Jurnal SPORTIF: Jurnal Penelitian Pembelajaran
Vol. 7 No. 4, February 2022, pp. 27-37
https://doi.org/10.29407/js_unpgri.v7i4.16880

The impact of target shooting exercise on passing accuracy in soccer games

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Received: 19 November 2021; Revised: 25 December 2021; Accepted: 7 February 2022

Abstract

This study aims to determine the impact of target shooting training on the level of passing accuracy in soccer games for students in Junior High School. The research method used an experimental approach using randomized pre-test and post-test. It was conducted at State Junior High School 12 Kendari in December 2020. The sampling technique is random. The sample was 30 students. Data is taken from the test. The instrument used to obtain data in this study is the accuracy pass test. Data analysis used descriptive analysis, pre-test and post-test homogeneity, and t-test. Data analysis concluded that shooting target exercise improved the accuracy of the pass in the soccer game. The study results have implications for an understanding of continuous and consistent training in improving students' abilities, developing various exercises that are by the student's character, and training equipment through multimedia and technology so that the level of passing accuracy remains high quality.

Keywords: accuracy, passing, soccer, target shooting

INTRODUCTION

Indonesia has a popular sport in various circles that is soccer. Young people play this game in multiple regions, even many football clubs in each region organize non-formal education to play football. At school too, everyone likes to play football. It is not only considered as a form of healthy physical activity but also has entertainment value. Even professional soccer players have used soccer skills as a commercial form for their careers (García-Angulo et al., 2020). It is not only for men, but women can also play it designed through their health (Martínez-Lagunas et al., 2014). It means that everyone has a different need for physical activity to play football. They require high and low activity (Adhitya, 2016). So, people who play soccer need a lot of energy in every situation, whether defending, shooting, or attacking.

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Therefore, physical ability and mastery of technique in practicing soccer are the basics that all players must master. One of the basic techniques in playing soccer is kicking. Getting an optimal kick requires excellent physical ability and perfect mastery of technique, with an excellent physical condition that will support the appearance of soccer players when taking kicks. The emergence of a perfect technique will affect the efficiency of the movement, which greatly affects the kick's results on the target that is the target of the kick. Students should have mastered these ideal conditions at the State Junior High School 12 Kendari. However, the results of the evaluation for soccer learning during the January to June 2020 learning period from 120 students concluded that the mastery of target shooting techniques is still low, especially in accuracy-pass. Accuracy of ball placement in playing football is needed to produce the right ball kick. This means the target practice is right and still shows the right shooting accuracy. Targeted practice needs to be achieved through consistent and continuous movements (Sintoko & Suharjana, 2018).

In addition, another problem that arises is that the level of practice of the students is still low and not maximal, making the level of accuracy in kicks not by the standard values set by the coach. A study is needed related to accuracy in kicking the ball from these problems. One form of practice to improve accuracy is in target shooting practice. With this attitude, if done repeatedly in the training process, it will provide adaptation to the feet, so this will increase the accuracy in directing the placement of the ball, which will indirectly affect the ability to pass in soccer games. It is a new study because it has examined the relationship between ball kicking exercises with accuracy that can produce good shots. With this concept, this study illustrates that every ball kick with the right accuracy level can cause physiological adaptations of movements that easily move targets in one step. This research offers the concept of continuous target shooting practice to improve passing accuracy in soccer games for junior high school students. The exercises given are related to

https://doi.org/10.29407/js_unpgri.v7i4.16880
7 (4) 2022 | 27-37

adapting the physiological abilities of junior high school students' movements. This means that the movement of shooting the ball learned by students in soccer games is adjusted to their abilities, but the shooting exercises learned are still adjusted to the standards of shooting practice in soccer games.

Many studies have been carried out related, such as 1) corner kicks, free kicks, penalty kicks, 2) player activity profiles, and 3) collective behavior (Sarmento et al., 2018). In addition, athletes who have high strength or power can usually have better soccer shooting accuracy than athletes who have lower power (Sintoko & Suharjana, 2018). Even kick accuracy is an important skill to get a good shot (Young et al., 2010b). To get these accuracy skills, players must do target shooting exercises regularly. Accuracy is assessed through various offsets in football games (Kryger et al., 2020). The role of strength in kicking towards a goal is one of the most basic ways to judge accuracy (Young et al., 2010a). So, shooting techniques can be done well if the players have a very good training method because it supports players to shoot (Sintoko & Suharjana, 2018).

