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The Effect of Drag Flick Drill Training on Shooting Accuracy in Indoor Hockey (Case Study: Students in Grade X at State Senior High School 14 in Tangerang Regency)

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Abstract

The purpose of this study was to examine the effect of Drag Flick Drill Training on the shooting accuracy of the boys' indoor hockey team at State Senior High School 14 in Tangerang Regency. The researcher used an experimental method to prove the effect of a treatment on the outcome of that treatment. This study used a one-group pre-test post-test design. This research design involved measurements through a pre-test administered before the treatment and a post-test conducted after the treatment was given to the sample. The researcher took a population of 27 students and a sample of 13 students. The treatment was given 8 times, twice a week. The sampling technique used in this study was purposive sampling, with the characteristics of the research sample being 13 male students in grade X at State Senior High School 14 Tangerang Regency who had just participated in the indoor hockey extracurricular activity. The instrument used in this test was a Target Game. The results of this study showed a significant effect of Drag Flick Drill Training on the shooting accuracy of male students participating in indoor hockey at State Senior High School 14 Tangerang Regency. Through these drills, students also show greater courage in making decisions to shoot. In addition, students who are able to achieve a high shooting percentage are generally supported by the consistent application of drag flick drills in the training process. It can be concluded that Drag Flick Drill Training has an effect on shooting accuracy.

How to Cite

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INTRODUCTION

Hockey is a sport that requires several physical components to be trained in order to achieve the best performance. Making mistakes when shooting the ball at the opponent›s goal is a major disadvantage for the team, so several aspects are needed to support success, including flexibility to achieve maximum results (Handianto, 2021). Flexibility contributes significantly (around 25–26%) to shooting accuracy, while explosive muscle power contributes the most. It is appropriate to emphasize the role of flexibility as one of the aspects that supports successful shooting.(Afrizal & Soniawan, 2021).

Currently, the achievements of Indonesian indoor hockey are still experiencing ups and downs. Quoted from the official website of the Ministry of Youth and Sports through an interview with one of the Indonesian national team athletes, the achievements of indoor hockey athletes are still not being recognized by the government, as evidenced by Indonesia›s inability to compete at the highest level in the indoor hockey world cup. Behind these achievements are the problems faced by athletes in training. The early development of athletes through talent search and monitoring, nurturing, education, and sports training based on science and technology in a more effective manner, as well as improving the quality of sports organizations at both the central and regional levels (Ugi Nugraha, 2019). Additionally, indoor hockey is also included in school extracurricular activities, such as at State High School 14 in Tangerang Regency, even though it is played on the school›s indoor hockey field, it still uses a ball and follows indoor hockey rules.

However, every player must master the basic techniques of indoor hockey in order to become skilled. The objective of the game is to score as many goals as possible against the opponent. Similar to soccer, the objective of indoor hockey is to score as many goals as possible against the opponent. An indoor hockey player also needs to master the basic skills of shooting accurately at the goal (Jasmani, 2021). Mastering basic techniques such as pushing, stopping, dribbling, and flicking are the main foundations of indoor hockey, as these skills support teamwork and make it easier to score as many goals as possible. (Lisa Emilia Isnaini & Eko Hariyanto, 2023). One of the best ways to score a goal in indoor hockey is to shoot hard and accurately at the goal so that the ball hits the target and results in a goal. Improvement in technique should also be supported by improvement in physical condition (Bompa & Haff, 2009).

Observing the ability of students at State High School 14 in Tangerang Regency in playing indoor hockey, both in extracurricular activities and in matches between clubs or schools in Tangerang, many failed to shoot well. The shooting results showed that the ball was shot slowly so that it could be blocked by the back players and caught by the goalkeeper. In addition, many balls were shot out of the field without hitting the target, namely the opponent›s goal.

More than 70% of goals scored come from shooting or shots at the opponent›s goal. One type of exercise that can improve shooting ability at the goal is target shooting practice, which consists of several types of exercises such as shooting at targets and girshoot (dribbling shots) (Siswa et al., 2017). In addition to improving shooting accuracy, this exercise is also used by coaches to prevent athletes or students from becoming bored (Lestari,Ni Kadek Yuni dan Laksmi, 2020). Variation in training programs reduces participant boredom and aids technical progress the author recommends variation to maintain engagement while improving shooting skills. (Mubarok & Sukoco, 2020).

