

The Impact of Partner-Based Training on the Development of Crescent Kick Skills in Pencak Silat Extracurricular Activities

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Abstract

Pencak Silat is a traditional martial art that includes various types of leg attacks, one of which is the kick. Kicking techniques often generate higher and more decisive points compared to other forms of attacks. Among the kicking techniques used in competition, the crescent kick is one of the most essential, requiring strength, agility, and accuracy. This study aims to determine the effect of partner-based training on improving crescent kick ability among Pencak Silat extracurricular participants. The research was conducted over two months, from May to June, involving 15 female students as samples. The experimental method employed a One Group Pre-Test and Post-Test Design. Data were analyzed using a t-test to measure the significance of performance improvement before and after the treatment. The results showed that the calculated t-value (4.50) was greater than the t-table value (2.14), indicating that the null hypothesis (H_0) was rejected. This finding demonstrates a significant effect of partner-based training on enhancing crescent kick performance. Therefore, partner-based training can be considered an effective method to improve crescent kick techniques in Pencak Silat extracurricular activities, particularly at SMP YAPENI.

Keywords: Crescent kick, Partner-based training, Pencak Silat

1 INTRODUCTION

This research is important because Pencak Silat is a cultural heritage that must be preserved and developed through extracurricular activities in schools. The decline in the Pencak Silat extracurricular achievements at SMP Yapeni indicates challenges in mastering basic techniques, particularly the crescent kick, which plays a crucial role in scoring during competitions. Weaknesses in the power, speed, and accuracy of the crescent kick need to be addressed through effective training methods. Therefore, this study aims to examine the effect of paired training on improving crescent kick performance as an effort to enhance athletes' achievements while supporting the preservation and development of Pencak Silat as part of the national culture.

Juli Candra (2021) stated that the principles of Pencak Silat are the fundamental rules regarding the methods of performing or practicing Pencak Silat. These principles encompass moral teachings as well as the values and aspects of Pencak Silat as a unified whole. Thus, the fundamental rules of Pencak Silat contain elements of ethics, logic, aesthetics, and athletics. In Pencak Silat learning, when a practitioner possesses good principles, it will shape a personality with noble character, contributing to a peaceful, harmonious, and secure life. The crescent kick is a kicking technique in which the movement trajectory forms a semicircular line, and the way it works resembles a sickle — swung from the outer side toward the inner side (Ahmad Maksum, 2021).

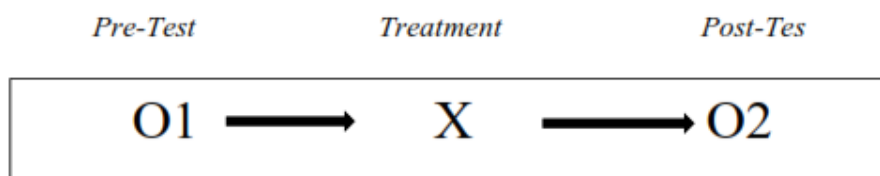
Furthermore, Dr. Ida Bagus Wiguna (2017) stated that an athlete can prepare themselves to achieve their goals through a training process, and intensive training will improve the athlete's skills and work capacity to reach optimal performance. According to Pambudi and Budiman (2019), the Practice Rehearsal Pairs method is included in the active

learning model. Active learning is a quick, enjoyable, engaging, and enlightening approach to learning. Practice Rehearsal Pairs is a simple method that can be used to practice a skill or procedure with a learning partner. The goal is to ensure that both partners are able to perform the skill or procedure effectively. This method is particularly suitable for psychomotor-based material. Furthermore, Arifudin, Opan (2022) stated that schools, as educational institutions at the micro level, must have good planning in order to create quality schools and achieve educational goals. In this context, extracurricular activities play an important role in developing students' character, particularly in fostering discipline and responsibility, which can be effectively achieved through well-planned and measurable programs.

