

The Relationship Between Balance And Leg Muscle Power With The Ability Of T Kick Speed In Pencak Athletes Youth Pledge Unit Bandar Lampung

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Abstrak

The purpose of this study was to determine the relationship between Balance and Leg Muscle Power with the ability of T kick speed in pencak silat athletes of Bandar Lampung youth oath unit. The method used in this study is quantitative method. With the research design consists of independent variables and dependent variables. Balance (X1), leg muscle power (X2), and kick speed ability T (Y), a sample of 17 pencak silat athletes from the Bandar Lampung youth oath unit. In this study, the data collection used survey methods with test and measurement techniques. The results showed that: (1) Balance has a significant relationship with the speed of the T kick, with the value of $t \text{ count} = 12.63 > t_{\text{table}} = 2.144$. (2) Leg Muscle Power has a significant relationship with T kick speed, with $t \text{ value} = 21.291 > t_{\text{table}} = 2.144$. (3) Limb Muscle Balance and Power have a significant relationship with T kick speed, with $F \text{ count value} = 120.273 > F_{\text{table}} = 3.74$. This study concluded that Balance and Power of Leg Muscles have a close relationship with the ability of T kick speed in pencak silat athletes of the Bandar Lampung youth oath unit.

Keywords: *balance, leg muscle power, T kick speed*

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INTRODUCTION

Pencak silat develops in line with the history of Indonesian society, pencak silat has become part of the culture of the Indonesian nation. Therefore, there is a need for a new breakthrough in the pattern of fostering the achievements of the pencak silat sport in order to maintain the marwah of being the original sport of the Indonesian nation which can carve the best achievements at every event. Pencak silat is a martial art system that has been passed down from generation to generation from the ancestors of the Indonesian nation. Pencak silat comes from two words namely pencak and silat. Pencak means the basic movements of self-defense that are bound

by rules and are used in learning, training and performances, while Silat means perfect martial movements, which hold fast to holy spirituality, for safety, welfare and avoiding danger (Pratama Rendra and Trilaksana 2018). In practice, Pencak silat is used to defend oneself by fending off, attacking, and self-defense, either with bare hands or using weapons (Dwi Putra Casmitha, 2019). As with other martial arts, in pencak silat there are basic techniques, namely stances, pairs, step patterns, defenses, attacks, catches, locks, drops, punches, kicks, sweeps and cuts. Of the several techniques used in pencak silat matches, kicks make the most significant contribution in a match.

There are 3 types of kick techniques, namely sickle kick, straight kick, and T kick. Of the three kick attack techniques, the T kick is not used too dominantly during the game. The T kick is a form of kick in the martial arts sport of pencak silat (Pratiwi, Edi Purnomo and Haetami. M, 2013). The T kick is a movement with the body position facing sideways with the trajectory of the T kick straight to the side (in the shape of the letter "T"), the subject of T's challenge is the outer side. In a match, fighters often use T kicks to attack opponents and perform defensive techniques when attacked by opponents (Maulana, 2018). T kicks are generally used when performing side attack techniques that can be aimed at the entire body of the opponent. This kick uses one foot and leg, the trajectory is straight forward and the impact is on the heel, sole and outer side of the foot, straight position, usually used for side attacks, targeting all parts of the body (Dewi, Ramadi, and Agus, 2016). The kick is executed by positioning the body sideways parallel to the trajectory of the kick straight to the side (creating the shape of the letter "T"). The T kick is not used too dominantly in matches although it is very effective when attacking and defending because this kick must be fully supported by physical conditions such as explosive power. or power, balance, and coordination and flexibility. This condition must be owned by every pencak silat athlete, especially when carrying out the T kick movement. The T kick is directed to the side to control the hips by using the soles of the feet (Simbolon, 2020). To perform the T kick technique requires speed, strength and especially a stable balance.

