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The Effect of Skipping Training on Straight Kick Speed in Pencak Silat at State Senior High School 1 Katapang

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Abstract

This study aims to determine the effect of skipping training on straight kick speed in pencak silat. The method used is a quasi-experimental with a pretest-posttest control group design. The research subjects consisted of 10 extracurricular pencak silat athletes at Senior High School 1 Katapang who were divided into two groups, namely the experimental group and the control group. The experimental group was given treatment in the form of skipping training for 3 weeks with a frequency of 4 times a week. The instrument used was a straight kick speed test in 10 seconds. The results of the paired sample t-test showed that there was a significant increase in the experimental group ($p < 0.05$), with an average increase of 6.2 kicks. While in the control group, no significant increase was found. The independent sample t-test also showed a significant difference between the experimental and control groups ($p < 0.05$). Thus, skipping training is proven to be effective in increasing straight kick speed in pencak silat athletes. The results of this study can be used as a reference by coaches in developing training programs aimed at improving athlete performance.

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INTRODUCTION

Pencak Silat is a martial art cultivated and developed by Indonesian ancestors and spread throughout the country and even developed abroad. (TriJuwanda, Zulrafli and Kamarudin, 2019) Further clarified by (Pomatahu, 2018) Pencak Silat is an Indonesian martial art consisting of four elements, sports, art, pencak silat and spirituality. Pencak silat uses punches and kicks to defend against opponent attacks. The ancestral points of pencak silat are listed in the form of an oath called prasetya by Indonesian silat athletes. Pencak Silat is an indigenous culture of the Indonesian nation developed by our ancestors to defend against all attacks from opponents on the defensive and offensive elements. Pencak Silat in Katapang is a sport that is very popular among the community. Pencak silat is one of the sports that is often competed in, especially at the student level. Every year there is always a pencak silat competition at the junior high school/high school level in the context of the Regency Sports Week.

According to (Totok Iswanto, 2018) in the pencak silat championship there are several categories in competition. One of them is the tanding category. This category features 2 (two) Pesilat players from different angles. Both face each other using elements of defense and attack, namely parrying / dodging / hitting / attacking the target and taking down the opponent using tactics and techniques of competition, stamina and fighting spirit, using rules by utilizing a wealth of techniques and moves. In pencak silat competitions there are various forms of attack including punches, kicks and takedowns. Each attack has a score or points. In the tanding category competition has the following values (points): punch 1 point, kick 2 points, takedown 3 points, and evasion followed by a kick 1 + 1. One technique often used in pencak silat competitions is kicking. According to (Nuraisyah, 2019) Kicking is an attack using the leg or foot to attack the opponent. One of the kicks often used by athletes during competition is the crescent kick. According to (Muslihin, Septiadi and Saputri, 2020) a crescent kick is a kick that has a semicircular trajectory inwards, targeting all parts of the body, with the instep and the tip of the foot.

According to (Lestiyono, 2020) in Pencak Silat matches, the crescent kick is often used to collect points because it has the advantage of being very practical in getting clear points, making it easier for the referee to judge during the match. To achieve a correct and effective crescent kick in a pencak silat match, a good agility element is needed. According to (Mardela, 2019) agility is very necessary in efforts to improve pencak silat performance. Agility is one of the physical situation factors that functions most importantly in pencak silat actions, especially when there is an attack from the rival. (Tofikin and Sinurat, 2020) said that pencak silat kicks must be done hard, fast, and agile.

Speed refers to a person›s body›s ability to change direction quickly and precisely while moving without losing balance (Candra, Satriaputra, and Widodo, 2019). To achieve the desired speed, proper and regular training methods are required. Training itself is defined as the process of bodily activity to systematically meet specific needs, with regular, normative load additions to produce progressive development (Septiadi, 2020). Many training methods are used by trainers, including demonstration, modeling, and group training. However, these methods have not been able to bring about significant changes in improving the agility of crescent kicks in pencak silat athletes. Therefore, an appropriate method is needed that is considered to facilitate athletes in improving their crescent kick agility in pencak silat athletes.

