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Development Of A Pencak Silat Sickle Kick Training Model: This Research Focuses On The Ability To Kick Speed

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ABSTRAK

This research and development paper was created to provide an updated product from previous research in the form of a product "Development of Pencak Silat Scythe Kick Training Model: This Research Focuses on Kick Speed Ability" that can serve as a reference for coaches in providing training models for athletes and also as a reference tool for independent learning/training athletes. The results have shown that this sickle kick training model is readily implementable. Based on the average results of the evaluation of experts, namely martial arts experts, experienced martial artists and exercise experts, the results are 98% and fall into the category of worthy of application and are supported by the results of the pretest post test pretest correlation Pearson 1 .997** Sig. (2-tailed) ,003 N 4 4 Posttest Pearson correlation ,997** 1 Sig. (2-tailed) ,003 N 4 4**. The correlation is significant at the level of 0.01 (2-tailed). From the above results, the results of the pretest and posttest on the ability of sickle kick speed that was conducted produce a correlation value of 0.997> 0.959, it is found that there is a relationship between the Pencak Silat sickle kick training model and the ability to kick speed, with a significant value of 0.003 <0.05. This means that H0 is rejected and Ha is accepted, which means that there is a positive relationship in the kick training model aimed at kick agility on the ability to kick sickle kick speed in martial arts.

Keywords: Pencak Silat, Scythe Kick, Kick Mobility, Scythe Kick Speed

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INTRODUCTION

Pencak Silat is a sport that has evolved from the original Pencak Silat for demonstration purposes and is now practiced as a competitive sport, as stated by (Syampurma & Negeri, 2019) in the definition of Pencak Silat compiled by PB. IPSI Along with Baikin in 1975, namely Pencak Silat is an Indonesian culture that aims to defend and maintain its existence and integrity towards the surrounding natural environment in the hope of improving the harmony of life and increasing faith and piety towards God Almighty. Through this pencak silat sport, it is also a way to form good moral and physical in children as stated by (Saputro et al, 2018) Pencak silat sports are taught

with the concept of forming virtuous people, but over time Pencak silat has evolved into a health and performance sport with a teacher who compiles material according to the basic techniques of Pencak silat sports that aim to develop motor skills in children and Pencak silat sports require a person who is always strong, energetic, robust and alert. This is also always associated with good physical fitness to show energetic movements, which is supported by (Sitompul & Sholihamia, 2020) who point out that "one of the things that students must have to gain agility, ability and high learning ability" is to maintain or improve physical fitness by regularly practicing physical activities and sports that are good for the health of the body. Pelamonia et al. (2018) affirm that good physical condition is very important in sports activities that are for learning or performance in a sport.

In the sport of Pencak Silat, mastery of kicking techniques is required because of the simple technique to score points, which is reiterated by (Syampurma & Negeri, 2019) who say that mastery of the basic techniques of sickle kick is very important for the performance of a Pencak Silat athlete, there are several aspects that are required and must be considered by an athlete and under the guidance of the coach to reach the peak of performance, namely: physical condition, technique and mentality of an athlete. The researchers developed products from previous researchers, namely (Strata et al., 2022) titled "Development of a Ladder Drill-Based Sickle Kick Training Model at an Early Age". From the results of this study, 15 ladder drill-only sickle kick training models were developed and the products were not directly tested in practice due to the impact of the Covid 19 pandemic.

The sickle kick technique in Pencak Silat refers to a technique in which the back of the sole of the foot is used with a kick trajectory running from the outside to the inside. The main target of this technique is the front of the opponent's body. According to another opinion about the sickle kick (Moh et al., 2022), the sickle kick is a kicking technique with a trajectory that is executed from the side inwards like a sickle / crescent. According to (Hausal et al., 2018), argues that attacks with the legs are very often performed in competitions because this attack +2 points each time it hits the opponent's body guard and +3 if it succeeds in knocking down the opponent, In conjunction with this, athletes must be given a training model that influences the sickle kick speed technique with the aim of producing kicks that are fast and not easily caught by opponents. reinforced by the opinion of (Marlianto et al, 2018), Kicking Techniques in Pencak Pencak, 2018), the kicking

technique in Pencak Silat is a technique that is often used in fights and has high points, the kicking technique has more power than punches and the kicking technique in Pencak Silat is the most dominant technique both in attacking the opponent.

