



The Effect of The Hurdle Hops, Multiple Box Jumps, and Dogging Run Training Methods on Football Shooting Skills

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Abstract

This study is an experimental study that aims to determine the effect of hurdle hops, multiple box jumps, and dogging run training methods on football shooting skills. The subjects in this study were students of the Faculty of Sports Science (FIK) Universitas Negeri Makassar (UNM), totaling 60 students divided into 3 groups, each group consisting of 20 students. The data analysis technique used the Tukey test with a significance level of 0.05. The results of the analysis of research data obtained that the average football shooting score for the hurdle hops training method group was 38.90, the multiple box jumps exercise method group was 27.85, and the dogging run exercise method group was 22,75. The results of this study indicate that of the three training methods given to each group, the results obtained that the hurdle hops exercise method has the greatest influence on football shooting skills in football games compared to multiple box jumps and dogging runs.

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INTRODUCTION

Football itself is a sport that is very popular with all levels of society, both children and adults, both men and women, as a choice of sport or focuses on achievement (Atiq & Budiyanto, 2020). Football is a game using 1 ball which is played by 11 people in one team, each team tries to score a goal to win a game (Tawfik, 2019; Firdaus & Baisa, 2019; Yulmiando, 2019). Football is a player's way of attacking and defending and how to make transitions, be it positive transitions or negative transitions (Lokanugraha, 2021).

Football involves various physical components including strength, speed, endurance, power, and precise accuracy, over a period of 2x45 minutes (Permana & Erwansyah, 2021; Akbar & Indardi, 2014; Wibowo et al., 2016). A football team must have good teamwork and be supported by good technique.

A football player must master the basic techniques of football, namely dribbling, control, passing, shooting, heading, and tackling. The technique of kicking the ball is the main basic technique in the game of football. Kicking is the most dominant basic technique in football compared to other techniques because the ability to kick the ball properly and correctly can be used to pass the ball, shoot the ball at the goal, defend, take free kicks, corner kicks, and penalty kicks (Haryanti et al., 2021; Ruslan et al., 2020; Effendi, 2016). Shooting techniques and principles are a combination and understanding of a player that must be considered and must be trained because this is an important component (Rajidin, 2014).

Shooting is one of the technical skills that need attention because through shooting too, goals are created (Herman, 2022). Shooting is an attempt to move the ball from one place to another using the feet. Shooting is one way to enter the ball or score a goal into the opponent's goal by using the foot as the subject of the movement (Sanusi et al., 2022). Shooting can be done with almost any part of the foot, but technically so that the ball can be kicked well, shooting is attempted using the back of the foot, and the outside of the foot. Shooting training aims to improve the athlete's ability to direct the ball according to the target, namely directing the ball to the opponent's goal, thus the chances of creating a goal are high.

The description above shows that the main elements in making a shot on goal correctly are mastering the basic technique of kicking the ball supported by an effective and appropriate training program. A player must master the basic skills of kicking the ball and then develop a series

of shooting techniques that allow shooting and scoring goals from various positions on the field. To kick the ball successfully, a player needs to develop dribbling and ball control skills. Most shooting opportunities come suddenly and a player must always be ready to take advantage of opportunities to shoot properly. The ability of players to take advantage of the various skills that have been mastered will make it easier to shoot.

Hurdle hops and multiple box jumps are exercises that increase leg muscle explosive power (Herman, 2022). This exercise must be done carefully, with various variations and stages. The exercise method uses slow eccentric contractions and performs fast contraction movements by jumping. Hurdle hops and multiple box jumps are repetitive exercises that aim to link strength and speed movements to produce explosive movements (Nurdiansyah & Susilawati, 2018). The exercise must be carried out regularly, systematically, and programmed to get maximum results. So in the implementation of the exercise, it is necessary to pay attention to the elements that affect the increase in explosive power.

Hurdle hops are one the training methods by jump for obstacles in the form of a pre-arranged goal. The hurdle hops training method can be said as one of the training methods that can increase the leg muscle power of football players because when making a jump through the goal that has been prepared previously, it takes the strength and speed of the football player's leg muscles to pass the goal. Multiple box jumps are also an exercise method by jumping over obstacles in the form of pre-arranged boxes. In principle, both hurdle hops and multiple box jump boxes the explosive power of the leg muscles. A dogging run test by changing direction as quickly as possible (Primary, 2016).