Based on the above description, the author wants to conduct this study to help improve the shooting accuracy of indoor hockey players, especially students at State Senior High School 14 Kabupaten Tangerang, and try to use the target shooting exercise method through the Drag Flick drill.

The novelty in this study, researchers used a sample of students who had just started playing hockey in an interest and talent development program at school. Unlike previous studies, which generally involved experienced athletes, this approach offers a new perspective in understanding the application of training methods to beginner groups. Thus, this study makes a different contribution to the study of sports technique development by focusing on participants who are still in the early stages of training.

METHOD

In this study, the researcher used the experimental method as the research approach. This study used a one-group pre-test post-test design (Arikunto, 2016) as its research design.

Table 1. Pre-test Post-test Group Design

Group	Pre-test	Treatment	Post-test
Experiment	O1	X	O2

Description:
O1: Pre-test before treatment is given
O2: Post-test after receiving treatment
X : (treatment) treatment given using Drill Exercises

Figure 1. Treatment given using Drill Exercises

This test takes the form of a Target Game, in which participants must shoot at predetermined targets with different point values. Research on sports games shows that target game training has a significant effect on improving shooting accuracy. The similarity of technical principles in indoor hockey makes this training relevant for improving shooting accuracy through focus, ball control, and consistency of movement. (Lestari,Ni Kadek Yuni dan Laksmi, 2020).

The researchers took a sample population of 27 male students who actively participated in indoor hockey extracurricular activities. The sampling technique used in this study was purposive sampling. Based on the sampling technique using purposive sampling, the research sample consisted of 13 male students in grade X at State Senior High School 14 in Tangerang Regency.

The explanation of this test instrument consists of implementation instructions, how to determine the score, and movements that are considered failures. The implementation instructions include the tester standing behind the ball, which is placed outside the circle line 9 meters in front of the goal or target. The tester is given 5 attempts, with 1 attempt per ball. The method for determining the score is the total score obtained on the target in 5 attempts at shooting at the goal. If the ball hits the rope or the score line on the target, the highest score from the two targets is taken, and if the ball goes outside the target or hits the goalpost, the shooter is declared to have scored no points. The movement is considered a failure if the ball goes out of the target area or if the ball is placed less than 9 meters from the target (Zubaidi et al., 2021).

This study provided treatment for 4 weeks with a frequency of 2 sessions per week. There were a total of 8 sessions, including initial and final tests to measure improvement. This is in accordance with the opinion (Bompa & Haff, 2009) that the body should adapt to the training load received.

RESULTS AND DISCUSSION

The research results are presented in the form of data describing the initial and final conditions of the variables studied. The data was obtained through a processing process after all information was collected during the specified training period.

Table 2. Pre-test and Post-test Shooting Accuracy Data Results

No	Pretest	Posttest	difference
1	14	20	6
2	13	21	8
3	15	19	4
4	13	20	7
5	13	17	4
6	12	19	7
7	14	17	3
8	14	19	5
9	13	18	5
10	12	19	7
11	13	19	6
12	12	20	8
13	12	19	7

From **Table 2**, the average increase was 5.92, with the highest increase being 8 and the lowest increase being 3 after receiving target game treatment for 8 sessions.

After the measurement process was completed, the data was then processed and analyzed using a statistical approach. In the initial stage, researchers compiled the raw data using Microsoft Excel before converting it into a standardized data format. Next, the analysis was conducted using Statistical Product and Service Solution (SPSS) version 25 statistical software.

Table 3. Description of Pretest and Posttest Statistics for Shooting Accuracy

Description	N	Min	Max	Mean	Std. Deviation	category
Pretest	13	12	15	13	0,954	medium
Posttest	13	17	21	19	1,155	high

Table 3. Shows data obtained from the pretest and posttest Shooting Accuracy. The pretest results ranged from a minimum of 12 to a maximum of 15. Meanwhile, the posttest results ranged from a minimum of 17 to a maximum of 21. The average score obtained in the pretest was 13, while in the posttest it was 19.