According to (Satria et al., 2021), The sickle kick attack requires an element of speed because the speed in the sickle kick is very important during the game, therefore, a Pencak Silat athlete is required to have a good speed in kicking in order to perform the sickle kick attack technique as fast as possible to the target on the opponent. Besides the element of speed in the sport of Pencak Silat also requires an element of leg muscle explosiveness. According to (Kamarudin & Zulrafli, 2020), a fast and hard sickle kick requires strong leg muscles. Leg muscle strength is the result of a combination of maximum strength and maximum speed, where the muscles must be able to generate as much force as possible and move at high speed to move the body effectively when performing movements. In order to achieve the desired sickle kick skill, an athlete must receive programmed training with training methods that are consistent with the desired results. The training model chosen by the researchers is the use of the media ladder drill, hurdle jump, cones, and hitting pad/target.

Hurdle jump training is an exercise in which the leg muscles are stressed using the body as a load and jumping over hurdles in the form of gates or hurdle jumps. Reinforced by (Cakrawijaya, 2021), one way to increase agility, speed and leg muscle strength is to perform obstacle jumping exercises. This exercise involves jumping over obstacles, such as Goals with a height of 30 to 60 centimeters, cone cone is a training device made of unbreakable plastic and cone-shaped, this training device is included in the exercise to train, (Lumintuarso, 2013) suggests in (Effandy & Ihsan, 2020) to explain that the punching pad is a device used to measure dynamic reaction speed, including the ability to kick reactions, and often uses a tool to measure total body reaction. The purpose of this test is to assess overall reaction speed.

Exercises involving ladder drills, hurdle jumps, cones and impact pads/targets are useful for increasing or shaping leg muscle strength, speed and foot coordination. Of these four training tools including the factors of agility formation in athletes, reinforced by Badriah (2002: 25) in (Tedi Purbangkara, Febi Kurniawan, 2019), in his book titled “Teaching Materials for Sports Physics and Practicum”, explains that agility depends on the following factors: strength, speed, muscle explosiveness, reaction time, balance and coordination.

The results of the author's observations of the skill of Pencak Silat sickle kicks for adolescent athletes in the Pencak Silat extracurricular of SMPN 1 GUNUNG SINDUR, the average athlete still has difficulty in performing sickle kick techniques with kicks that are easily caught by opponents because they do not have agility and speed skills in mastering sickle kick techniques. The lack of sickle kick speed skill in pencak silat is due to the fact that the training model does not focus on sickle kick speed skill, so the sickle kick speed skill is not optimal. Therefore, the authors are interested in conducting a correlation study to determine whether there is a significant relationship between the sickle kick training model using ladder drill, hurdle jump, cone-cone, and punching pad training tools with the ability to accelerate the sickle kick in Pencak Silat out-of-school youth athletes SMPN 1 GUNUNG SINDUR and SMPN 1 PARUNG.

METHOD

The method used in this research is the research and development method with the Dick and Carrey development model and uses a correlation method with quantitative and qualitative approaches, the sampling technique is carried out by purposive sampling considering adolescent pencak silat athletes aged 14-17 years. The sampling technique is conducted by considering adolescent martial arts athletes aged 14-17 years. Data will be collected using research instruments, by analyzing the correlation results of the pretest and posttest, and by evaluating the sustainability of the training model based on the opinions of martial arts experts, experienced martial artists, and exercise science instructors. With this approach, the researcher aims to describe the relationship between the sickle kick training model and sickle kick speed ability in adolescent athletes aged 14-17 years old practicing extracurricular pencak silat at SMPN 1 GUNUNG SINDUR and SMPN 1 PARUNG to ensure the accuracy of the data in this study.

RESULT AND DISCUSSION

In the feasibility assessment phase of the sickle kick training model, the main focus was on the ability of the kick velocity as part of this research and development. This process refers to the guidelines of Suharsimi Arikunto as described in (Strata et al., 2022). This evaluation involved a combination of validation test results from experts, with the average rating calculated using the following formula:

$$Average\ Assessment = \frac{96 + 100 + 100}{3}$$

Keterangan:

96 = Expert Score Results / Silat Trainer

100 = Experienced Pencak Silat Athlete Expert Score Results

100 = Motor Movement Expert Score Results

Referring to the average results of the evaluations by experts including pencak silat experts, experienced pencak silat athletes and motor skills experts, this pencak silat sickle kick training model that focuses on kick speed ability for adolescents achieved a score of 98%. The results of the feasibility test analysis concluded that this training model is suitable or not suitable for implementation, and the feasibility assessment was made using a category and percentage scale according to the guidelines of Suharsimi Arikunto (Strata et al., 2022) as follows:

Table 1. Percentage of Feasibility

Score in Percentage	Category of Feasibility
<40 %	Not Good/Not Worthy
40% - 55%	Less Good/Less Feasible
56% - 75%	Good Enough / Decent Enough
76% - 100%	Good/Advanced

In the context of this study, the data refers to information obtained through correlation methods using a quantitative approach. This study aims to describe the relationship between the sickle kick training model and sickle kick speed ability in the martial art of Pencak Silat. The research data consisted of pretest and posttest results that included a sickle kick agility test with speed elements. The test was conducted with a sickle kick, alternating between the right and left leg strikes on the striking pad, with a duration of 15 seconds.

