

## **Distribution practice method of badminton lob punch accuracy**

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### **Abstract**

The aim of this research is to determine the effect of the distribution practice method on the accuracy of lob shots in badminton. This study employs an experimental method, utilizing a One Group Pretest and Posttest design. The sample consists of 11 athletes. Data collection techniques involve tests and measurements, with the research instrument being a lob shot accuracy test. Data analysis is performed using the t-test formula at a significance level of 5%. The results of hypothesis testing indicate that there is an influence of the distribution practice method on the accuracy of badminton lob shots. Therefore, the conclusion is that there is an impact of the distribution practice method on the accuracy of lob shots in badminton. This demonstrates that the distribution practice training method is suitable for improving the accuracy of badminton lob shots.

**Keywords:** distribution method; lob; badminton.

### **INTRODUCTION**

In today's modern life, human activities are inseparable from sports, serving various purposes such as a specialized profession, entertainment, recreation, livelihood, health, and culture. Sports can positively influence physical health (Khan et al., 2012; Lu & Wei, 2023; Vasconcelos Lima Diniz, 2023), and through sports, the immune system in the human body can also improve (Andreescu, 2023; Gleeson, 2007; Rojas-Valverde et al., 2023; Rubinstein et al., 2023). Properly conducted sports activities offer significant benefits to individuals. Overall, sports play a crucial role in various aspects of life, ranging from physical and mental health to societal influences. Sports contribute to health development, disease prevention, and the well-being of communities.

Badminton, a racquet sport, is widely popular in Indonesia. The community in Indonesia is familiar with and conscious of badminton (Susanto, 2009). The interest in playing badminton has extended to the educational sector, with the establishment of badminton extracurricular activities (Arduta et al., 2020). Badminton remains a favored sport among diverse groups of Indonesian society, encompassing various economic backgrounds, genders, ages, and generations.

Badminton, or specifically, the game of shuttlecock, involves two players (for singles) or two pairs (for doubles) positioned on opposite sides of the court, separated by a net (Karyono & Paluris, 2022; Lismadiana, 2021). Players score points by hitting the shuttlecock over the net and into the opponent's designated area. The game demands repetitive, high-intensity, anaerobic efforts throughout the match (Phomsoupha & Laffaye, 2015). It requires players to master fundamental techniques such as the serve, lob, drop shot, smash, netting, underhand, and drive (Bayuri et al., 2022; Muchhamad Sholeh & Andibowo, 2022; Wibowo et al., 2022).

Lobbing is a fundamental technique in badminton crucial for players to master. This technique involves tossing the shuttlecock high in the air to evade opponent attacks and provide the player with time to return to the proper court position (Ali & Siong, 2023; Ikhtiar et al., 2023; Yogaswara et al., 2023). Proficiency in lobbing is advantageous for players to control the game, minimize errors, and

utilize lobbing as a strategic weapon to attack opponents by directing the shuttlecock into open areas. Therefore, mastering the lobbing technique is essential for players to enhance their gameplay and secure victories in matches.

Observations at PB Buha Club revealed that athletes tend to be less active on the court, particularly when executing the basic technique of lobbing, leading to inaccuracies. This inaccuracy in lobbing can result in point loss and provide opponents with opportunities to counterattack, emphasizing the need for innovative and effective training methods tailored to the athletes' conditions. Previous research, such as the study conducted by Muhammad Akbar Juliansyah on the effectiveness of shadow and arm muscle power training on overhead lob shots in badminton, demonstrated positive results (Juliansyah, 2021). While this preliminary research yielded positive outcomes, it prompts the need for further investigation into alternative methods for a more comprehensive understanding of their effectiveness.

Accuracy in badminton lobbing involves propelling the shuttlecock as high as possible towards the backcourt of the opponent. Precise lobbing requires a targeted direction with high accuracy to ensure the shuttlecock remains in play. Selecting appropriate training methods is crucial for helping players achieve their desired performance levels. This study explores the impact of the distribution practice method on the accuracy of lob shots in badminton. The aim is to provide badminton coaches with diverse training methods, allowing them to choose the most suitable approach for their athletes. The primary objective is to assess the influence of the distribution practice method on the accuracy of badminton lob shots.

## METHOD

The study employed an experimental design, a research method conducted rigorously to discern cause-and-effect relationships among variables. One fundamental characteristic of this research is the application of treatment to the research subjects. The study was conducted at the Badminton PB Buha field in Mapanget Subdistrict, Manado City, over a period of approximately 2 months, involving 26 sessions (24 treatment sessions and 2 testing sessions) with a training frequency of three times per week to ensure the stability of improvements during training. The population for this research comprised 11 athletes from PB Buha in Mapanget Subdistrict, Manado City. The sampling method employed was a total sampling, including the entire population in the study. The research design used in this study was the One Group Pretest-Posttest design.

The lob ability test that will be used is using the poole forehand clear test (Poole & Nelson, 1970).