Despite these insights, there is still limited research that specifically investigates the application of the Practice Rehearsal Pairs method in improving technical skills in Pencak Silat, particularly the crescent kick technique among school-level athletes. The lack of empirical evidence on how this training method influences the accuracy, strength, and effectiveness of crescent kicks in a structured extracurricular setting creates a significant gap. Therefore, this study aims to fill that gap by examining the effect of paired training (Practice Rehearsal Pairs) on the crescent kick performance of Pencak Silat athletes in school extracurricular programs.

2 RESEARCH METHODS

This study aims to determine whether paired training can significantly improve athletes' technical ability and skill in performing the crescent kick. The method used in this research is an experimental method with a One-Group Pretest and Posttest Design, which is intended to examine the relationship between the independent and dependent variables. The independent variable in this study is paired training, while the dependent variable is the technical ability of the crescent kick. The research design used is as follows:



The population is the generalization area consisting of objects or subjects that have certain qualities and characteristics determined by the researcher to be studied and from which conclusions are drawn. In this study, the population consists of all Pencak Silat extracurricular athletes at SMP Yapeni, totaling 15 students. Meanwhile, the sample represents a portion or subset of the population to be studied, where data collection is carried out by selecting part of the population considered representative of the entire group. Therefore, the sample must be truly representative or reflect the overall characteristics of the population. The sampling method used in this study is total sampling, meaning that the sample is identical to the population all 15 Pencak Silat extracurricular athletes at SMP Yapeni.

In quantitative research, data analysis techniques are clearly defined and are directed toward answering the research questions or testing the hypotheses formulated in the proposal. Since the data are quantitative, the data analysis techniques use available statistical methods. The statistical technique used in this study is descriptive statistics. Before conducting data analysis, it is necessary to perform prerequisite tests for the validity of the analysis, including data description, normality test, and effectiveness test.

Hypothesis testing in this study uses the paired samples test with manual calculation. The paired samples t-test is a parametric test used to determine whether there is a

significant difference between the means of two related samples. The formula is as follows :

Explanation:

$$t_{hit} = \frac{\bar{D}}{\frac{SD}{\sqrt{n}}}$$

$$SD = \sqrt{var}$$

$$var(s^2) = \frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2$$

t = calculated t-value

$\bar{D}$ = mean difference between measurement 1 and measurement 2

SD = standard deviation of the difference between measurement 1 and measurement 2

n = number of samples

Kriteria pengujian :

$t_{calculated} > t_{tab}$ = significantly different (H_0 rejected)

$t_{calculated} < t_{tab}$ = not significantly different (H_0 accepted)

3 RESULT AND DISCUSSION

This study focuses solely on the relationship between the independent variable, paired training, and the dependent variable, the crescent kick ability of Pencak Silat athletes. To achieve the research objectives, the researcher provided treatment over 16 sessions or 2 months, with a frequency of two sessions per week. After the treatment was completed, a post-test (final test) was conducted using the same instrument. In this study, the pre-test measured the crescent kick ability to determine the skill level of Pencak Silat athletes at SMP Yapeni before the treatment was given. Similarly, the post-test used the same instrument to assess the level of crescent kick ability after the treatment and served as the final evaluation. The test results are as follows:

Tabel 1. Descriptive Data Summary of the Research on the Effect of Paired Training on Crescent Kick Ability at SMP YAPENI.

Crescent Kick Ability at SPH - PALEMB.								
			Statistics					
No		Variabel	N	Mean	Std. Deviasi	Range	Min	Max
1	<i>Pre-test</i>	Crescent kick ability	15	73,00	7,19	24	64	88
2	<i>Post-test</i>	Crescent kick ability	15	80,93	9,11	33	64	97

From the table above, it can be seen that the pre-test results show a minimum score of 64, a maximum score of 88, and a mean of 73.00, while the post-test results show a minimum score of 64, a maximum score of 97, and a mean of 80.93.

To process the data, it must first be converted from raw data into standardized data. After that, prerequisite tests are conducted, including the normality test and homogeneity test.

