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The Effect of Lunges and Squat Jump Exercises on the Speed of the Crescent Kick in Young Pencak Silat Athletes of the PSHT Rayon Kerepkidul, Nganjuk Branch

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Abstract

The speed of the sickle kick is a crucial element in pencak silat, but it is often hampered by the lack of specific physical training methods. This study aims to determine and compare the effects of training lunges and squat jumps on the speed of the sickle kick in young pencak silat athletes from PSHT Rayon Kerepkidul, Nganjuk Branch. This study used a quantitative approach with a quasi-experimental method. The subjects were 16 teenage pencak silat athletes (10 males and 6 females) of PSHT Rayon Kerepkidul, Nganjuk Branch, selected using total sampling. A two-group pretest-posttest design was used, with athletes divided into two groups (lunges and squat jump) using the technique of ordinal pairing based on pretest scores. Data were collected using a 10-second crescent kick speed test instrument, then analyzed using a t-test. The results of the study showed that both methods had a significant effect; the group lunges recorded an average increase of 1.25 kicks (Sig. 0.019), while the group squat jump increased by 1.63 kicks (Sig. 0.009). Although the difference test showed no statistically significant difference between the two treatments (Sig. 0.486), squat jumps were shown to contribute to a greater increase on average. It was concluded that both methods were effective in increasing kick speed, but the variation squat jump demonstrates superior efficiency. Consequently, coaches can prioritize squat jump training programs to optimize leg explosiveness and athletes' attacking performance in the competition arena.

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1. INTRODUCTION

Pencak silat has existed in Indonesia since the 7th century AD. The hunting and fighting skills of indigenous Indonesian tribes, who used weapons such as machetes, shields, and spears, are the foundation of pencak silat. Animal movements for survival in the forest are a primary inspiration for many indigenous peoples in Indonesia. However, movements such as punches, kicks, and even locks have evolved from pencak silat.

Entering the 14th century, pencak silat began to spread widely throughout the archipelago. This martial art was specifically introduced in Islamic boarding schools (pesantren) by Islamic preachers to train the physical and spiritual toughness of the students. Over time, pencak silat has had a dual function; in addition to forging noble character, this martial art became a catalyst that awakened the courage of the community in resisting colonial domination. The preservation and development of pencak silat over time was also fostered by the contributions of important historical figures, from Panembahan Senopati, Sultan Agung, Prince Diponegoro, Tuanku Imam Bonjol, Teuku Cik di Tiro, Teuku Umar, Sabai Nan Aluih, to female heroes such as Cut Nyak Dien and Cut Nyak Meutia.

The Indonesian Pencak Silat Association (IPSI), founded on May 18, 1948, is the parent organization of Indonesian Pencak Silat and is possibly one of the oldest silat organizations in the world. This organization is a forum for Pencak Silat from all over the world. Founded by Indonesia, Singapore, Malaysia, and Brunei Darussalam on March 11, 1980, the International Pencak Silat Federation (Persilat) is its official name.

Pencak Silat is a martial art that is part of Indonesian culture and is used to defend oneself from enemy attacks. In addition, it is also a competitive sport played at the regional, national, and international levels, from children to adults, both for students and general practitioners (Kuswanto, 2016). When someone follows pencak silat training, a healthy physical condition will be created in particular. Furthermore (Shapie, 2014) states that for adolescent or young pencak silat athletes, we need to start developing and applying physical components that lead to peak performance.

Although its practice is dominated by physical contact, pencak silat is essentially a self-defense discipline that upholds moral principles. (Wahyu Ari Wilujeng, 2013) emphasizes that pencak silat serves as an instrument for building strong character, deepening religious values, and building a harmonious social order. All of these noble values accumulate in the creation of noble morals, which are reflected through positive personality and behavior. Through this philosophy of noble morals, a silat practitioner is taught to understand their balanced position as a creature of God, an individual, a part of society, and in harmony with the universe. This understanding encourages them to always carry out their obligations with sincere intentions, optimize their potential, and contribute significantly to a more meaningful life together.

In addition to instilling noble character, athletes in Pencak Silat must also carry out programmed training to master basic techniques well. Basic techniques that you need to practice include standing movements, lunges, and attacks. Attacking techniques can be done using the hands (often called punches) and feet (often called kicks) (Dewi, 2014). According to Iswana & Siswantoyo (2013), a kick is an attack with the foot that strikes a legal part according to the rules of the game. This technique has the advantages of high power and range, high practicality, and easy application.