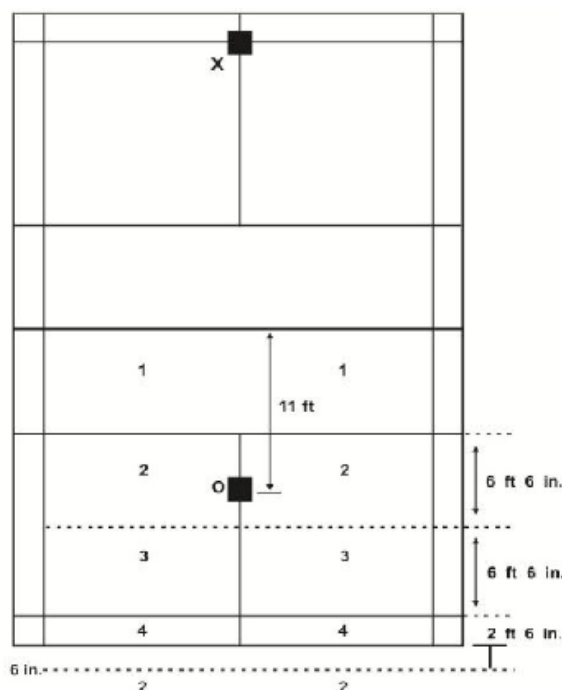


Figure 1. Poole Forehand Clear Test

The data analysis technique employed in this research involves the normality test, which is intended to determine whether the research data originates from a normally distributed population. Through the normality test, the appropriate statistical test for hypothesis testing can be determined using SPSS. Lastly, the hypothesis test of the research asserts the presence or absence of the influence of distribution training on the accuracy of lob shots in badminton, utilizing the statistical technique of the t-test.

## RESULTS AND DISCUSSION

### Results

The research results are shown by initial data (pretest) and final data (posttest). The description of the research results from the data obtained is described as follows:

Table 2. Table of Pretest and Posttest Results

No	Initial Test	Final Test	Difference(Gain)
1	25	32	7
2	28	31	3
3	29	37	8
4	28	31	3
5	27	34	7
6	30	35	5
7	26	32	6
8	28	32	4
9	27	35	8
10	31	36	5
11	30	38	8
<b>Σ</b>	<b>309</b>	<b>373</b>	<b>64</b>

Based on the table, it can be seen that the results achieved after taking action in the form of training using the distribution practice method on the accuracy of lob shots have increased. This can be seen in the results where the data obtained at the time (pretest) was 309, while after being given treatment or the results (posttest) it increased by 373.

In order to fulfill the analytical requirements in testing the research hypothesis, several test requirements were carried out including: normality test.

Table 3. Data Normality Test

Mark	Statistics	Sig.	$\alpha = 5\%$	Conclusion
Pretest	0,970	0,889	0,05	Normal
Posttest	0,912	0,256	0,05	Normal

Based on normality test data, it was concluded that the scores from the pretest and posttest were normally distributed. The basis for this conclusion is the Sig value. Pretest and posttest > 0.05. Next, it is necessary to test the hypothesis using the t test as follows:

Tabel 4. Uji t

Test	Mean	t	df	Sig. (2-tailed)
Pretest	28,09	-9,947	10	0,000
Posttest	33,91			

Based on the results of the t test using the Wilcoxon test, the results were Sig. 0.000 < 0.05, so it can be concluded that there is an influence of distribution practice methods on the accuracy of badminton lob shots.

## Discussion

The hypothesis testing conducted in this research has resulted in a summary of the hypothesis test results as follows. The research data demonstrates that exercises utilizing the practical distribution method significantly influence the accuracy of lob shots in badminton. This is evidenced by the increase in data values between the pretest and posttest. Furthermore, it is proven that athletes who participated in training with the practical distribution method, based on the research findings, exhibited pretest scores ranging from the highest at 31 to the lowest at 25. After analysis, the average score was determined to be 28.1. In contrast, the posttest data showed scores ranging from 38 to 31, with an average score of 33.9 after analysis. This indicates that the respondents sampled in this research experienced an improvement in average scores from the initial test to the final test.

Moreover, based on the conducted testing, it is evident that all variables have homogenous population variances and follow a normal distribution. This is supported by data processing showing normal and homogenous data values. For the purpose of hypothesis testing in this research, the t-test was employed.

The results of the pretest and posttest using the t-test for the training with the practical distribution method on the accuracy of lob shots in badminton yielded a calculated t-value of 9.95, while the critical t-value obtained from the distribution table was 1.812. It turns out that the calculated t-value is greater than the critical t-value or falls outside the region of acceptance of the null hypothesis (Ho). Thus, it can be concluded that the alternative hypothesis (Ha) is accepted, and the null hypothesis (Ho) is rejected.

In conclusion, it can be inferred that training with the practical distribution method, specifically concerning the accuracy of athletes in performing underhand lob shots, has a significant impact on the athletes. Thus, the hypotheses in this research have been answered and validated through the statistical formulas utilized in data analysis, leading to conclusions drawn from various hypotheses.

The results between the pretest and posttest in this study showed a significant improvement. The pretest results were below the standard with an average of 28.1, and after receiving treatment in the form of training with the practical distribution method, the posttest results clearly demonstrated an increase with an average score of 33.9. Upon analysis, the improvement between the pretest and posttest was found to be 5.818. Therefore, it can be accepted that the influence of training with the practical distribution method on the accuracy of badminton lob shots in athletes from PB Buha Kabupaten Manado is substantiated.

## CONCLUSION

The results of the pretest and posttest using the t-test in the study on training with the practical distribution method regarding the accuracy of lob shots in badminton yielded a calculated t-value of 9.95, while the critical t-value obtained from the distribution table was 1.812. It is evident that the calculated t-value is greater than the critical t-value, indicating that the calculated t-value falls outside the region of acceptance of the null hypothesis (Ho). Therefore, it can be concluded that the alternative hypothesis (Ha) is accepted, and the null hypothesis (Ho) is rejected.

In summary, it can be inferred that training with the practical distribution method, particularly in terms of assessing the accuracy level of athletes in executing underhand lob shots, has a significant impact on the athletes.

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