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Efforts to Improve Shooting Accuracy in Futsal Games Through Structured at UKM Futsal UPI Sumedang

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Abstract

This research is motivated by the low shooting accuracy of futsal players, which is generally caused by suboptimal mastery of basic techniques, poor movement coordination, and the lack of structured and sustainable training programs. In futsal, shooting accuracy is a crucial indicator that directly influences the success of scoring goals. Therefore, a systematic training method is needed to improve this ability. This study aims to determine the effect of structured training on improving shooting accuracy among UPI Sumedang futsal UKM players. The method used was a quantitative approach with a one group pretest-posttest experimental design. The sample consisted of 15 players who actively participated in futsal UKM activities. Data were collected through shooting accuracy tests conducted before (pretest) and after (posttest) the implementation of a structured training program. Data analysis was carried out using statistical tests to determine the differences in results before and after treatment. The results showed a significant improvement in shooting accuracy after the implementation of structured training. This improvement was indicated by the difference in the average scores between pretest and posttest, supported by statistical test results showing a significant effect. These findings indicate that systematic, targeted, and repetitive training effectively improves basic shooting techniques. Furthermore, the improvement was influenced by a combination of technical training, target-based methods, drill exercises, and physical components such as leg muscle explosiveness and eye-leg coordination.

Keywords: futsal, shooting accuracy, structured training, drill method, motor coordination

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A. Introduction

Futsal is a branch of large ball games played by two teams with five players each including goalkeepers on a small field that is generally in a room, resulting in a fast-paced and high-intensity game. The characteristics of the ball that have low bounce require players to master individual technique, ball control, and teamwork quickly and optimally in a limited space. In a scientific context, futsal games emphasize basic technical skills such as passing, dribbling, and shooting which are done quickly and precisely due to the high pressure of the game and limited movement space. In addition, the harsh field conditions cause players to use the sole of the foot more often to control the ball to keep it close and difficult for the opponent to catch. However, in practice, various obstacles are still found, especially in the aspect of shooting accuracy, which is influenced by physical condition factors such as the explosive power of leg muscles and the coordination of players' movements. The problem of low shooting accuracy is also strengthened by research findings that show that even though players have good and fast kicking power, the results of shots are not necessarily accurate due to the lack of optimal eye-to-foot coordination in the game (Anwari et al., 2023) (Ali Akhfan et al., n.d.) (Wulandari et al., 2026)

Based on the findings in the field, there are still many young players who have difficulty in improving shooting accuracy, which is generally due to limitations in mastering basic techniques and the implementation of a structured and continuous training program is not optimal. This condition shows that a less systematic training process has an impact on the low consistency and accuracy of kicks towards the goal. In the context of futsal games, shooting accuracy is an important indicator that reflects the player's ability to place the ball precisely on target, thus having a direct effect on success in scoring goals. Therefore,

improving shooting accuracy needs to be focused on developing good basic techniques, improving movement coordination, and strengthening physical condition, especially in the leg muscles. In addition, the application of specific and directed training methods, such as target training and kick rep training, is an important step in helping players improve the accuracy of direction and shooting stability. With programmed and clear training, players' shooting accuracy abilities are expected to develop optimally.

Various efforts have been made by previous researchers to improve shooting accuracy in futsal games through the application of various training methods. One of them is a study conducted by a study that examines the effect of target wheels and target darts training on the accuracy of futsal shooting. This research aims to help players improve the accuracy of kicks through modification of target exercises in futsal extracurricular activities of high school students of the Indonesian Institute of Semarang. The method used was an experiment with a pretest-posttest control group design, as well as data analysis through normality, homogeneity, and t-test, with a sample of 15 students using the saturated sample technique. In addition, another study conducted examined the effect of the massed practice method on shooting accuracy in futsal extracurricular students of SMK Negeri 2 Singaraja. This study uses a quantitative approach with an experimental design involving 18 students as an experimental group and 18 students as a control group. Data collection techniques are carried out through practice, documentation, interviews, and observations. The results of the study show that the application of the massed practice method has a positive influence in improving the shooting accuracy of futsal players. (Mahendra et al., 2025) (Arwandi et al., 2020)

Various previous studies have shown that training methods such as target wheels, target darts, and massed practice

are effective in improving the accuracy of futsal shooting. However, these studies tend to be partial and focus on one type of exercise method without integrating it into a structured, systematic, and sustainable exercise program according to the principles of exercise. In addition, most studies are still limited to short-term implementation, so they have not yet described the effectiveness of coaching as a whole. In fact, improving shooting accuracy requires a structured training approach that combines aspects of technique, physical conditioning, and gradual repetition of exercises. Therefore, there is still a research gap related to the effect of structured training on improving the accuracy of futsal shooting, especially at the student level, in order to produce more optimal and consistent improvement.

B. Methods

This study uses a quantitative approach with an experimental method that aims to test the effect of a treatment on increasing the accuracy of futsal shooting. The research design applied is One Group Pretest-Posttest Design, which involves only one group that is given treatment without a comparison group. The population in this study is students who are members of the UPI Futsal UKM Sumedang Campus, with a sample of 15 players who actively participate in the activity. This study involved two main variables, namely the free variable as the treatment given and the bound variable in the form of shooting accuracy ability. The data collection technique is carried out through three stages, namely pretest to determine initial ability, treatment, and posttest to measure the improvement of ability after treatment is given.