Table 2: Results of the Pencak Silat Scythe Kick Agility Test

Correlations

		Pretest	Post Test
Pretest	**Pearson Correlation**	**1**	**,997****
	Sig. (2-tailed)		**,003**

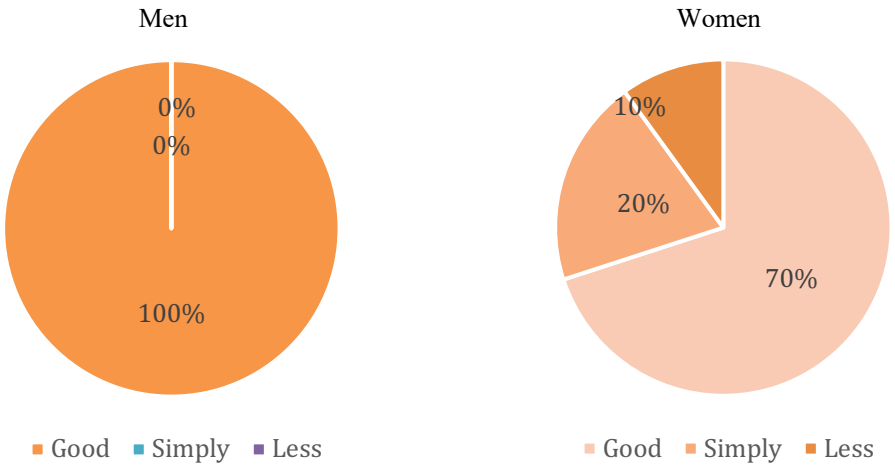
	N	**4**	**4**
Post Test	**Pearson Correlation**	**,997****	**1**
	Sig. (2-tailed)	**,003**	
	N	**4**	**4**

****. Correlation is significant at the 0.01 level (2-tailed).**

Based on the results of the pretest and posttest on sickle kick speed ability, a correlation value of 0.997 was obtained, which is greater than the critical correlation value of 0.959. This indicates a positive relationship between the sickle kick training model in Pencak Silat and kick speed ability. In addition, the significance value of 0.003, which is below the significance level of 0.05, indicates that the relationship is statistically significant in terms of the determinations: 1) If the significance level is ≤ 5%, H0 is rejected and Ha is accepted. 2) If the significance level is ≥ 5%, H0 is accepted and Ha is rejected.

Since the significance level is 0.003 < 0.05, H0 is rejected and Ha is accepted. That is, there is a positive correlation between the sickle kick training model and kick agility, which in turn improves the ability to accelerate sickle kicks in pencak silat. This conclusion is based on the principles described in the book "Quantitative, Qualitative, and Action Research Methods" by (Dr. UHAR SUHARSAPUTRA, 2018). The small group study collects data on the Pencak Silat sickle kick training model for adolescent athletes aged 14 to 17 years. The following are the results of the small group study to monitor success at diagram 1.

Pie chart 1. Small Scale Trial



From the information contained in Diagram 1, it can be concluded that the sickle kick training model in Pencak Silat is considered good and suitable for athletes who can perform the exercise smoothly. However, for athletes who have difficulty performing the pencak silat sickle kick training model, this model is considered less effective. By analyzing the results of the small-scale trial, it can be concluded that the pencak silat sickle kick training model is suitable for adolescent athletes and can proceed to a large-scale trial.

Table 3. Small Scale Trial Data

No	Variabel	Banyak Pemain	Hasil Tes	Kategori
1.	Convenience	34 Player	16-24	Fair and Good
2.	Difficulty	1 Player	14	Less

Once the results of the product development of training models for young athletes have been tested and revised on a small scale, the large group testing phase begins. Based on the results of the small group trials, which were evaluated by experts, the researchers then revised the original product and obtained 20 Pencak Silat sickle kick training models for young athletes aged 14 to 17.

