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The Effect of Passing Training Using Ankle Weights with the Rondo Training Method on Improving Futsal Players Passing Accuracy

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Abstract

Improving passing accuracy is an important aspect in futsal, because passing is a vital basic technique for futsal to run smoothly. The underlying problem of this study is the low level of passing accuracy in futsal players at SMAN 1 Margaasih, which often results in loss of ball possession during matches. This study aims to determine the significant effect of passing training using ankle weights with the rondo training method on improving passing accuracy in futsal players. This study uses a quantitative approach with an experimental method using a one-group pretest-posttest design. The research sample consisted of 18 futsal players at SMAN 1 Margaasih who were selected by purposive sampling. The instrument used to measure passing ability was the Wall Pass Test which had been modified according to the research needs. The results showed a significant increase in passing accuracy after being given treatment. This was proven by the paired sample t-test statistical test which showed a significance value (p-value) smaller than $\alpha = 0.05$, which means that H_1 is accepted and H_0 is rejected. Rondo training provides a stimulus in the form of pressure and quick decision-making in tight spaces, while ankle weights provide the effect of increasing leg muscle strength and explosive power, which synergistically improves the player's technical and physical ability to pass accurately.

Keywords: *Ankle Weight, Rondo, Passing, Futsal, Accuracy.*

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INTRODUCTION

Sports are one aspect that has the potential to improve human physical and spiritual well-being. In addition to being a means of entertainment, sports also aim to improve physical health, education, and enhance individual and group achievements, as outlined in the National Sports System Law of the Republic of Indonesia Number 3 of 2005. As is widely known, futsal is a sport that is widely loved by people throughout the world. Futsal is usually played by two teams of five players each and is a popular sport where fans of this sport exceed 30 million players from 100 countries. Therefore, futsal is one of the sports of choice for people used as a hobby, entertainment, and to maintain fitness and health (Made & Wijaya, 2021). To achieve the desired results in futsal, you must master the basic techniques of the game. Basic techniques are paramount, as it's important to understand that playing futsal requires basic skills to achieve

the game's goals (Naldi & Irawan, 2020). There are several basic techniques that need to be mastered, namely heading, stopping, shooting, dribbling, controlling, tackling, goalkeeping techniques, throw-ins, kick-ins, and passing.

Based on the quote above, basic skills are paramount for someone playing futsal. Among the several techniques that futsal players must master, one of them is basic passing. Passing is used frequently in the game. A player's basic technique significantly impacts a team's performance. Therefore, quality passing can be leveraged to a team's advantage by moving the ball toward the opposing team's goal. Players don't just pass; they must also create precision and accuracy within those passes. Precision is the ability to direct the ball in a predetermined direction or directly toward the target (Fatoni & Prianto, 2022). Players who have good kicking technique will play more efficiently than those who have not yet mastered this basic technique. Passing is the skill of moving the ball from one player to another, executed with high accuracy and precision (Wiriawan & Irawan, 2019).

The game will not run smoothly if players are unable to pass effectively. This is due to a lack of basic passing skills and teamwork. To achieve good passing, appropriate and effective training methods are needed to ensure accurate passing. Passing is a training exercise aimed at developing several basic techniques, including vision, direction of the pass, body position toward the target, which can be done diagonally or vertically, with the placement of the supporting foot to train foot contact or impact with the ball, leg swing when passing, and subsequent movements after passing. To improve the quality of a player's passing, the rondo training method is needed, which aims to support the success of each futsal player's passing accuracy. The benefits or goals of using the rondo training method are to enable players to make accurate and fast passes, run short distances, manage stamina, control the ball, improve motor skills, and make decisions when receiving the ball (Murdika, 2022). Rondo drills are also useful for assessing the abilities of each individual player on a team. Using this training method, coaches can assess players composure under pressure, creativity in manipulating opponents, and confidence in handling the ball, all of which will be valuable assets for players in improving their playing skills.

While research has proven the effectiveness of rondo training, the question arises as to how this training can be further optimized to strengthen players leg muscles with additional physical capacity in the form of training loads. To achieve maximum passing accuracy, in addition to good technique, physical ability also plays a role, as good shooting results are achieved not only by mastering good technique but also by being in good physical condition

(Anggara, 2021). In this discussion, researchers added a physical training element by adding ankle weights to the ankles. Ankle weights typically weigh between 0.5 and 2 kg and are typically equipped with velcro, making them comfortable and easy to use. By using ankle weights, players can improve the quality of their training because the weight is applied to their body. According to (Moh Hanif Sholeh Faturrohman et al., 2023) "Ankle weight training is an exercise to increase the strength and performance of the leg muscles, which is done by applying weight to the lower leg. In ankle weight training, a device in the form of an ankle vest is attached to the lower leg to react quickly, especially when kicking." This exercise is done by swinging the leg using weights to make passes to improve passing ability and movement without the ball to create empty space. Therefore, the use of ankle weights can be an innovation in passing accuracy training, complementing other commonly used passing accuracy training methods.