The fundamental reason for choosing the skipping method is because the skipping movement has benefits, including burning fat, maintaining stamina, balance, agility, and movement. This sport is also a technique that is easy for many people to master and does not take up space or cost. Previous research results show that a skipping training program has a positive effect on increasing strength, speed, and agility, thus contributing to the agility of athletes (Sina and Pelariyanto, 2020). Based on the characteristics of the movement and previous research data, the skipping training method needs to be implemented in an effort to improve kicking agility.

The background to this research is the observation that some athletes at the Macan Kumbang Senori Tuban Pencak Silat School still lack agility in their straight kicks. To determine what coaches can do to improve their athletes› straight kicking agility, the researchers discussed efforts to improve agility in straight kicks through the skipping training method.Katapang 1 Senior High School.

The novelty of this study lies in three important points: first, the focus on the straight kick, which is still rarely investigated in comparison to the crescent kick; second, the

research setting involving high school athletes in extracurricular activities, providing new perspectives on the applicability of training methods in school environments; and third, the finding that a short three-week skipping program can significantly improve kick speed, proving its efficiency and practicality. Together, these elements position this study as a unique contribution to the development of pencak silat training methods.

METHOD

This study uses a quantitative approach with a quasi-experimental method which aims to determine the effect of skipping training on straight kicking ability in pencak silat.The research subjects were given an initial test (pretest), then given treatment in the form of skipping training for a certain period, and ended with a final test (posttest). The research population was pencak silat athletes in the Senior High School 1 Katapang Extracurricular. The research sample was selected using a purposive sampling technique, with criteria of age, experience level, and physical condition. The number of samples used was 10 people. The instruments used included a straight kick ability test (number of kicks in a certain time, strength, and accuracy), an observation form or daily training record, a stopwatch, a mat, and other relevant measuring tools.

The research was conducted through several stages, namely Pretest: Measuring the initial ability of the participants' straight kicks (within 10 seconds). Treatment: Skipping training was carried out for 3 weeks, with a frequency of 4 times a week. The training program was systematically arranged in the form of sets and series to increase the effectiveness of the training. Each set was carried out for 10 seconds and each series consisted of 10 repetitions of the movement, and In one week, participants were given 3 sets of training with 3 series in each training session. This pattern was applied consistently throughout the program to ensure gradual and measurable improvement in skills. Posttest: Measured straight kicking ability after treatment. Data analysis used descriptive and inferential statistics. The statistical test used was the paired sample t-test to determine significant differences between pretest and posttest results.

RESULTS AND DISCUSSION

Table 1. Test ResultsThe Effect of Skipping Training on Straight Kick Speed in Pencak Silat at State Senior High School 1 Katapang

Group	Pretest	Posttest
Experiment	14	20
Experiment	13	19
Experiment	14	20
Experiment	15	21
Experiment	14	21
Control	13	14
Control	14	15
Control	14	14
Control	15	16
Control	15	15

Table 1 shows the results of the number of straight kicks in 10 seconds in the experimental group before and after skipping training. Pretest scores ranged from 13–15 kicks, with an average of 14 kicks. After a 3-week skipping training program, posttest scores increased to 20–21 kicks, with an average of 20.2 kicks. This represents an average increase of 6.2 kicks. This increase is quite significant, indicating an improvement in straight kick speed ability after the treatment.

Paired Sample T-Test StatisticsExperimental Group, standard deviation, and standard error of the pretest and posttest scores for the experimental group. The pretest mean was 14.00 ± 0.71, while the posttest mean was 20.20 ± 0.84, indicating a significant difference before the hypothesis test.

Shows the results of the paired sample t-test in the experimental group, with a mean difference of -6.20 ± 0.45, t = -31.00, df = 4, and a significance value of p = 0.000006 (p < 0.05). This result indicates a significant difference between the pretest and posttest. Thus, skipping training has been shown to significantly increase straight kick speed.

Paired Sample T-Test Statistics Control Group, the control group's pretest mean of 14.20 ± 0.84 and posttest mean of 14.80 ± 0.84. This small difference indicates that descriptively, the increase in ability in the control group was very minimal.