The crescent kick is a form of leg attack in Pencak Silat. According to (Tofikin & Sinurat, 2020), this technique is executed through an inward semicircular motion using the instep of the foot. If successful in hitting the target, the athlete will earn two points for this relatively practical technique. (Kuswanto, 2016) stated that the trajectory of this kick resembles the shape of a sickle agricultural tool. Technically, the execution of the crescent kick focuses on an inward circular motion using the instep that can be directed at various areas of the opponent's body (Pomatahu, 2018). Furthermore, this curved kick uses the back leg as support and is very flexible because it can be applied while moving forward, stepping backward, or jumping.Winning a pencak silat match requires mastery of technique, good physical condition, and effective strategy, with attacking techniques such as the crescent kick playing a decisive role in scoring points.

However, the success of a crescent kick is influenced by one factor: the speed of the kicking movement. A slow kick will be easily read and intercepted by the opponent, making it ineffective in a match. Conversely, a kick executed at high speed will be more difficult for the opponent to anticipate, increasing the chance of scoring. Previous studies have shown that many pencak silat athletes are unable to execute crescent kicks at ideal speed, allowing opponents to anticipate the movement during matches (Indra et al., 2025). Therefore, increasing kicking speed is an essential part of pencak silat training.

Based on observations conducted at the PSHT Rayon Kerepkidul Nganjuk Branch, the implementation of physical training for young athletes has included various forms of training to support competitive ability. However, until now, the most effective training method in increasing the speed of the sickle kick is unknown. The speed of the sickle kick is one of the important components in pencak silat competitions because it determines the success of athletes in gaining points and avoiding opponents' anticipation. Therefore, research is needed that compares lunges and squat jumps

to determine which training method contributes more to increasing the speed of the sickle kick in young pencak silat athletes of PSHT Rayon Kerepkidul Nganjuk Branch. The results of this study are expected to be a basis for coaches in determining a more effective training program according to the needs of athletes.

Optimal performance in martial arts requires a synergy between speed, strength, and excellent motor coordination. Regarding leg striking techniques, the effectiveness of a kick is largely determined by acceleration capacity and accuracy, which are directly derived from the strength and explosive power of the lower extremity muscles. To boost these physical components, implementing targeted training methods is essential. Lunge exercises, specifically plyometric variations such as *jumping lunges*, are recognized as one of the functional training approaches. The efficacy of this exercise is supported by research results (PUTRA, 2024), which prove that exercise interventions, such as *jumping lunges,* successfully increased the kicking power of Dollyo Chagi in Hapkido athletes, with a percentage increase of 7.6%.

In the analysis of sports physiology, various movements, such as *lunges,* cause specific neuromuscular adaptations to promote leg propulsion and acceleration. When an athlete performs *lunges b*y walking mindfully, they not only shift their body weight but also sculpt their muscles to achieve maximum contraction in the shortest time. Empirically, it has been proven that the slow walking technique can significantly increase the power of Pencak Silat athletes' front kicks, with an increase of 11.9% (Gunawan & Jatmiko, 2020). Furthermore, there is research evidence that training modifications such as *lunges and f*our corners with an additional load (resistance) of two kilograms can increase overall leg muscle strength (Abdurrochim, 2020). Speed depends on strong leg muscles because without it, kicks will lose momentum and become slow, making them easy to read, catch, or even throw by opponents in the arena.In summary, kicking speed is the practical result of accumulated leg strength and explosive power, developed through a measured and scientific combination of training methods, ranging from unilateral stability exercises such as lunges to explosive plyometric movements such as squat jumps.

To facilitate increased explosive power (*power*) in leg muscles, *squat jump plyometric* training is recommended as a form of functional training. This exercise is specifically designed to build explosive muscle power, an essential mechanical element in supporting kicking speed. Strong leg muscle capacity is an absolute prerequisite for athletes to produce fast, powerful, and accurate leg strikes. The efficacy of this training method aligns with research findings (Gunawan & Jatmiko, 2020), which confirms that the application of plyometric training, such as *squat jump,* has been proven to increase lower extremity muscle strength and power, which directly impacts the quality of a silat athlete's kicks. By improving leg muscle performance, athletes will be able to launch much faster and more effective attacks in the competition arena.

It is estimated that the combination of exercises, *lunges* and training *squat jump,* will be more effective in increasing the speed of the sickle kick. Practicing *lunges* increases speed and endurance for high-intensity activities, and exercises *such as squat jump i*ncrease leg muscle strength that supports explosive kicking movements. It is hoped that conventional training methods that focus solely on technique will be more effective if these two methods are combined.