This study uses a useful skill test instrument to measure shooting ability in students. The drawings for the shooting accuracy test are as follows:

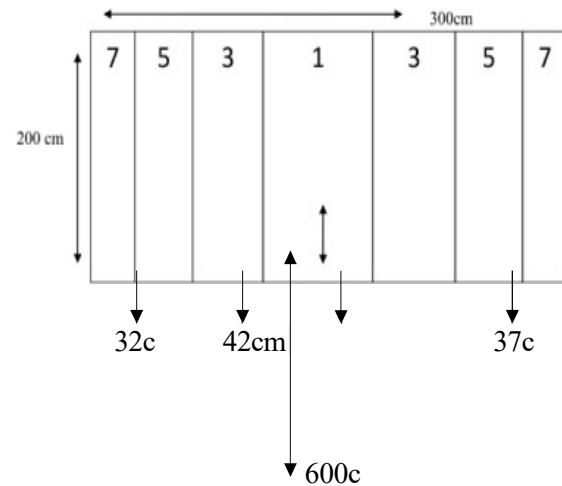


Figure 1. Futsal Shooting Accuracy Test
Source: Sumpena, 2011

Implementation instructions :

1. Students are 3 meters behind the cones that have been provided preparing to kick with the right or left foot, depending on the player's preference, 6 meters away from the goal or goal.
2. Furthermore, there is no hint from the researcher, the researcher becomes an observer whether the kick technique is legal or not, students kick the ball using any shooting technique.
3. The implementation was carried out with students not kicking past the cones.
4. An opportunity is given to students 3x kicks.

Execution is considered invalid:

1. The ball comes out of the target area.
2. Kick distance under 10 meters.
3. Shooting through the cones.
4. Not shooting according to the implementation instructions.

Score :

1. The number of scores on the target 3 times.
2. If the ball from the kick hits the score separator on the target, the result is the largest score.

C. Result and Discussion

Results

Table 1 Description of Shooting Abiliy Data

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Pretest shooting	17	1	13	121	7.12	3.604
Posttest shooting	17	7	15	177	10.41	2.425
Valid N (listwise)	17					

Table 2 Paired Samples Test

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pretest shooting - Posttest shooting	-3.294	2.173	.527	-4.411	-2.177	-6.251	16	.000

Table 3 Normality of Shooting Abiliy Data

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest shooting	.192	17	.095	.942	17	.343
Posttest shooting	.190	17	.103	.920	17	.147

a. Lilliefors Significance Correction

Table 4

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		17
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	2.11645340
Most Extreme Differences	Absolute	.127
	Positive	.095
	Negative	-.127
Test Statistic		.127
Asymp. Sig. (2-tailed)		.200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Table 5

Wilcoxon Signed Ranks Test

		N	Mean Rank	Sum of Ranks
Posttest shooting - Pretest shooting	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	15 ^b	8.00	120.00
	Ties	2 ^c		
	Total	17		

a. Posttest shooting < Pretest shooting
b. Posttest shooting > Pretest shooting
c. Posttest shooting = Pretest shooting



Discussion

The results showed that there was an increase in shooting accuracy after being given structured training. This increase can be seen from the difference in scores between the pretest and posttest and is strengthened by the results of statistical tests that show a significant influence. These findings indicate that exercises carried out systematically and repeatedly are able to improve basic technical skills in the game of futsal.

Empirically, the results of this study are in line with research conducted by those who found that programmed exercises, such as mental imagery and technique exercises, have a significant influence on improving shooting accuracy with a significance value of 0.000 (<0.05). This shows that exercises carried out in a structured manner are able to increase focus, concentration, and accuracy in shooting. (Alwan ' Alauddin et al., 2024)

In addition, the improvement in shooting accuracy is also influenced by the use of proper training methods, such as target-based exercises and drill methods. Research by Naufal Syahrul Anwari et al. (2022) shows that target games are more effective in improving shooting accuracy than conventional methods because they train players to focus more on the target. In line with that, the study also proved that shooting practice with the drill method was able to significantly increase accuracy,

shown by a significance value of 0.000 and an increase in the score from 7.12 to 10.41. (Sports Coaching & Sports Science and Health, 2025)

From the aspect of physical condition, the improvement in shooting accuracy is inseparable from the contribution of leg muscles and eye-foot coordination. Research by states that there is a significant relationship between the explosiveness of leg muscles and coordination on shooting accuracy in futsal games. This is reinforced by Lili's research which states that explosive power and balance are important factors in producing accurate and directed shooting. (Perdana et al., n.d.) (Septiani Putri et al., 2022)

Furthermore, the results of this study are also supported by a study conducted by which states that physical exercises such as lunges have a significant influence on improving shooting accuracy in futsal players. This shows that structured training not only improves technique, but also supports the physical aspects that play a role in shooting success.

Thus, the increase in shooting accuracy in this study is the result of a combination of several factors, namely structured technical training, the use of appropriate training methods (targets and drills), and improvements in the physical condition of players. These findings reinforce that structured training is an effective approach in improving basic futsal skills, especially in the shooting aspect.

D. Acknowledgments

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E. Conflict of Interest

There is no conflict of interest.

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