Pencak silat certainly requires leg muscle power, especially in the fight category, in sports power is a person's ability to exert maximum strength with his efforts as quickly as possible (N. K. R. Dewi et al., 2018). Power is the product of strength and speed. Performance Requires good power. Good power ability determines a person to achieve maximum performance, especially leg muscle power, because the leg muscles are the main center of motion for the body as a whole. If

the leg muscle power is weak, it does not allow a person to achieve maximum performance. When the muscles have good power, a person's ability to perform maximum strength will occur in a short time. Power is very influential on the muscles. Power concerns the strength and speed of dynamic and explosive muscle contractions and involves maximal expenditure of muscle strength in the fastest possible time (Andika, 2014). So that power becomes one of the physical components that must be possessed by pencak silat athletes. But that does not mean that other components are not needed in pencak silat, such as balance.

Balance is the ability to maintain proper posture and body position when standing. The ability to maintain balance is influenced by several factors, including: visual, ear (coach). Balance is a person's skill in maintaining body systems in both static and dynamic positions, balance is also very important in carrying out a movement because with good balance, the movements carried out will reach perfection (Husnah, 2019). When kicking, you can be sure that your body is in a state of movement, so you need balance to maintain your body's position. To maintain a balanced body position is very influential in determining the good and bad quality of kicks and produce points. Balance is the ability to maintain the neuromuscular system in an efficient position or attitude while we move (Maulana, 2020). Balance is easy to control and maintain body position, in static balance and dynamic balance.

METHOD

The method in this study is related to the information analogy that describes the existing symptoms. Especially with regard to how big is the relationship between balance and leg muscle power with the ability to kick T in Pencak Silat Athletes in the Bandar Lampung Youth Oath Training Unit. Correlational research is research conducted to determine whether there is a relationship between two or several variables. With the existence of relationships and levels of variables, researchers can find out the level of relationships that exist and will be able to develop research according to the goals of researchers.

The population in this study were 17 youth oath unit pencak silat athletes and the sampling technique used a purposive sampling technique, namely the sample was determined by the researcher so that the sample in this study totaled 17 athletes. For the instruments used for each variable, namely balance using a modified bass test, leg muscle power using a standing broad jump

and kick speed t using a test with a single target. Then before looking for the relationship between balance (x1) and leg muscle strength (x2) on the ability to kick t (y), a prerequisite test was carried out, namely testing the validity and reliability of the research instrument. to test the validity and reliability of this instrument using normality and homogeneity tests.

RESULTS AND DISCUSSION

The data collected in this study consisted of balance, leg muscle power and speed of T kicks in the Satria Muda Indonesia pencak silat athletes in Bandar Lampung. The data obtained from each of these variables were then grouped and analyzed statistically.

Tabel 1. Description of the results of the balance test data, leg muscle power, and kick speed for pencak silat T.

Statistik	Variable		
	Balance	Power Leg Muscles	Kick Speed T
<i>Mean</i>	79,471	187,353	0,445
<i>Minimum</i>	100	228	0,58
<i>Maximum</i>	46	155	0,32

The results of measuring balance with a total of 17 athletes show that the average balance of the pencak silat athletes at SMI Sumpah Pemuda Bandar Lampung at a young age is 79.471, the minimum score is 46, and the maximum score is 100. For leg muscle power with a total of 17 athletes, it shows that the average the average leg muscle power of pencak silat athletes from SMI Sumpah Pemuda Bandar Lampung at a young age is 187.353, minimum score is 155, maximum score is 228 and kick speed T with a total of 17 athletes, shows that the average kick speed T of pencak silat athletes at SMI Sumpah Pemuda Bandar Lampung at the age of adolescents is 0.445, minimum score 0.32, maximum score 0.58. After knowing the description of the data for each variable, then testing the hypothesis with the following results:

Tabel 2. Correlation Test Results

Correlation	r value	r table	Conclusion
Balance with kick speed T	0,956	0,482	Signifikan
Leg muscle power with kick speed T	0,984	0,482	Signifikan
Balance and leg muscle	0,991	0,482	Signifikan

power with kick speed T

From the calculation of the closeness test data for the value of r above, it is obtained that the balance value with kick speed T is 0.956 (very strong), meaning that the better the balance of an athlete, the faster the kick is produced and conversely the kick speed will be slower if the balance of an athlete is lacking. Then the r Table value of 0.482 with $\alpha = 5\%$ with $N = 17$ obtained r^2 of 91.4%. This means that the balance affects 91.4% of kick speed T 8.6% of it is influenced by other factors.