From the results of the explanation of the problems in the evaluation of soccer learning that have been described above, thus this study aims to determine the effect of target shooting practice on the level of passing accuracy in soccer games. This research focuses on improving football accuracy through target shooting exercises so that the players have high power. Target shooting exercises are carried out continuously so that students can have the flexibility of the movements that have been learned. Physiological students also become more adaptable to every shooting movement. This illustrates the gap from research conducted with previous research. In giving target shooting movements, students also consider the student's strength so that the target's physiological adaptation process can affect the level of shooting accuracy. Previous studies have described the relationship between ball kicking exercises and accuracy to produce a good shot so that every ball kick has the right level of accuracy and can

https://doi.org/10.29407/js_unpgri.v7i4.16880
7 (4) 2023 | 27-37

ISSN : 2477-3379 (Online)
ISSN : 2548-7833 (Print)

cause physiological adaptations of movements that are easy to move the target in one step. So, the gap in this study is target shooting exercises that are carried out continuously in student games in junior high school so that students can have a high level of shooting accuracy. The study was conducted on students in Junior High School in Kendari. This is because learning football at the State Junior High School in Kendari has problems in shooting ball practice. In addition, the students also have a high interest in football, so the school seeks to facilitate the learning of football in sports subjects according to the obstacles faced so far. It is expected giving will contribute to the development of the concept of target shooting training related to passing accuracy, which can affect the quality of football games. Based on the background of the problem, the formulation of the problem in this research is "how is the effect of target shooting practice on the level of passing accuracy in soccer games?

METHOD

The study used a quasi-experiment with one group pretest-posttest design (Creswell, 2012). It was conducted on July – December 2020 at State Junior High School 12 Kendari. The population in this study were all male students of class VIII totaling 90 people. However, the research sample amounted to 30 students. The sampling technique is nonprobability sampling. It is given an equal chance of being selected as a sample.

In this study, students got target shooting exercises for 16 weeks. The stages of the research are as follows;

1. The students were given a pre-test before the implementation of the ball shooting practice that had been determined to improve the accuracy of passing in the soccer game. The pre-test activity was carried out in the first week.
2. Giving exercise was for 14 weeks. Every week before practice, students get warm-up to reduce the risk of injury. The treatment will be carried

https://doi.org/10.29407/js_unpgri.v7i4.16880
7 (4) 2022 | 27-37

out according to the planned training program. Ball shooting practice activities are carried out continuously.

3. In the 16th week, the students were given a post-test to find changes in the level of accuracy passing in the soccer game before and after the training to shoot the ball.

Data were collected through observation and tests. Observations were made to determine the process of giving target shooting training. While the test is used to determine the passing accuracy after students get target shooting practice. This test is used to measure the ability of students to place the ball that was kicked in the goal. The tools used in the implementation of this test are 1) football field, 2) Ball, 3) Meter, 4) Chalk, and 5) Blank forms and stationery. The instrument used for the test was taken from the research results conducted by (Rodriguez-Giustiniani et al., 2021), which has published on August 31, 2021, so that the instrument is considered valid and reliable. Participants are instructed to kick the ball as hard and accurately as possible to the shooting target. The shooting target zone is at a distance of 15 m in the four corners of the goal. This target area has been identified as the optimal ball placement to beat the goalkeeper while shooting. Each shooting target is divided into the middle area (75 cm x 60 cm) and the expansion area (100 cm x 90 cm), with the middle area worth 10 points and the widest area worth 5 points. Shots that miss the target area are scored 0. The shot hit consists of 8 shots. The technique of data analysis used;

1. Descriptive analysis is to find out the mean and standard deviation.
2. Pre-test and post-test homogeneity. The homogeneity test results of the variance of the pre-test and post-test data for the accuracy pass is 1.36. Because F-count = 1.36 < F-table (30) = 1.84, then H0 is accepted and H1 is rejected, it means that the data variance between the pre-test and post-test of the accuracy pass is homogeneous.
3. Hypothesis testing using paired t-tests with a significant level of 0.05 to see the effect of the variables studied.

https://doi.org/10.29407/js_unpgri.v7i4.16880
7 (4) 2023 | 27-37

RESULT

The results of data analysis show that there is a change of accuracy pass. The descriptive statistical data of the accuracy pass test results are:

Table 1. The result of pre-test and post-test

Descriptive Statistical	Accuracy Pass	
	Pre-test	Post-test
Mean	13,67	17,4
Standard Deviation	1,42	1,22
Maximum	17	20
Minimum	12	15

Table 1 shows that target shooting practice has a fairly good effect on increasing passing accuracy. While the result of homogenity test is below;

Table 2. The result of normality test

	Pre-test	Post-test
N	30	30
Lo	0.134	0.145
L_{tabel}	0.161	0.161

Table 2 shows that the data used in this study are normal. From the results of the pre-test data test, it was concluded that Lo = 0.134 < Ltable = 0.161. So it was concluded that the pre-test data was normal. While the post-test results show that Lo = 0.145 < Ltable = 0.161. So, the post-test data is normal. It means that the data variance between the pre-test and post-test of the ability of accuracy pass is normal so that it meets the requirements to continue with the t-test.

Table 3. The result of homogeneity test

	Pre-test	Post-test
N	30	30
F-count	1,22	1,36
F-table	1.84	1,84

Table 3 shows that the calculated F value for the pretest is 1.22. Because F-count = 1.22 < F-table = 1.84, the pre-test data is homogeneous. While the F-count for the post-test is 1.36, because F-count = 1.36 < F-table = 1.84, the post-test data is homogeneous. This means that the data variance between the pre-test and post-test of the

https://doi.org/10.29407/js_unpgri.v7i4.16880
7 (4) 2022 | 27-37

accuracy pass is homogeneous so that it meets the requirements to continue the t-test.