Previous studies have found that various training techniques can improve pencak silat kicking abilities. For example, a study (Zana Zulfani & Rahayu, 2022) found that pencak silat athletes can improve their crescent kicks and front kicks with training, such as *Zig-zag run* and *split squat jump*. In addition, research (Indra et al., 2025) looked at how *box jumps* with *interval* impact affect the speed of the pencak silat sickle kick. However, research that specifically investigates the relationship between training *lunges* and *squat jump and the* speed of the crescent kick is still very limited. This is especially true for young pencak silat athletes from the Kerepkidul branch of PSHT, Nganjuk. Consequently, this study has never examined the effect of combining these two training techniques on different subjects.

Based on observations conducted at the PSHT Kerepkidul Branch, Nganjuk, coaches have implemented various forms of physical conditioning training to support athletes' competitive abilities. However, there is no information yet indicating which training method contributes most to improving sickle kick speed. Given that sickle kick speed is a crucial aspect in earning points in pencak silat competitions, research comparing *lunges* and *squat jumps is needed.* This study aims to determine the contribution of each training method to the speed of the sickle kick and to determine the more effective training method so that the results can be used as a reference in compiling a training program for young pencak silat athletes of PSHT Rayon Kerepkidul Branch Nganjuk.

The importance of this study is to provide clear direction in selecting a suitable location, namely Kerepkidul District, Nganjuk Branch. This area was chosen because of the large number of PSHT Pencak Silat youth athletes who participate in various training and competition activities, thus providing an opportunity for researchers to directly investigate the effects of training *lunges* and training *squat jumps* on the crescent kick. The study population included all PSHT Pencak Silat youth athletes who actively train in the Kerepkidul branch of the Nganjuk region, thus becoming a relevant and representative population to measure the effectiveness of the new training method. In this study, PSHT Pencak Silat youth athletes in the Kerepkidul branch of the Nganjuk region were selected as a sample to ensure variability and reduce bias. This sample selection was based on the participants' ability to follow an intensive training program, which is important for accurately testing the research hypothesis. Therefore, focusing on these youth pencak silat athletes is expected to provide detailed insights into the effectiveness of the applied training strategies and their impact on sparring performance. Therefore, it is hoped that this study can make a real contribution to the development of more structured and effective training programs for pencak silat in the region.

Legally, this research is based on Law Number 11 of 2022 concerning Sports, which emphasizes that high-achieving sports coaching is carried out in a planned, systematic, hierarchical, and sustainable manner by utilizing sports science and technology to improve athlete performance. This provision is reinforced by Government Regulation Number 46 of 2024 concerning the Implementation of Sports, which mandates that training programs must be scientifically designed according to the characteristics of the sport and the needs of athletes. Therefore, research on the effect of lunges and squat jump training on the speed of sickle kicks in young pencak silat athletes from PSHT Rayon Kerepkidul, Nganjuk Branch has a strong legal basis as a form of application of sports coaching science in supporting athlete development in an effective, measurable, and achievement-oriented manner.

Based on the background description, the researcher is interested in conducting research with the title "The Effect of Exercise *Lunges* and Training *Squat Jump* on the Speed of the Sickle Kick in Teenage Pencak Silat Athletes of

PSHT Rayon Kerepkidul Nganjuk Branch." This research is expected to contribute to pencak silat coaches and athletes in determining effective training methods to increase the speed of the sickle kick.

2. METHOD

This research uses a quantitative approach through an experimental method with a two-group pretest-posttest design. *Two-Group Pretest-Posttest Design. The* population and sample in this study involved all 16 young pencak silat athletes from PSHT Rayon Kerepkidul, Nganjuk Branch, selected using a saturated sampling technique (total sampling). All subjects were then divided into two treatment groups: the lunges training group and the squat jump training group, each consisting of 8 athletes. The division of these groups was carried out in a balanced manner using the technique of *ordinal pairing*, where placement is based on the order (ranking) of initial test scores (*pretest*) so that the basic abilities of both groups are equal.

Data collection is carried out systematically through three concrete operational stages: implementation of the *pretest*, giving treatment (*treatment*), and implementation of the *posttest.* The

measurement instrument used was a crescent kick speed test, where each athlete was instructed to kick as hard as possible towards a target in the form of a *sandbag* or *peck* for a full 10 seconds. After the initial data was obtained, specific training treatment (*lunges* for group A and *squat jump for* group B) was given for 8 weeks with structured intensity for a total of 16 meetings. At the end of the training period, the athletes' abilities were re-evaluated through a *post-test* using the same instrument to measure the level of improvement.

