The Effect of Rope Skipping Training On Shooting Ability To The Goal of Futsal Game Students UPT SPF SMPN 46 Makassar

Muh. Nuryadin 1A-E, Herman H 2B-D, Muhammadong 3B-D, M. Adam Mappaompo 4B-D, Muh. Adnan Hudain 5B-D

1Program Study of Postgraduate in Physical and Sports Education, Makassar State University, Makassar City, South Sulawesi, Indonesia
2Program Study of Public Administration, Faculty of Social Sciences and Law, Makassar State University, Makassar City, South Sulawesi, Indonesia
3Program Study of Physical Education, Health and Recreation, Faculty of Sports Science, Makassar State University, Makassar City, South Sulawesi, Indonesia
4Study Program of Elementary School Physical Education, Health and Recreation, Faculty of Sports and Health Sciences, Makassar State University, Makassar City, Indonesia

muhammadyadin09@gmail.com*, hermandody@unm.ac.id2, muhammadong@unm.ac.id3, m.adam.mappompo@unm.ac.id4, muh.adnan.hudain@unm.ac.id5

ABSTRACT
This research is experimental research with a quantitative approach. This study aims to determine whether there is a difference between rope skipping using one foot and rope skipping using two feet on the shooting ability of UPT SPF SMPN 46 Makassar students. The sample in this study amounted to 28 athletes which were divided into 14 athletes with one-foot rope skipping treatment and 14 athletes with two feet rope skipping treatment, with two-legged rope skipping treatment foot with shooting test instruments using 9 times shot into the goal. The research method is used to look for the effect of certain treatments on others under controlled conditions or experimental methods. The results of this study are. With the results of the study, the effect of 2-leg rope skipping training amounted to 53.9% on shooting ability, and the effect of 1-foot rope skipping training to 52.7% on shooting ability Conclusion. Increase in rope training skipping with 6,550 for rope skipping 2 feet and 2,900 for rope skipping 1 foot.

INTRODUCTION
Futsal first appeared in Uruguay at the beginning of the 20th century. There are various claims about who created the sport, but it is known that Juan Carlos Ceriani was one of those who played a role in developing the rules and concept of this game. Initially, futsal was created as an alternative to larger and more formal indoor soccer (Rinaldi &;
Rohaedi, 2020). Futsal courts are smaller than traditional soccer fields, usually measuring around 25-42 meters long and 16-25 meters wide. The field is lined with hard or synthetic floors that support fast and technical balls. Each team consists of five players, including a goalkeeper. There are no permanent substitutes in the game, so substitutions are usually limited and done off the field (Badaru, 2017).

In futsal, one of the most important aspects of the game is the player's ability to master the technique of kicking the ball into the goal. Kicking the ball into the goal is a key moment in the game, which often determines the outcome of the game. Therefore, a deep understanding of effective techniques to kick the ball into the goal in futsal is essential. Although there is some research on ball kicking techniques in futsal, there is still much to learn to understand the more specific and effective aspects in the context of futsal as well as the wide variety of exercises applied to athletes.

The results of the researchers’ observations for 2 weeks on UPT SPF SMPN 46 Makassar aged 14-15 years, with details of this extracurricular practising 3 times in a week, researchers found a problem in students, namely kicks on goal (shooting). Researchers observed practice during game sessions when shooting more often than towards the goal so that no goals were created. Players are always in a hurry in shooting so the ball often deviates to the left side of the goal, to the right side of the goal, and to the top of the goal. From the results of the shooting process carried out by athletes, namely the imposition of the foot on the ball is not right, some kick right at the bottom of the ball which causes the ball to float up, some of what is kicked is the side of the ball so that the ball deviates to the side of the goal. This is due to several factors, one of which is the lack of training stages devoted to training shooting and less varied exercises. The form of training carried out by the coach is only a variation of shooting after a wall pass, even though there are still many forms of exercise that can strengthen leg muscles so that the kicked ball can be directed properly.

In this case, researchers consider that shooting is one of the most important elements in futsal games because, without good shooting mastery, it is impossible for a goal to be created. Where the main goal of the futsal game is victory by making as many goals as possible against the opponent's goal, this study seeks to get effective training in improving shooting results. As a result of this weakness, futsal achievements so far at UPT SPF SMP 46 Makassar are fairly minimal.