Table 4. Shapiro-Wilk Normality Test Shooting Accuracy

Normality Test	Statistic	df	Sig.	Normality
Pretest	0,878	13	0,066	normal
Posttest	0,900	13	0,132	

Based on the results in **Table 4**, it shows that the pretest and posttest results for shooting accuracy data changes are normal, because the significance value is greater than 0.05 (5%). From the normality test results above, there is a significance value that is normally distributed because the significance value for pretest shooting accuracy is 0.066 and posttest is 0.132.

Table 5. Levene's Homogeneity Test Shooting Accuracy

Homogeneity	df1	df2	Sig.	Homogeneity
0,028	1	24	0,868	significant

Based on **Table 5**, the results of the Lavene homogeneity test are significant, with a shooting accuracy result of 0.868. Therefore, it is stated that >0.05, so Ho is accepted.

Table 6. Results of Paired Sample T-test Shooting Accuracy

	T-test	t	df	Sig. (2-tailed)
Pair 1	pretest - posttest	-13.304	12	Pair 1

Based on **Table 6**, the results of the t-test, initial and final shooting accuracy tests showed sig. (2-tailed) 0.000 < 0.05. Thus, Ho was rejected and Ha was accepted.

Therefore, it can be concluded that the Drag Flick Drill Exercise has a significant effect on shooting accuracy in male students participating in indoor hockey at State High School 14 in Tangerang Regency.

The framework explains that low maturity in shooting precision or accuracy is one of the main factors that hinders the team from scoring goals, thereby contributing to the team's defeat. This problem arises due to a lack of emphasis on the application of appropriate training methods and drills.

Shooting accuracy training plays an important role in improving the accuracy of indoor hockey players' shots, thereby increasing their chances of scoring goals. This improvement in accuracy directly strengthens the effectiveness of the team's attack and increases their chances of winning the game. (Candra Juli Prawesti, 2022). To overcome this, a variety of training drills specifically designed to improve the shooting accuracy of hockey athletes are provided. Through these exercises, athletes have a greater chance of scoring, thereby increasing the team's chances of winning the game. It is this scoring advantage that ultimately leads the team to victory.

In previous studies, the results obtained tended to be higher because most of the samples consisted of athletes who were trained and accustomed to undergoing high-intensity training programs. In contrast to these conditions, this study involved students who had mostly just started participating in extracurricular activities. Nevertheless, the samples in this study still showed a significant improvement in ability compared to their initial condition before the training was given.

The popularity of the drag flick technique has become an innovation and an important part of the team's offense. The drag flick is an important technique that makes the game more exciting. The drag flick technique is commonly used in penalty shots and is used as a variation for shooting. In addition to the above techniques, physical ability is also needed to support shooting performance in hockey (Septianingrum et al., 2018). The drag flick technique in indoor hockey is a shooting technique that emphasizes speed and accuracy through good body coordination and stick control. Mastering this technique allows athletes to produce fast, directed shots that are difficult for goalkeepers to anticipate. (Prawesti, 2022).

Flick is one of the techniques often used to score goals in both field hockey and indoor hockey. Flick is a combination of the accuracy of the push technique and the effectiveness of a scooping shot. This definition is the basic reason why the flick technique can only be performed when shooting at the goal within the circle area (Olahraga, 2011).

According to Rony Ibrahim et al. (2017) in the article "Kinematics Analysis of Drag Flick Movements in Field Hockey," (Ibrahim et al., 2017)"Achieving high stick head speed and, consequently, ball speed is essential for the success of drag flick movements in field hockey." They explain that stick head speed plays a significant role in the outcome of the drag flick meaning

that coordination and timing of the movement are crucial.

This study faced several obstacles, particularly related to the characteristics of the sample, which was still in the early stages of learning hockey. Researchers encountered difficulties when training students to focus their gaze on the target, as most of them were not yet accustomed to maintaining stable visual concentration while performing technical movements.

In addition, another challenge arose when training the coordination of steps and the flexibility of the waist required in the swing phase when shooting. These movements require good body control, while the students were still in the process of adjusting to the basic techniques. This condition meant that the training process required a more gradual approach so that students could understand and apply the movements correctly.

CONCLUSION

Referring to the results and analysis of the data, it can be concluded that: Variations in drag flick drills have a positive impact on improving students' concentration when shooting. Through these drills, students also show greater courage in making decisions to shoot. In addition, students who are able to achieve a high shooting percentage are generally supported by the consistent application of drag flick drills in the training process.

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