soccer game situations, Crisscross and crossover exercises have different but complementary characteristics in developing dribbling skills. Crisscross exercises emphasize lateral agility and quick response, which are very useful when players face opponents and have to make sudden changes in direction. On the other hand, crossover exercises focus more on body stability and forward-backwards movement control, which are important for maintaining ball control in situations that require planned movements. The difference in muscle activation patterns is also an important point. Crisscross emphasizes lateral stabilizer muscles such as the gluteus medius, while crossovers involve more core muscles and pelvic muscles for anteroposterior stability. In terms of energy, Crisscross is more explosive with a dominant anaerobic system, while crossovers have aerobic, thus supporting player endurance, by combining these two exercises, players can improve their dribbling skills comprehensively, both in terms of agility, body control, and physical endurance. Both make a significant contribution to preparing players for a variety of situations on the pitch, making them essential components of any soccer training program.

CONCLUSION

1. There is a significant effect of Crisscross training using ladder drills on improving dribbling ability in Syekh Yusuf Football School athletes.
2. There is a significant effect of crossover training using ladder drills on improving dribbling ability in Syekh Yusuf Football School athletes.
3. There is a significant difference in the effect between Crisscross training and crossover training on improving dribbling ability in Syekh Yusuf Football School athletes, and Crisscross training is more effective than crossover training.

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