Dribbling requires agility in body movements to respond to situations and conditions faced and change the direction of the ball as desired (Herman & Hasbillah, 2022). Exercise is an activity that a person does to improve or maintain body fitness. Weight training is an exercise that is carried out systematically using weights as a tool to increase muscle strength improve the physical condition of athletes, and prevent injuries or health goals (Nasrulloh et al., 2018). Exercise. Leg muscles are needed by a player when running and changing direction suddenly in dribbling (Rachman & Azima, 2018). The movements included in the manipulative motion family in futsal games include kicking the ball, dribbling, heading the ball, grabbing the ball and catching the ball for the goalkeeper, or throwing in to start the game after the ball leaves the field.
As a result of growth, there is an increase in weight, length or height, bones and muscles become stronger, body circumference becomes larger, and organs become more perfect (Budihera, 2019).

Plyometrics exercises allow muscles to reach their maximum in the shortest possible time (Muzakki et al., 2020). Strength, speed, and power are a series of physical components that are very important in various sports (Fernandes et al., 2018). Exercise has become one of the systematic sports activities for a long time, increased gradually and individually, as well as aims to form humans who function physiologically and psychologically to fulfill tasks (Nafis & Kusuma, 2021). According to Bayu Suryo (2010: 3), jumping rope is known as rope skipping. Jumping skipping is an activity that uses a rope with both ends of the rope held with both hands and then swung over the head while jumping high. Rope skipping is a series of movements of jumping over a rope using a pedestal of one or two feet and landing on two legs that are done repeatedly. Skipping is a form of exercise by using a rope and jumping continuously (Ningsih & Widodo, 2019).

The benefits of rope skipping are to train strength, agility, and muscular endurance. For the momentum of the hop jump in one place, there will be maximum ankle extenders at one hop up. With this ankle hops exercise, you will get an increase in the ability to jump upright, jump far, agility, strength, endurance of long muscles, and concentration (Agustin et al., 2018).

In 2019, the Mayor Cup III futsal tournament was also unable to win 3 matches in the group stage. In 2020, the Zion Cup IV was unable to enter the round of 16. The year 2022 was also unable to penetrate the group stage at the Futsal Championship Dispora championship. In 2022, the third winner of the Athira Vol 9 inter-junior high school tournament. In 2023, the 3rd place in the junior high school mini soccer tournament in the Dispora Cup Championship and third place in the ASC tournament between junior high schools at Athira Junior High School which was held in Makassar. The lack of achievements so far makes researchers want to focus training on a very important part of futsal matches, namely shooting.

**METHODS**

This research is descriptive research using a quantitative approach. Hakim & Musfira (2020) This method is interpreted as the study of basic principles, the meaning of investigation which often involves problems with logic, classification and assumptions of basic assumptions. The research design used is pre-experimental because this research is a research activity that begins with determining the subject and ends with a form of test to determine the effect of the treatment that has been given. The treatment that will be given to the sample is as many as 16 meetings with a fixed treatment but the number of sets in doing the exercise will be increased as the exercise progresses.
The Effect of Rope Skipping Training On Shooting Ability To The Goal of Futsal Game Students UPT SPF SMPN 46 Makassar

Muh. Nuryadin\textsuperscript{1A-E}, Herman H\textsuperscript{2B-D}, Muhammadong\textsuperscript{3B-D}, M. Adam Mappaompo\textsuperscript{4B-D}, Muh. Adnan Hudain\textsuperscript{5B-D}
muhammadynadin09@gmail.com

This research place will be conducted at PT SPF SMPN 46 Makassar. Street Gunung Lantimojong No. 124 Makassar District, Makassar City. The implementation time is carried out every Monday, Wednesday, Friday, and Sunday from 15.30-16.30 and 16.30-17.30. Starting at 15:30 for one-legged rope skipping training and starting at 4:30 p.m. for two-legged rope skipping training.

Effective testing can be produced by avoiding test implementation errors (Budiwanto, 2017). The data is obtained at the beginning of the experiment as initial data and at the end of the experiment as final data. The goal is to find out the results of the treatment and the difference which is the ultimate goal of the experiment. The variables to be studied as a basis for obtaining research data are:

In Sugiyono's opinion (2012), observation is a data collection technique to observe human behaviour, work processes, natural phenomena, and respondents. In this study, researchers made direct observations to find facts in the field (Zulkifli et al., 2019).

The data analysis used consisted of descriptive analysis, normality test, homogeneity, and T-Test using SPSS 22.