METHOD

This study used a quantitative approach with an experimental design. The design used in this study was a one-group pretest-posttest design, where the subjects passing accuracy was measured before (pretest) and after (posttest) they were given treatment in the form of rondo training using ankle weights. This design allowed the researchers to observe changes in the dependent variable as a result of the intervention.

This research was conducted inInter Futsal field located in Margahayu, Bandung and was held on May 7 – June 11, 2025. Meanwhile, the treatment was carried out in 12 meetings, with a frequency of 3 training sessions in one week, namely Monday, Wednesday and Friday.

The population in this study were futsal players at SMAN Margaasih 1 who actively trained with a sample size of 18 players were selected by purposive sampling with special considerations and the best abilities, namely those aged at least 16 years and have mastered the basic techniques of playing futsal, especially in passing, and are not currently injured and are willing to participate in the research.

To obtain data for this study, a pretest will be conducted at the first meeting and a posttest at the final meeting using the selected test instrument. The instrument used to measure passing accuracy is the wall pass test. This test was chosen because it has valid and reliable standards. This test is adapted from research conducted by (Doewes et al., 2022) with a validity level of 0.857 and a reliability level of 0.812. To determine a player's passing ability, there are wall pass test norms with the following categories:

Table 1. Test Norms

Category	Value Limits
Very Less	<59
Less	60 – 69
Enough	70 – 79
Good	80 – 89
Very Good	>90

The research procedure began with a pretest at the beginning of the session to obtain baseline data on passing accuracy. The sample was then given treatment in the form of rondo training using ankle weights for a specific period of time, namely, three training sessions per week over a period of 12 sessions. This aligns with the opinion of the (Prof. Drs. Harsono, 2017) which states that "a marco-cycle is a long-term training cycle that can take 6 months, a year, or even several years; a meso-cycle lasts 3-6 weeks; and a micro-cycle lasts less than 3 weeks, perhaps 1 or 2 weeks." Then, as an experiment to get good results, it can also be done with a training frequency of 3 days a week, while the training duration should be at least 4-6 weeks (Juliantine et al., 2007). In line with Tjaliek Sugiardo's opinion in (Umar Fitriadi, 2021) stated that 12 to 16 practice sessions resulted in permanent changes. The training program was similar to typical rondo training, employing defensive and offensive patterns such as 4 vs. 2, 5 vs. 2, 5 vs. 3, and so on, with players positioned within a box or circle demarcated by cones, and each training session lasted 10–20 minutes. The difference in this study was the addition of ankle weights to each training session. The ankle weights used were 0.5 kg, with no weekly weight increases. The addition of ankle weights to rondo training aimed to strengthen the player's leg muscles, enhancing their passing power and ensuring accurate direction. After the intervention or treatment period was completed, a post-test wall pass test was conducted to measure the improvement in passing accuracy.

RESULTS AND DISCUSSION

Result

This study aims to determine the effect of passing training using ankle weights with the Rondo training method on improving the accuracy of futsal players passing. The subjects of this study were futsal players from Margaasih 1 High School with a sample size of 18 people. This study began with pretest data collection on May 7 2025 and posttest data collection on June 11, 2025. The data were then processed and analyzed statistically using the SPSS 25

application as shown in the appendix. The summary of the overall data description is presented in tabular form. The results of the study can be described as follows:

Table 2. Wall Pass Test Pre-Test Results

Passing 1	Passing 2	Achievement	Category
68	67	68	Less
70	72	72	Enough
67	73	73	Enough
62	67	67	Less
74	70	74	Enough
68	71	71	Enough
67	70	70	Enough
59	65	65	Less
67	72	72	Enough
68	71	71	Enough
73	68	73	Enough
69	65	69	Less
73	70	73	Enough
62	67	67	Less
70	72	72	Enough
67	59	67	Less
67	72	72	Enough
69	71	71	Enough

Table 3. Wall Pass Test Post Test Results

Passing 1	Passing 2	Achievement	Category
72	79	79	Enough
73	82	82	Good
74	82	82	Good
68	78	78	Enough
82	77	82	Good
73	81	81	Good
70	79	79	Enough
77	71	77	Enough
72	82	82	Good
73	80	80	Good
74	83	83	Good
69	78	78	Enough
78	82	82	Good
69	78	78	Enough
75	82	82	Good
70	78	78	Enough
75	82	82	Good
80	77	80	Good

The findings indicate an increase in passing accuracy in the experimental group. In the initial test (pretest), the average wall pass test score was at the "enough" level. After being given the treatment and conducting the final test (posttest), there was a significant increase, with the experimental group achieving a high average score, in the "good" category. This means that the results of this data analysis clearly indicate that the intervention given to the experimental group correlated with an increase in their passing accuracy, as can be seen in the change in the average wall pass test score from the "enough" category to "good" category.