The organization of this hurdle hop, multiple box jumps exercise follows the concept of a power circuit. Most of the exercises are specific to the movement of the legs because the muscle groups are the power centers of sports movements. Components that support and allow players to perform shooting kick movements are by having leg muscle explosive power that shooting kicks can get maximum results, good leg muscle power is needed. Therefore it is necessary to train leg muscle power, in training leg muscle power one method can be used, namely the hurdle hops method, multiple box jumps. As for the hurdle hops, multiple box jumps increase the explosive power of the leg muscles which are useful for improving shooting kicks.

Therefore, this study observes about the

effect of hurdle hops, multiple box jumps and dogging run training methods on football shooting skills.

METHODS

This study is a quantitative study, which aims to reveal how the skills of FIK UNM students in kicking the ball in a football game. The subjects in this study were 60 male FIK UNM students who were divided into 3 groups, each group consisting of 20 students, with an age range of 18-21 years. The research was conducted on the football field of FIK UNM. This study consists of two variables, namely the independent variable which consists of the hurdle hops training method, multiple box jumps, and dogging run exercises, and involves one dependent variable, namely football shooting skills. The first group was given hurdle hops exercises and the second group was given multiple box jumps exercises, and the third group was given dogging run material using a shooting skill test that has been developed by Nurhasan and has been tested for validity and reliability (Efendi & Widodo, 2019). Each group practiced for 6 weeks, and the exercise was carried out 3 times in 1 week. Data were analyzed using Tukey’s test.

RESULTS AND DISCUSSION

Based on the data obtained through the results of shooting the ball, it can be described as follows:

Table 1. Descriptive Statistical Data

Kel	N	Range	Min	Max	Sum	Mean	SD
HH	20	16	30	46	778	38.90	4.930
MBJ	20	19	17	36	557	27.85	5.528
DR	20	16	16	32	455	22.75	4.678

Information :

- HH : Hurdle hops
- MBJ : Multiple box jump
- DR : Dogging run

Based on **Table 1**, descriptive statistical data is obtained as follows, for the hurdle hops exercise method with a sample of 20 students, a range of 16, a minimum score of 30, a maximum value of 46, a total of 778, and an average 38.60 and standard deviation of 4.930. Description of the statistical data for the multiple box jumps exercise method with a sample size of 20 stu-

dents, a range of 19, a minimum value of 17, a maximum value of 36, a total of 557, an average of 27.85, and a standard deviation of 5.528. And for the description of the dogging run data with a sample of 20 students, a range of 16, a minimum value of 16, a maximum value of 32, a total of 455, an average of 22.75, and a standard deviation of 4.678.

Table 2. Frequency Distribution Of Football Shooting Skills In The Hurdle Hops Training Method Group

Interval	Frequency	%	Category
30-33	2	10	Very poor
34-35	4	20	Poor
36-37	8	40	Fair
38-39	4	20	Excellent
40-41	2	10	Superior
Amount	20	100	

Based on **Table 2** above, it can be seen that the frequency of football shooting skills in the hurdle hops training method group, there are 2 people or 10% at 30-33 intervals with a very poor category. There are 4 people or 20% in the interval 34-35 with less category. 8 people or 40% at 36-37 intervals with moderate category. There are 4 people or 20% in the interval 34-35 with good category. there are 2 people or 10% at intervals of 30-33 with a very good category.

Table 3. Frequency Distribution Of Football Shooting Skills In The Multiple Box Jumps Training Method Group

Interval	Frequency	%	Category
17-21	3	15	Very poor
22-26	4	20	Poor
27-31	6	30	Fair
32-36	4	20	Excellent
37-41	3	15	Superior
Amount	20	100	

Table 3 above discusses the frequency of football shooting skills in the multiple box jumps training method group, there are 3 people or 15% at intervals of 17-21 with a very poor category. There are 4 people or 20% in the interval 22-26 with less category. 6 people or 30% in the interval 27-31 with moderate category. There are 4 people or 20% in the interval 32-36 with good category. And there are 3 people or 15% in the interval 37-41 with very good category.

Table 4. Frequency Distribution Of Football Shooting Skills In The Dogging Run Training Method Group

Interval	Frequency	%	Category
16-19	2	10	Very poor
20-23	3	15	Poor
24-27	7	35	Fair
28-31	5	25	Excellent
32-35	3	15	Superior
Amount	20	100	

Table 4 above states that the frequency of football shooting skills in the dogging run training method group, there are 2 people or 10% in the 16-19 interval with a very poor category. There are 3 people or 15% in the interval 20-23 with less category. 7 people or 35% at intervals of 24-27 with moderate category. There are 5 people or 25% in the interval 28-31 with good category. And there are 3 people or 15% at intervals of 32-35 with very good category.