Pie Chart 2. Small Scale Trial

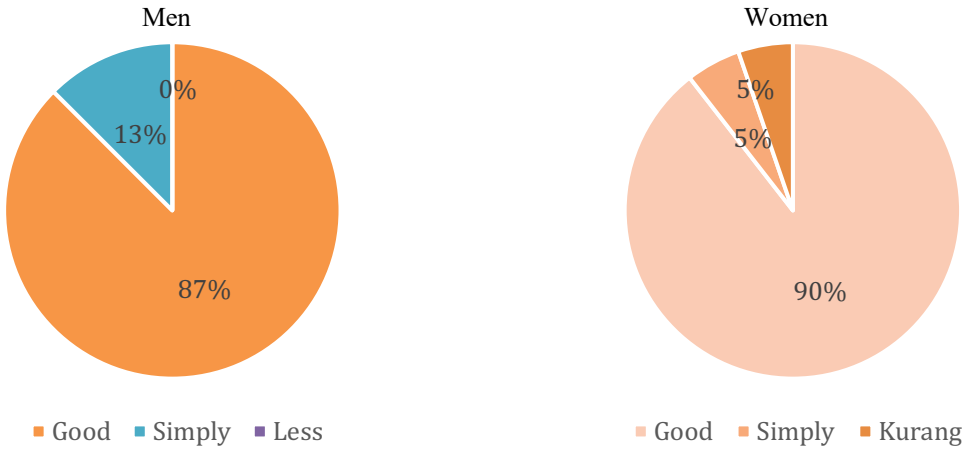


Table 4. Athlete Treatment Outcome Data

No	Variabel	Banyak Pemain	Hasil Tes	Kategori
1.	Convenience	34 Player	18-24	30 Good dan 4 Simply
2.	Difficulty	1 Player	14	Less

to determine the success of this study, the researchers applied a category scale for the achievement of sickle kick agility proposed by (Prof. Johansyah Lubis & Hendro Wardoyo, 2016) by determining the success of the number of kicks in one minute by the sample. From this implementation, the measurement of success can be seen per category which is separated between males and females.

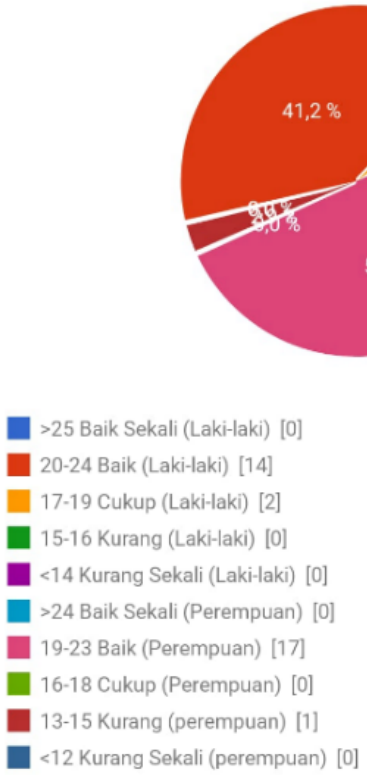
Table 5. Success Score of the Scythe Kick Agility Test

Category	Women	Men
Excellent	>24	>25
Good	19-23	20-24
Fair	16-18	17-19
Less	13-15	15-16
Very Poor	<12	<14

Source : (Prof. Johansyah Lubis & Hendro Wardoyo, 2016)

The success rate of the agility test based on the measurement of half-moon kick agility, which was conducted as a result of implementing a training model focused on kick speed ability for adolescents aged 14-17 years, suggests that a success rate of 90.2% was achieved in the test with a large group. A total of 31 athletes made good progress, while 4 athletes still had difficulties performing the exercise.

Pie Chart 3. Scythe Kick Agility Test Results



based on the results of the final kick agility test that was conducted, the final score is described as follows: Good category for men 41.2%, good category for women 50%, from the whole that was produced, it can be concluded that the Pencak Silat sickle kick training model that focuses on kicking speed is declared successful, with several suggestions for consideration in the next research (1) In the application of the training model, a trainer must provide a clear understanding and example of the movements that must be performed. (2) The tools used can be modified with assistive devices (3) The training model can be varied according to objectives and needs. (4) Modify existing training equipment with similar functions.

CONCLUSION

Based on the data analysis, description, review of research results and discussion, the following conclusions can be drawn: The validity of the Pencak Silat sickle kick training model was tested by various experts, including Pencak Silat trainer experts (96% validity), experienced Pencak Silat athlete experts (100% validity), and motor skill experts (100% validity). The product validity results from the expert evaluation showed an excellent rating, with 20 models of Pencak

Silat sickle kick training receiving an average expert evaluation score of 98% without revision. The hypothesis of the agility test showed statistical significance ($p < 0.05$), so Ho was rejected and Ha was accepted. This Pencak Silat sickle kick training model is successful and there is a significant relationship between the training model and sickle kick speed ability in adolescent Pencak Silat athletes aged 14-17 years.

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