For the test data for the closeness of the relationship with the value of r above, the value of balance and leg muscle power with kick speed T is 0.991 (very strong), with an R Table of 0.482. That is, good balance and greater power will result in greater kicking speed, on the other hand, a slower kicking speed is produced by athletes who have poor balance and leg muscle power. Then an r^2 of 98.2% is obtained, meaning that 98.2% of kick speed T is obtained by balance and 1.8% of leg muscle power is influenced by other factors.

Discussion

The first result shows that balance has a significant relationship with the ability to kick speed T. Balance is the ability to maintain the position and attitude of the body when standing or when making movements. In this study, according to the closeness test and the t test on the results data above, it was stated that balance had a close relationship of 0.956 (very strong) with kick speed T. This was proven by Agus Prianto's research (2022). Based on the results of data analysis and discussion, it was concluded that there is a significant relationship between balance and T kick ability of IKSPI Pencak Silat athletes in the Siak branch. This means that the balance greatly affects the ability of T kick speed in pencak silat. This is also in line with a quote from (Debrito et al., 2018) that a good balance possessed by an athlete can support the pattern of executing T-kick movements, where good balance abilities will be able to support good kick movement techniques as well.

The second result shows that there is a significant relationship between leg muscle power and the ability to kick speed T. Power greatly affects the muscles. Power concerns the strength and speed of dynamic and explosive muscle contractions and involves maximal expenditure of muscle

strength in the fastest possible time. Muscular power, often called explosive strength, is characterized by sudden, rapid movements or changes. Power is one of the physical components that must be possessed by pencak silat athletes. Power is one of the components of physical condition. Power is the ability to perform activities suddenly and quickly by exerting all strength in a short time. So leg muscle power is the ability of the leg muscles to exert maximum strength with very short contractions to receive the load it gets. Power means the product of strength and speed. Doing the T kick requires good leg muscle power in order to get maximum results (Finandra et al., 2020). The components needed in pencak silat are Strength, Power, Flexibility, Agility, and Coordination. But that does not mean that other components are not needed in pencak silat, such as balance. Based on the above opinion, it can be concluded that athletes who have good leg muscle power will also support the strength and speed of good kicks.

The third result shows that balance and leg muscle power have a significant relationship with the speed of the T kick. The T kick is a kick to the side controlling the hips by using the soles of the feet. To perform the T-kick technique requires speed, strength and especially a stable balance. The T kick is a kick that uses one leg and leg, the trajectory is straight ahead and the impact is on the heel, sole and outside of the sole of the foot, straight position, usually used for side attacks, targeting all parts of the body. Based on the above opinion, it can be concluded that balance is needed to perform this kick, judging from the initial attitude of the kick which requires balance to launch a T kick. owned, the better the kick that is launched.

CONCLUSION

Based on the results of the research and data analysis, it can be concluded that there is a significant relationship between balance and the ability to kick speed T in pencak silat athletes in the Bandar Lampung Youth Pledge unit and there is a significant relationship between leg muscle power and the ability to kick speed in martial arts athletes. the Bandar Lampung Youth Pledge unit, and simultaneously there is a significant relationship between balance and leg muscle power with the ability of T kick speed in pencak silat athletes in the Bandar Lampung Youth Pledge unit.

Based on the conclusions, the researchers provide advice to pencak silat trainers in an effort to increase maximum kick results, so that balance and leg muscle power are taken into account as potential athletes in preparing training programs. Then for athletes, to get maximum performance

in pencak silat, apart from training technique, it is also very necessary to train physically which is very influential in the sport of pencak silat, such as balance and leg muscle power.

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