RESULTS AND DISCUSSION

Research Result

The first analysis conducted in this study was a descriptive analysis of the initial test (pretest). From the initial data collection as the object of research, data on the number of samples or students in UPT SPF SMPN 46 Makassar were obtained. The results of descriptive data analysis whose calculations are listed in the appendix can be described as follows:

| Table 1. Hasil Analisis Deskriptif Pretest Shooting Siswa UPT SPF SMPN 46 Makassar. |
|-----------------------------------------------|-------------------|-------------------|
| Statistics                                    | Pretest Rope Skipping 1 Foot | Pretest Rope Skipping 2 Feet |
| Sample                                        | 20                 | 20                 |
| Average                                       | 10,90              | 10,90              |
| Standard deviation                            | 3,291              | 3,323              |
| Variance                                      | 10,832             | 11,042             |
| Range                                         | 10                 | 10                 |
| Minimum                                       | 6                  | 6                  |
| Maximum                                       | 16                 | 16                 |
| Total Score                                   | 218                | 218                |
The Effect of Rope Skipping Training On Shooting Ability To The Goal of Futsal Game Students UPT SPF SMPN 46 Makassar

Muh. Nuryadin\textsuperscript{1,}\textsuperscript{*}, Herman H\textsuperscript{2,}, Muhammadong\textsuperscript{3,}, M. Adam Mappaomp\textsuperscript{4,}, Muh. Adnan Hudain\textsuperscript{5,}\textsuperscript{o}, muhammadyn09@gmail.com\textsuperscript{1,}\textsuperscript{116}

Table 2.
Results of Descriptive Analysis of Postest Shooting Students of UPT SPF SMPN 46 Makassar

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Postest Rope Skipping 1 Foot</th>
<th>Postest Rope Skipping 2 Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Average</td>
<td>13.80</td>
<td>17.45</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>1,989</td>
<td>1,701</td>
</tr>
<tr>
<td>Variance</td>
<td>3,958</td>
<td>2,892</td>
</tr>
<tr>
<td>Range</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Minimum</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Maximum</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>276</td>
<td>349</td>
</tr>
</tbody>
</table>

Table 3.
Normality Test of 1 Foot and 2 Foot Rope Skipping Group on the Shooting Ability of UPT SPF SMPN 46 Makassar students.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Df</td>
</tr>
<tr>
<td>Pretest Skipping 2-Foot</td>
<td>0.895</td>
<td>20</td>
</tr>
<tr>
<td>Postest Skipping 2-Foot</td>
<td>0.940</td>
<td>20</td>
</tr>
<tr>
<td>Pretest Skipping 1 Foot</td>
<td>0.905</td>
<td>20</td>
</tr>
<tr>
<td>Postest Skipping 1 Foot</td>
<td>0.973</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 4.
Test of Homogeneity of 1 Foot and 2 Foot Rope Skipping Group on the Shooting Ability of UPT SPF SMPN 46 Makassar students.

<table>
<thead>
<tr>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.917</td>
<td>1</td>
<td>78</td>
<td>0.051</td>
</tr>
</tbody>
</table>

Based on the homogeneity test above, data was obtained with a significance value of 0.051, the data was said to be homogeneous data. Provided that the significance value is greater than 0.05. Between the 1-foot rope skipping and 2-foot rope skipping groups, the resulting value is homogeneous.

Table 5.
Paired Test of 1-Foot and 2-Foot Skipping Statistical Samples on the Shooting Ability of UPT SPF SMPN 46 Makassar students

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest Skipping 2-Foot</td>
<td>10.90</td>
<td>20</td>
<td>3.323</td>
<td>0.743</td>
</tr>
<tr>
<td>Postest Skipping 2-Foot</td>
<td>17.45</td>
<td>20</td>
<td>1.701</td>
<td>0.380</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest Skipping 1 Foot</td>
<td>10.90</td>
<td>20</td>
<td>3.291</td>
<td>0.736</td>
</tr>
<tr>
<td>Postest Skipping 1 Foot</td>
<td>13.80</td>
<td>20</td>
<td>1.989</td>
<td>0.445</td>
</tr>
</tbody>
</table>

a. Pretest the 2-foot Rope Skipping group with a total of 20 students with a standard deviation of 3.323 with a tolerance of an average error value of 0.743 and an average score of 10.90 while in the 2-foot Rope Skipping group posttest with the same number of students of 20 students with a standard deviation of 1.701 with an average error tolerance of 0.380 and an average score of 17.45.