The training program for each group was designed with progressive overload principles across the 8-week period (16 sessions, 2 sessions per week, with at least one rest day between sessions). Each session lasted approximately 45-60 minutes, structured into a 10-minute warm-up, the core training menu described below, and a 10-minute cool-down/stretching. The Lunges group (Group A) performed forward walking lunges: 3-4 sets of 10-12 repetitions per leg, with 60-90 seconds of rest between sets. Training intensity was progressed across the program in three phases: weeks 1-3 used bodyweight lunges only to build technique and unilateral stability; weeks 4-6 introduced light additional load (2 kg hand weights) to increase strength demand; and weeks 7-8 emphasized faster, more dynamic execution (walking lunges performed at a quicker cadence) to begin transferring strength gains toward speed. The Squat Jump group (Group B) performed plyometric squat jumps: 3-4 sets of 8-10 repetitions, with 90-120 seconds of rest between sets to allow adequate recovery for maximal explosive effort, following the standard plyometric technique of a controlled downward squat (eccentric phase) immediately followed by a maximal vertical jump (concentric phase) and a soft, controlled landing. Intensity was likewise progressed in three phases: weeks 1-3 focused on jump technique and landing mechanics at submaximal effort; weeks 4-6 increased jump height and effort to near-maximal intensity; and weeks 7-8 incorporated shorter ground-contact time between repetitions to emphasize rate of force development. Both groups' sessions were supervised directly by the researcher and the club's coach to ensure correct technique and consistent adherence to the prescribed sets, repetitions, and rest intervals, so that the training protocol described here can be replicated in future studies.

Category	Son	Daughter
Very well	>25	> 24
Good	20 – 24	19 – 23
Enough	17 – 19	16 – 18
Not enough	15 – 16	13 – 15
Very little	<14	< 12

Source: (Lubis & Wardoyo, 2016)

Acquisition data *were pretested,* and *then post tes*ted and analyzed statistically. Before the hypothesis test is carried out, the data are tested for feasibility first through prerequisite tests, which include normality tests using the *Shapiro-Wilk method* (considering the number of samples is under 50 subjects) as well as homogeneity testing using *Levene's Test*. After the data variance is confirmed to be normally distributed and homogeneous, the analysis proceeds to the hypothesis testing stage. This test uses a *Paired Sample t-test* to measure the significance of the improvement before and after training in each group, as well as an *Independent Sample t-test* to compare significant differences in effectiveness between training methods: *lunges* and training *squat jump*.

3. RESULTS AND DISCUSSION

The analysis of the prerequisite test proved that all data instruments were normally distributed and had homogeneous variance. Based on this foundation, the main causality analysis was conducted to evaluate the significance of the increase in sickle kick speed in two physical intervention groups: the lunges group and the squat jump group.

In the first test group (exercise *Lunges*), the average kick frequency was recorded at the *pretest.* The average kick rate was recorded at 21.00 kicks per 10 seconds. This figure gradually increased significantly to an average of 22.25 in the posttest. *Paired Sample T-Test* confirmed this with a significance value of 0.019 ($p < 0.05$). This provides strong affirmation that the *lunges method* contributed significantly to the increase in kicking speed of the PSHT Rayon Kerepkidul youth athletes. The average increase achieved in this group was 1.25 kicks.

Table 1. Results *Pretest* and *Posttest* Group *Lunges*

No	Number	*pretest*	*posttest*
1.	Ah	22	22
2.	Hw	22	23
3.	Fb	22	25
4.	Rs	21	23
5.	And	21	23
6.	No.	21	21
7.	Sl	20	20
8.	Ap	19	21

The table above is the result of the *pretest* and *posttest* from the lunges group

Table 2. Results *Pretest Lunges* Son.

No	category	son's grades	frequency	percentage
1	very well	>25	0	0
2	Good	20-24	5	100%
3	Enough	17-19	0	0
4	not enough	15-16	0	0
5	very little	<14	0	0
number of male youth athletes *Monday*			5	100%

From the table above, 5 male athletes, or 100% of the training sample *Lunges* has the category "Good," while for the daughters below

Table 3. Results *Pretest Lunges* Daughter.