Table 4. Statistical Description of Pretest and Posttest Wall Pass Test

	N	Range	Minimum	Maximum	Mean	Standard Deviation
Pre-Test Wall Pass Test	18	9	65	74	70.39	2.615
Post-Test Wall Pass Test	18	6	77	83	80.28	1.934
Valid N (listwise)	18					

The statistical analysis results above indicate a significant increase in passing accuracy after the rondo training intervention using ankle weights. Descriptive data shows that the average pretest wall pass test score was 70.39 with a standard deviation of 2.615, while the average posttest wall pass test score increased to 80.28 with a standard deviation of 1.934. This increase indicates a positive effect of the training program.

Then carry out the prerequisite test with a normality test using *Shapiro Wilk*, as well as homogeneity test with Lavene'e Test.This test will test the hypothesis that the sample comes from a normally distributed population, to accept or reject the hypothesis by comparing the significance value with 0.05. The criterion for accepting the hypothesis is if the significance value is greater than 0.05, if it does not meet the criteria, the hypothesis is not normally distributed and is rejected.

Table 5. Normality Test

	Class	Shapiro Wilk		
		Statistics	df	Sig.
Results	Pretest Wall Pass Test	.903	18	.066
	Post-Test Wall Pass Test	.916	18	.109

The normality test for the pretest wall pass test used *Shapiro-Wilk* because it was determined from the total number of samples below 30 people. Considering the characteristics of the sample in this study, the *Shapiro-Wilk* test is relevant to use in testing the normality of

the data. The data results shown are Sig 0.66 (*Shapiro-Wilk*), which means the Sig value > 0.05 can be said to be normally distributed. And for the posttest wall pass test experienced a significant increase with a Sig value of 0.109 (*Shapiro-Wilk*).

Table 6. Homogeneity Test

		Levene Statistics	**df1**	**df2**	**Sig.**
Results	Based on Mean	1,681	1	34	.204
	Based on Median	.586	1	34	.449
	Based on Median and adjusted df	.586	1	24,620	.451
	Based on trimmed mean	1,458	1	34	.236

The homogeneity test shows a significance value of 0.204 (Based on Mean) for the comparison of the pretest and posttest wall pass test, which is much greater than 0.05. This indicates that the data variance between the pretest and posttest is homogeneous, thus fulfilling the assumptions for the Paired Sample Test.

Table 7. Hypothesis Test of Increase (Paired Sample T-Test)

Group	Mean	Df	Sig. (2-taled)	Information
Experiment	-9,889	17	.000	Significant

The main results of the Paired Samples t-test showed a significant t-value with df=17 and a very small Sig. (2-tailed) value (usually <0.05, but the assumption of a significant Sig. is based on a clear average increase). This significant t-value statistically proves that the difference between the pretest and posttest averages is not a coincidence, but rather the result of the effect of the training treatment. Thus, the research hypothesis stating that there is an effect of rondo training using ankle weights on increasing passing accuracy can be accepted.

Discussion

The use of ankle weights in this study allows for greater stimulation of the leg muscles, forcing them to work against greater resistance during the eccentric and concentric phases of explosive movements. The use of ankle weights increases the intensity of the exercise, which in turn can induce greater physiological responses, such as muscle fiber hypertrophy or increased efficiency of the stretch-shortening cycle. With the weights on the ankles, players experience lighter passing and greater power when pushing the ball.

The improvement in the quality of passing accuracy in the players in this study was not only influenced by the training program, but there were several other factors that influenced

the improvement in the speed of the players, including: (1) situation and condition, the success of this study was not only influenced by rondo training using ankle weight, but there was an impact from the situation and condition of the field that supported it because it could help players to improve their abilities, especially their ability to pass. Apart from the field, the weather could also support the success of this study because from all the meetings, when this study took place the weather did not hinder the progress of the study. (2) the enthusiasm and enthusiasm of the players also supported the success of this study, as evidenced by the presence of almost all players in the training program from the first meeting to the final test. (3) the futsal coach of SMAN 1 Margaasih who gave freedom and support and the facilities provided could help this study run smoothly.

CONCLUSION

This study aims to determine the effect of passing training using ankle weights in the rondo training method on improving the passing accuracy of futsal players. From the results of the t-test, it can be seen that rondo training using ankle weights has a significance value of 0.00 < 0.05, so it can be interpreted that there is a significant effect of the treatment that has been given. Then, seen from the average pretest figure of 0.66 and the average posttest of 0.109, this indicates a significant increase from before being given treatment and after being given treatment. Based on the results of the study entitled "The Effect of Passing Training Using Ankle Weights with the Rondo Training Method on Increasing the Accuracy of Futsal Players Passing", it can be concluded that there is a significant effect of rondo passing training using ankle weight training loads on increasing the accuracy of passing futsal players at SMA 1 Margaasih. This is indicated by the results of the Paired Sample T Test significance of 0.000 with a probability and significance smaller than expected (<0.05).

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