b. Pretest the 1-foot Rope Skipping group with a total of 20 students with a standard deviation of 3.291 with a tolerance of an average error value of 0.736 and an average score of 10.90 while in the 2-foot Rope Skipping group posttest with the same number of students of 20 students with a standard deviation of 1.989 with an average error tolerance of 0.445 and an average score of 13.80.
Based on the sample test, statistical data was obtained regarding shooting by two groups, namely the 1-foot Rope Skipping group and the 2-foot Rope Skipping group with the following details:

1. Pretest and posttest for the 2-foot Rope Skipping group with a t table of 10.462 with an increase of 6.550 from 20 samples with sig. (2-tailed) of 0.000.
2. Pretest and posttest for the 1-foot Rope Skipping group with a t table of 4.619 with an increase of 2.900 from 20 samples with sig. (2-tailed) of 0.000.

With the T-Test sample test results above from the sig data. (tailed 2) then the data obtained shows that the significance level is 0.000, so there is a significant influence between 1 leg rope skipping exercise and 2 leg rope skipping exercise, but the mean data shows that 2 leg rope skipping exercise has a greater increase compared to 1 leg rope skipping. Therefore, it can be ascertained that of the two forms of treatment given, the 2-foot rope skipping exercise is better than the 1-foot rope skipping exercise.

**Discussion**

The results of the descriptive data analysis of the 1-foot Rope Skipping group shooting from 20 students who carried out the initial test showed that the average kick score was 10.90, this is still considered minimal for a futsal player who must have a sharp level of shot on goal. very accurate, while the descriptive data of the 2-foot Rope Skipping group shooting from 20 students who carried out the initial test resulted in an average score of 10.90. This is because so far the shooting training given only targets goal-scoring ability without providing training that can improve students' shooting skills. This could be biased because this has not been treated to determine the effect of the training given so far and the training so far has always been combined with the form of a game so students have not been able to concentrate well on shooting and the students' kicks are still very weak, from several shooting experiments that have been carried out.

If this is done during a match, most of the goals are not scored because the kick is weak so it is easily caught by the opponent. And of all the attempts made, almost 90 per cent of the kicks went straight into the goal.

Through the rope-skipping training method, the students' kicks became better than before. The statistical data from the SPSS test results prove that after being given
training, the student’s ability to shoot became better with the average score of students' shooting ability for the 1-leg rope skipping exercise being 13.80 and for the 2-foot rope skipping exercise with an average score of 13.80. This is because the leg muscle strength built from this exercise is getting better. The effect of rope skipping training is to make the leg and ankle muscles stronger and able to make the kicks in the desired direction. This research is supported by research conducted by (Suryadi, 2022) with the results of his research that leg muscle strength training is effective in improving the shooting ability of soccer players. These results show a positive increase in the average pretest score compared to the average posttest score and a significant increase in the research. T Test on the results obtained during the research period for 16 meetings and 2 additional meetings for the pretest and posttest on the ability to shoot on goal.

The influence between these two exercises can be seen in the test given to the 1 leg Rope Skipping group with a significance value of 0.000. The value of 0.000 is smaller than $\alpha = 0.05$, it is considered that this exercise has a significant influence on students’ initial and final abilities in shooting. Meanwhile, the 2-foot Rope Skipping group also has a significance value of 0.000. The value of 0.00 also proves that there is an influence between the pretest and posttest with an influence value of 6.550, while for the 1-foot rope skipping exercise it is 2.900. If you look at the results, it turns out that the two exercises have their relationship and influence on the treatment given, where the influence of each has a relationship as shown by the T-test carried out. This test also shows that each influence in the posttest carried out between the pretest and posttest groups has an influence that is not too big. It is shown in the Ttest that for the sample group with rope skipping 2 legs the influence of the impact of the training given is 53.9% on the ability to shoot at goal at UPT SPF SMPN 46 Makassar and rope skipping 1 foot from the impact of the training given was 52.7% on the ability to shoot at goal at UPT SPF SMPN 46 Makassar. This difference shows that training with a 2-leg skipping rope is better than training with a 1-leg skipping rope. Being able to pass and all other techniques in the game of futsal well is not a player who masters shooting techniques in futsal, then everything will be in vain, because playing football aims to score goals, while playing beautifully is not given value. Futsal players are required to be able to kick the ball into the opponent's goal well until they can score a goal. To create a goal from a kick, strong leg strength is needed. For this reason, in this exercise, the two forms of training provided all focus on increasing leg strength. Shooting is a way to put the ball or create a goal into the opponent's goal using the feet as the subject of movement. "From an attacking point of view, the goal of futsal is to shoot at the goal. A player must master the basic skills of kicking a ball and then develop a series of shooting techniques that enable him to perform shooting kicks and score goals from various positions on the field. The ability to shoot powerfully and accurately using both feet is the most important factor. "Qualities such as anticipation, steadiness and calm under opposing pressure are also no less important," Luxbacher in Istofian & Amiq (2016, 106). In this research, to take a shot at the goal you need to have 2 important factors in taking the shot, namely both feet which have an important role. Strong flat feet will make it easier for the kicker to adjust
The position of the foot and the contact of the foot that will touch the ball so that it is easy to touch the part of the ball where pressure will be applied from the foot. This is guaranteed to be able to control the ball and the speed of the ball according to what the kicker expects, even if only one leg is strong when kicking. More flat feet can make the ball hit less than the kicker wants. This will cause the ball to deviate or not reach the desired target section of the goal.