No	category	daughter's grades	frequency	percentage
1	very well	>24	0	0
2	Good	19-23	3	100%
3	Enough	16-18	0	0
4	not enough	13-15	0	0
5	very little	<12	0	0
number of female youth athletes' *lunges*			3	100%

From the table above, there are 3 female athletes, or 100% of the training sample. *Lunges* have the category "Good". The following is a histogram image: *pretest* training *lunges*.

Table 4. Results *Posttest Lunges* Son.

No	category	son's grades	frequency	percentage
1	very well	>25	1	20%
2	Good	20-24	4	80%

3	Enough	17-19	0	0
4	not enough	15-16	0	0
5	very little	<14	0	0
number of male youth athletes' lunges			5	100%

From the table above, 1 male athlete, or 20% of the training sample, l*unges* have a "Very Good" category, and 4 male athletes, or 80% of the training sample, l*unges* have "Good," while for daughters it is below.

Table 5. Results *Posttest Lunges* Daughter.

No	category	daughter's grades	frequency	percentage
1	very well	>24	0	0
2	Good	19-23	3	100%
3	Enough	16-18	0	0
4	not enough	13-15	0	0
5	very little	<12	0	0
number of female teenage lunges athletes			3	100%

From the table above, there are 3 female athletes, or 100% of the training sample, *Lunges* has a "Good" category.

In the second test group (exercise Squat Jump), the escalation in performance shown was recorded as slightly more massive. The average kick value at the start (pretest) was at 21.25 kicks, which then increased to 22.88 kicks in the final evaluation phase (posttest). Parametric analysis produced a statistical significance value of 0.009 ($p < 0.05$), which directly confirms the high effectiveness of the training *squat jump*. The average difference in improvement for this group reached 1.63 kicks.

Table 6. Results: *Pretest* and *Posttest* Group *Squat Jump.*

No	Number	*pretest*	*posttest*
1.	Rw	23	28
2.	Fe	22	24
3.	Rp	22	23
4.	Sp	22	23
5.	Rc	22	23
6.	Sun	20	21
7.	Mr	20	21
8.	Sr	19	20

Table 6. Results *Pretest Squat jump Son*

No	Category	son's grades	frequency	percentage
1	very well	>25	0	0
2	Good	20-24	5	100%
3	Enough	17-19	0	0
4	not enough	15-16	0	0
5	very little	<14	0	0
number of male youth athletes *squat jump*			5	100%

From the table above, 5 male athletes, or 100% of the training sample, have the category "Good" for squat jump, while for daughters below.

Table 7. Results *Pretest Squat Jump* Daughter.

No	category	daughter's grades	frequency	percentage
1	very well	>24	0	0
2	Good	19-23	3	100%
3	Enough	16-18	0	0
4	not enough	13-15	0	0
5	very little	<12	0	0
number of female teenage athlete's squat jump			3	100%

From the table above, there are 3 female athletes, or 100% of the training sample, whose *squat jump* has a "Good" category.

Table 8. Results *Posttest Squat Jump Son*

No	category	son's grades	Frequency	percentage
1	very well	>25	1	20%
2	Good	20-24	4	80%
3	Enough	17-19	0	0
4	not enough	15-16	0	0
5	very little	<14	0	0
number of male youth athletes *squat jump*			5	100%

From the table above, 1 male athlete, or 20% of the training samples, has a "Very Good" category, and 4 male athletes, or 80% of the training sample*s, squat jump* has "Good" category, while for daughters it is below.

Table 9. Results *Posttest Squat Jump* Daughter.

No	category	daughter's grades	frequency	percentage
1	very well	>24	0	0
2	Good	19-23	3	100%
3	Enough	16-18	0	0
4	not enough	13-15	0	0
5	very little	<12	0	0
number of female youth athletes *squat jump*			3	100%

From the table above, 3 female athletes, or 100% of the squat jump training sample, have the "Good" category.

Table 10. Summary of Crescent Kick Speed Increase and Significance

Training Method	Rate-rate *Pretest*	Rate-rate *Posttest*	Increase (difference)	Significant (p-value)
Lunges	21,00	22,25	1,25	0.019 (significant)
Squat Jump	21,25	22,88	1,63	0.009 (significant)

The final stage of this statistical testing involves an *Independent Sample T-Test* to assess the significance of the difference in the effects of the two interventions. The test results showed a significance value of 0.486 ($p > 0.05$). Mathematically, this figure indicates that no significant difference in effects was detected between the two interventions. However, the descriptive data consistently showed that the program *squat jump* triggers a more dominant performance gain margin (1.63) than the program *lunges* (1,25).