Table 5. The Results Of The Tukey-Test Analysis Of Differences In Football Shooting Skills Between The Hurdle Hops And The Multiple Box Jumps Training Method Group

Group	Qcount	Qtable	Sig	Information
Hurdle hops & Multiple box jumps	11,050*	2.95	0.000	There is a difference

Table 5 above states the results of testing the Tukey-Test analysis in shooting football between the hurdle hops training method group and the multiple box jumps training method group, obtained a difference in the Q-count 11.500 and Q-table 2.95, there is a significant difference because α (0.000) is less than 0.05. In other words, there are differences in skills in shooting football between the hurdle hops training method group and the multiple box jumps training method group.

Table 6. The Results Of The Tukey-Test Analysis Of Differences In Football Shooting Skills In The Hurdle Hops And The Dogging Run Training Method Group

Group	Qcount	Qtable	Sig	Information
Hurdle hops & Dogging Run	16,150*	2.95	0.000	There is a difference

Table 6 above, the results of the Tukey-Test analysis of skills in football shooting between the hurdle hops training method group and the dogging run training method group obtained differences in the value of Q-count = 16.150 and Q-table 2.95 and there is a significant difference. because 0.000 is less than 0.05. It can be concluded that there is a difference in shooting football between the hurdle hops training method group and the dogging run training method group.

Some basic football techniques that must be mastered by football players to be able to play well are passing, dribbling, heading, shooting, controlling, and goalkeeping. Of all the basic techniques in football, shooting technique has a very important role in the game of football. Shooting is one way to enter the ball or create a goal into the opponent's goal by using the foot as the subject of the movement. Shooting is the most important factor in making the final finish. Poor technique in a shooting often results in missed scoring opportunities(Dawn, 2020).

Efforts to improve the ability to shoot football can be done with regular training systematically and continuously. To achieve optimal training results, a good and appropriate training model is needed. The right training model is a way to improve the skills of athletes who are trained. The demand for an effective and efficient training model must be selected based on the problems that arise in training. To improve the abilities and skills of players in performing shooting techniques, an appropriate form of training is needed(Ruslan et al., 2020). In this study, the exercise model that is considered appropriate for the problems that arise during exercise is the plyometric exercise model. Plyometrics is an exercise to increase leg muscle explosive power by using internal weights or self-weights. Plyometric weight training is an exercise in which the source of the load comes from the athlete's body weight. It is very efficient and effective in training to increase leg muscle explosive power (Setyawan & Yunus, 2020).

The use of appropriate training methods is expected to overcome the problem of slow improvement in football shooting skills. The coach must create a training atmosphere that activates the athlete so that they can master shooting well. Therefore, coaches need an exercise method that can activate their athletes in mastering shooting accuracy. Thus, hurdle hops and multiple box jumps are expected to affect increasing shooting accuracy(Prakarsa & Umar, 2020).

Kicking is the most dominant basic technique in the game of football from some of the basic techniques that exist because the ability to kick the ball properly and correctly can be used to

give passes to friends, shoot the ball toward the opponent's goal mouth to make the winning goal, and make a goal. various types of kicks, especially free kicks, corner kicks, and penalty or penalty kicks (Soekatmsi, 2014). The shooting technique is needed by a football player to enter the ball into the opponent's goal as the ultimate goal of the attack. If you have good shooting skills, the chance to win the match will be even greater (Belli et al., 2021).

Hurdle hops, multiple box jumps training is an exercise in which the muscles exert maximum strength in short time intervals, to increase power. In the implementation of the hurdle hops and multiple box jumps training methods, the coach must master the principles of these training methods. Football is a sport that has important basic motor components, namely speed, and strength. Football matches require maximum muscle power, as in resistance using kicks, fast and strong movements are needed (Adityatama et al., 2022).

Having high agility is one of the things that support shooting. Shooting is done by a player quickly, if a player does not have agility then the opportunity to shoot at the opponent's goal will be immediately closed by the defender. This is stated by Maulana et al, that agility contribution is positively and significantly related to football shooting ability (Maulana et al., 2020).

CONCLUSION

The hurdle hops training method in shooting football has a higher value than the multiple box jump. The results of the analysis of research data to test and obtained the average value of the football shooting group with the hurdle hops training method was 38.90 and the average score of the football shooting skills group with the multiple box jumps exercise method was 27.85, and the average value was obtained. The average football shooting skill in the dogging run training method group was 22.75. Therefore, the football shooting skills of the hurdle hops training method were higher (good) than the football shooting skills in the multiple box-to-box jumps and dogging run training methods group. From the three training methods, namely hurdle hops, multiple box jumps and dogging run, the best result for football shooting skills is the hurdle hops method.

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