How to shoot at goal by approaching the ball from behind at a slight angle, place the foot that supports the balance next to the ball, this balance requires equal strength of both legs to ensure that the gravitational force remains in one horizontal and vertical point without losing movement, bend the knee of the foot stretch your arms to the side to maintain balance, pull the leg that will kick backwards, pulling this leg requires agility so that it can be pulled back quickly as a follow-up movement when the foot touches the ball, straighten the leg, the head does not move, focus attention on the ball, straighten your shoulders and hips with the target body on the ball, jerk the kicking leg so that it is straight, keep it strong, kick the centre of the ball with an instep or tortoise of the foot, the forward force of movement through the contact point, complete the final movement of the kicking leg, the leg that holds the balance is lifted from the surface of the field. The strength of this foot which can make the foot move when moving on the field makes the ball direction good because if the flat foot cannot balance the movement then when the ball is in line with the impact of the ball and the fallen foot shakes a little or folds it can cause the ball's direction to be erratic. Movements like this require leg strength or balanced leg training, therefore in this study, the rope skipping movement with 2 legs is more effective with an increasing effect in the high category, while for rope skipping with 1 leg it is lower. The increase in each sample in the 2-leg rope skipping exercise in the high category was caused by the sample's ability to balance themselves with strong foot support, while for the 1-leg rope skipping exercise in the low category it was caused by the contact of the foot on the ball which was by what the player wanted but because the lack of support results in the direction of the ball not being in line with expectations. This is in line with research conducted by (Fadli, 2022).

In this study, during the post-test process, the researchers also conducted interviews after the sample had shot at the goal, so they agreed from the group that did the 2-legged rope skipping exercise that the strength of the supporting leg supports the desired direction of the ball when kicking because the impact of the leg does not shake or is correct. the part of the ball you want to kick. Moreover, the accuracy of the kicks becomes stronger after getting rope skipping training. However, for the 1 leg rope skipping exercise, the sample response was that the accuracy of their kicks was getting stronger but the ball was still far from being able to score a goal because the follow-up movement when the foot had hit the ball was very much determined by the supporting foot. Even when you want to kick a long distance when playing, sometimes your legs fold as if they are folded due to lack of leg strength, because the part of the ball that is being kicked does not match the expected contact with the ball. Therefore, through this research, the researcher conveys that to train shooting skills it is necessary to treat both
legs so that they are balanced. The foot used to touch the ball becomes stronger and the foot used to rest becomes a balance to help direct the ball according to the kicker's wishes.

**CONCLUSION**

1. There is an effect of 1-foot Rope Skipping training with an increase in the average shooting ability score of 2,900.
2. There is an effect of the 2-foot Rope Skipping exercise which increases the average shooting ability score by 6,550.

**REFERENCES**


The Effect of Rope Skipping Training On Shooting Ability To The Goal of Futsal Game Students UPT SPF SMPN 46 Makassar

Muhammad Nuryadin\textsuperscript{1a}, Herman H\textsuperscript{2b}, Muhammad Mappampo\textsuperscript{3b}, M. Adam Mappaompo\textsuperscript{4b}, Muh. Adnan Hudain\textsuperscript{5b}

muhammadnuradi09@gmail.com


The Effect of Rope Skipping Training On Shooting Ability To The Goal of Futsal Game Students UPT SPF SMPN 46 Makassar

Muh. Nuryadin1,*, Herman H2, M. Adam Mappaompo3, Muh. Adnan Hudain4

muhmaddyadin09@gmail.com

123