Once these prerequisites are fulfilled, the next step is to perform hypothesis testing using the paired sample test with manual calculation.

3.1.1 Sub of Sub Result 1

The normality test was conducted to determine whether the data are normally distributed or not. This test serves as a preliminary step before proceeding to inferential statistical analysis. Inferential statistics is a method used to draw general conclusions based on collected data. The overall normality of the data was tested using the One-Sample Kolmogorov-Smirnov Test.

Table 2. Results of the Normality Test Calculation for Crescent Kick Ability with Paired Training Treatment in Pencak Silat Extracurricular Athletes at SMP YAPENI.

No	Variable	N	D _{max}	D _{tabel}	α	Information
1	<i>PRE-TEST</i> Crescent kick ability	15	0,13	0,34	0,05	NORMAL
2	<i>POST-TEST</i> Crescent kick ability	15	0,09	0,34	0,05	NORMAL

Based on the table above, the normality test results show that the pre-test data for crescent kick ability with 15 samples obtained a D_{max} value of 0.13 and a D_{table} value of 0.34, indicating that D_{max} < D_{table}, meaning the data are normally distributed. Similarly, the post-test data after paired training treatment obtained a D_{max} value of 0.09 and a D_{table} value of 0.34, which also indicates that D_{max} < D_{table}, confirming that the post-test data are normally distributed.

3.1.2 Sub of Sub Result 2

The homogeneity test was used to determine whether the variance of the crescent kick ability data was the same or different between the pre-test and post-test data. The results of the homogeneity test calculations are presented in the table below.

Table 3. Results of the Homogeneity Test Calculation for Crescent Kick Ability with Paired Training Treatment in Pencak Silat Extracurricular Athletes at SMP YAPENI.

No	Variable	<i>Levene Statistic</i>	df 1	df 2	F _{tabel}	Information
1	Crescent kick ability	0,66	1	28	4,20	Homogen

Based on the table above, the results of the crescent kick ability of students participating in the Pencak Silat extracurricular program at SMP YAPENI show a Levene Statistic value of 0.66 and an F-table value of 4.20. This indicates that W < F-table, meaning the data are homogeneous. Therefore, it can be concluded that the test of crescent kick ability in Pencak Silat using paired training has equal or homogeneous variance.

The hypothesis test in this study was conducted using a paired sample t-test with the assistance of Microsoft Excel. The paired sample t-test was used by the researcher to

determine the effect of paired training on the mastery of the crescent kick technique in Pencak Silat.

Based on the paired t-test results in the table above, the t-table value is 2.14 and the t-calculated value is 4.50 ($t_{\text{calculated}} > t_{\text{table}}$), thus H_0 is rejected. Therefore, it can be concluded that there is a significant difference between the pre-test and post-test results, meaning that paired training has a significant effect on the mastery of the crescent kick technique in Pencak Silat.

Table 4. Results of the Paired Sample t-Test on Crescent Kick Ability with Paired Training Treatment in Pencak Silat Extracurricular Students at SMP YAPENI.

Variable	t _{hitung}	t _{tabel}	Information
<i>Pre test – Post test</i>	4,50	2,14	H_0 rejected

From the paired t-test results above, it can be seen that the t-table value is 2.14 and the t-calculated value is 4.50 ($t_{\text{calculated}} > t_{\text{table}}$), therefore H_0 is rejected. This indicates that there is a difference in the mean scores between the pre-test and post-test results, meaning that paired training has a significant effect on the mastery of the crescent kick technique in Pencak Silat.

4 CONCLUSION

Based on the results of data analysis, description, research findings, and discussion, the following conclusions can be drawn:

- The average result of the crescent kick performance of athletes who practiced using paired training showed that the pre-test had an average score of 73.00, while the post-test had an average score of 80.93. The higher average post-test score compared to the pre-test indicates that paired training had a positive effect on improving crescent kick ability.
- Paired training is a fun and engaging training variation that provides athletes with the opportunity to motivate each other and exchange information to achieve better training outcomes.

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