Table 4. The results of the t-test for pre-test and post-test of accuracy pass

	N	Mean	t-count	t-table	
Pre -Test	30	13,67	21.94	1,699	Significance level of 0.05
Post -Test		17,4			

The result of data analysis known that t-arithmetic = 21.94 and t table at a significance level of 0.05 with degrees of freedom N-k = 90 – 1 = 89 obtained 1.699. Because t-count = 21.94 > t-table = 1.699, it can be concluded that there is a significant effect between pre-test and post-test ability of accuracy pass. This means that the group that was given the shooting target exercise showed an increase in the accuracy of the pass.

DISCUSSION

The results of observations during the research process showed that the students had good enough enthusiasm to receive target shooting training to improve passing accuracy in playing soccer. Students received target shooting exercises for 16 weeks. Before they received the exercise, they got the pretest, and after the treatment, they got a post-test. Table 1 shows that the average score of the pretest of the ability to pass accuracy = 13.67. Based on the results of descriptive statistical analysis, it can be seen that the average ability of accuracy pass in the post-test = 17,4. From the post-test score, it showed a fairly good increase. Meanwhile, based on the results of the t-test for pretest and post-test of the ability to pass accuracy, it is known that t-count = 21.94 > t-table = 1.699. Based on the results of the t-test data, it can be concluded that there is a significant influence of target shooting practice on the ability of accuracy pass in soccer games for students of Junior High School in Kendari. The results of this study indicate that the exercise provided can show an increase in the ability of the accuracy pass to kick the ball on the goal.

From these data, it is known that the target shooting exercise intended in this research is an exercise carried out by kicking the ball

https://doi.org/10.29407/js_unpgri.v7i4.16880
7 (4) 2023 | 27-37

continuously at predetermined target points by the specified exercise intensity. Thus, implementing treatment in target shooting exercises can improve coordination ability to train limb motor adaptation to produce eye and foot coordination in making more optimal kicking movements on the goal (Burhaein et al., 2020).

These findings indicate a different concept in this study, where coaches can understand that target shooting exercises can increase accuracy in kicking the ball through a continuous training process. This gives rise to physiological adaptations to the movements that have been learned. Therefore, the coach can consider that the intensity of constant training is a big consideration in influencing kick accuracy. In addition, continuous practice can build a consistent psychological state (Vaz et al., 2019). This finding provides a clear concept of psychological stress and physiological movements affecting the stress level of players (Naji et al., 2020). So, the coach must influence the stress level of the players when doing target shooting practice. Especially during the pandemic, psychological conditions are very important in influencing the condition of the student body. In addition, training can run well when the trainers have a coaching style that can suit the needs and motivations of the students (Nasiruddin et al., 2020).

However, another study showed that the performance of passing and shooting decreased after high-intensity resistance training students (Draganidis et al., 2013). So, the coaches must consider the level of intensity of the students so that the training activities can be by the needs and abilities of the students. The coaches must also consider the age level. The findings show that the training model for 12-16-year-olds should highlight the principle of specificity for exercise (Hary & Firdiansyah, 2019). The adult player has different characteristics a unique (Coelho E Silva et al., 2010). It means that physical–technical development in a young player is important to support the soccer training continually (Bravo-Sánchez et al., 2017). (Hutabarat et al., 2017) concluded that concentration and kinesthetic perception significantly affect shooting ability in playing soccer

https://doi.org/10.29407/js_unpgri.v7i4.16880
7 (4) 2022 | 27-37

for U-11. So the coach can also consider each player's level of concentration.

Better performance in ball shooting accuracy can be seen from a longer fixation on both the target and the ball. This means that the coach must pay attention to the players' performance in assessing the results of the exercise. Thus, players score more goals when they only focus on the target area in the goal. In this case, more or less fixation on the target area results in less accurate attention (Schaper et al., 2020). So, the position becomes a very good calculation for the accuracy of shooting the ball (Schulze et al., 2017).

CONCLUSION

The results of data analysis concluded that there was a significant impact of target shooting practice on the ability of the accuracy pass in the soccer game of the State Junior High School 12 Kendari. However, this research is still limited to target shooting exercises. It is carried out by kicking the ball continuously at predetermined target points according to the intensity of the exercise set. This form of exercise is used to determine the accuracy-pass ability. Therefore, this research can still be developed through various aspects such as the physical condition of each individual, including body weight or body mass index. This research can also still develop training strategies or multimedia technology. Moreover, during the Covid-19 pandemic, limited soccer practice-led coaches to develop or use multimedia technology for target shooting practice in soccer games.

ACKNOWLEDGEMENT

We want to thank the First Kendari State School students who have helped the research process to completion. Principals and sports coaches at State Junior High School 12 Kendari have allowed research activities.

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