The results of the paired sample t-test in the experimental group showed a significant increase in the number of straight kicks after skipping training (t = -31.00; p = 0.000006, p < 0.05). The average number of kicks before treatment was 14.0 ± 0.71, while after treatment it increased to 20.2 ± 0.84, with an average increase of 6.2 kicks. This indicates that skipping training has a significant effect on increasing the speed of straight kicks.

In the control group, the paired sample t-test results showed no significant increase (t =

-2.45; p = 0.070, p > 0.05). The average number of kicks before the measurement was 14.2 ± 0.84 and after the measurement was 14.8 ± 0.84, with an average increase of only 0.6 kicks. This finding indicates that without skipping training, straight kick speed does not experience significant changes.

Furthermore, the results of the independent sample t-test on the gain value showed a significant difference between the two groups (t = 17.71; p = 0.00000016, p < 0.05). The experimental group had an average gain of 6.2 ± 0.45, while the control group only had 0.6 ± 0.55. These results indicate that skipping training is much more effective in increasing straight kick speed compared to no skipping training.

From the data analysis that has been done, it shows that there is a significant difference in the number of kicks in the experimental group with an average increase of 6.2 kicks. However, it is not significant in the control group with an average increase of only 0.6 kicks. The results show that the number of kicks in the pretest is less than the posttest. From these results, it can be seen that the skipping training given to the experimental group is very effective in increasing the speed of straight kicks in pencak silat. Meanwhile, in the control group, the pretest and posttest did not show a significant difference, so skipping training needs to be applied to the control group to improve straight kicks in pencak silat.

The results of this study are in line with research conducted by Pradana et al. (2020) using a quasi-experimental method, with a pretest-posttest control group design to compare before and after treatment. A total of 30 pencak silat athletes were involved. All subjects were divided into three groups. Each group consisted of 10 athletes and was given a different treatment. The instrument used to assess the speed of the sickle kick was by kicking as many times as possible in 10 seconds with a 100 cm high sandsack target. The results showed that training using rubber tires and skipping can significantly increase kick speed (p <0.001) compared to the control group. Based on these results, it can be concluded that there is an increase in rubber tire training and skipping in pencak silat athletes.

Training conducted over a period of two months, or twice a week, can increase the speed of sickle kicks in pencak silat athletes. This is consistent with what was stated by Hidrus et al., 2020, who stated that training is a systematic process carried out repeatedly with the training load given increasing daily. The improvement in training results in the experimental group was due to the systematic and repetitive training process and the increasing or increasing amount of load given daily.

Flexibility is a crucial factor in sports. Low levels of flexibility also impact speed and balance in martial arts athletes (Syahruddin et al., 2019). Therefore, researchers suggest that training with rubber tires can improve leg muscle flexibility, allowing for greater freedom of movement with minimal energy expenditure (Watsford et al., 2010) and maintaining balance. Furthermore, leg strength also influences kicking speed in martial arts athletes. Skipping is thought to increase leg muscle strength, maximizing leg power in kicking quickly (Gribble et al., 2012).

Other studies suggest that as strength and agility increase, balance skills must adapt to control functional movement patterns, resulting in improved performance (Mcleod et al., 2009). Training using rubber tires and skipping for 16 sessions has provided effective evidence in training kick speed in pencak silat. Therefore, these findings can be used as a reference for pencak silat coaches in determining training programs, so as to create superior and high-achieving athletes. We recognize that there are several shortcomings in this study, such as psychological factors that we were unable to monitor comprehensively, so it is feared that this could affect the results. Further research is expected to answer some phenomena that cannot be explained in this study. This will be able to provide a better and clearer view regarding the speed of pencak silat athletes' sickle kicks to each coach.

CONCLUSION

This study has proven that skipping training can significantly increase straight kick speed in pencak silat athletes. Here indicates that the improvement is not due to chance, but is statistically meaningful and substantial enough to have a real impact on athletes' performance. This is evident in the number of straight kicks during the pretest (before the treatment (skipping training)) and after the treatment. The results of this study can serve as a reference for coaches in increasing straight kick speed so that athletes can achieve maximum results in pencak silat competitions.

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