The frequency and speed of the leg kick in the crescent kick technique are central to the sport of pencak silat. This technique requires reaching the target area within a fraction of a second to achieve optimal points while eliminating the opponent's potential counterattack. Empirical evidence from this study validates the assumption that structured physical programming through *lunges* and *squat jump* able to accelerate neuromuscular capacity *in* martial artists.

The Influence of Training *Lunges*

Training *lunges has been* successfully validated as a powerful medium for increasing the acceleration of the sickle kick speed. Biomechanics of movement *lunges* focuses the gravitational load unilaterally (one foot support). This condition forces the main driving muscle fibers of the lower extremities, such as the *quadriceps, hamstrings, and gluteus maximus, to* contract strongly while trying to maintain the stability of the hip and knee joints.

In the anatomical details of pencak silat techniques, the strength of the supporting leg structure is the absolute foundation. While a silat athlete has a solid foundation of unilateral balance resulting from adaptation, *lunges*, kinetic chain pathway (*kinetic chain*) from the pelvis to the instep of the kicking leg can be channeled without having to dampen postural sway. Consequently, the duration of the leg's kick becomes much more efficient and targeted. This mechanical interpretation aligns closely with research findings (Afianda Ikhsan et al., 2023), which posited a causal link between routine lunges and increased circular kick speed in martial arts practitioners. Therefore, this exercise is vital in fostering dynamic movement stability in martial artists.

The Influence of Training: *Squat Jump*

On the other hand, *squat jumps* successfully recorded the highest improvement score, legitimizing its capacity as a leading instrument in assembling power-*explosive*. The uniqueness of this method is completely controlled by the biological phenomenon *of the stretch-shortening cycle* (muscle stretch-contract cycle), which represents the essence of *plyometrics*.

While the martial arts are in the *eccentric phase* (squatting), the leg muscle compartment absorbs and encapsulates elastic energy. This energy reserve is not wasted, but is instead realized immediately as a kinetic explosion in the flexion phase *concentric* (vertical throw). This series of repetitive movements reshapes the habits of the fast-response muscle fibers (*fast-twitch fibers*) in producing absolute explosive power. The crescent kick is a pure ballistic technique that relies on maximum acceleration speed within a very narrow window of time (*rate of force development*). Therefore, the adaptation of the nervous and muscular systems from *squat jump* transforms the leg's capabilities into a reactive ballistic weapon. This field fact is in line with and strengthens the literature consensus from (Vira, 2023) and (Subekti et al., 2025), which positions the *squat jump* as the main pillar of the transformation of martial arts movement speed.

Comparative Interpretation

Considering the p-value of 0.486, the reliability divergence between the two methods is not numerically significant. However, the descriptive data (1.63 vs. 1.25) reveal important practical insights: *squat jump provides* a more specific resonance to the mechanical needs of the sickle technique.

The root cause goes back to the principle of exercise specificity. *Squat jump directly manipulates the rate of force development to* duplicate the explosive power demands of a direct kick. Conversely, lunges are more established in their role of maintaining pure endurance and proprioceptive muscle balance. In a real arena, it is explosive power that more visibly produces

lightning points. Therefore, as a conclusion and for practical application in training camps, the combination of the two is believed to produce a deadly silat athlete: *lunges* used to carve a solid foundation for support, while *squat jump* deployed to transform the foundation into a high-speed attack projectile.

4. CONCLUSION

This study concluded that exercise interventions, *lunges* and *squat jump, were proven* effective in increasing the speed of sickle kicks in young pencak silat athletes of PSHT Rayon Kerepkidul, Nganjuk Branch. Both the lunges group (Sig. 0.019) and the squat jump group (Sig. 0.009) showed statistically significant increases in crescent kick speed. However, the Independent Sample t-Test comparing the two groups showed no statistically significant difference between them (Sig. 0.486). Therefore, although the squat jump group recorded a numerically larger average increase (1.63 kicks) than the lunges group (1.25 kicks), there is no statistical evidence indicating that squat jump training is more effective than lunges training in improving crescent kick speed; both methods can be considered comparably effective based on the available data.

The main limitation of this study lies in the small sample size, which potentially limits the generalizability of the findings. Therefore, further research is recommended involving a larger sample size with a more diverse population or training location. For pencak silat practitioners and trainers, it is highly recommended to integrate *squat jump* as a priority training menu to accelerate kicking speed, and combine it with *lunges* as an essential supporting exercise to strengthen the stability, balance, and basic strength of the athlete's legs holistically.

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