

Contributions of Leg Power Muscle on Sickle Kick Ability of Pencak Silat Athletes

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Abstract—The problem that appears in the research is that: at the time of the kick, there are still legs that focus is not rotated. At the moment of the kick trajectory, not half-circle, the lack of balance when doing A crescent kick. The study aims to figure out the contributing power of the limbs to the crescent kick ability. This research uses correlational research methods. The population in this study is all the Pencak silat athletes in the Satria Muda Indonesia College Pekanbaru, sample as many as 12 men athletes or total samples. Data retrieval is done using the formula product-moment by conducting a test vertical jump test and a crescent kick test capability to the athlete of the Satria young Indonesia College Pekanbaru. The results of this study revealed that Vertical Jump Tes has a significant contribution with the ability to kick the athlete of the Satria young Indonesia College Pekanbaru, acquired T count 0,876 > T table 0.576 with a contribution of 76.7%.

Keywords—leg muscle power, kick, Pencak Silat

I. INTRODUCTION

Sport at this time is an activity that cannot be separated from human life individually and group. Di addition, it also sports is a human physical activity in the formation of the whole man, physically and mentally healthy and has a good mental attitude.

Sport is not only done by the athletes or sports professionals but also dilakukan by students at school called jasmani. “Physical education sport is an integral part of the overall education system that focuses on the development aspects of physical fitness, motor skills, thinking skills, stability emotional, social skills, reasoning and moral action through physical activity” [1].

This is in accordance with Act No. 3 of 2005, concerning the national sports system Article 27 paragraph 4, which reads: “Coaching and sport development achievements implemented by empowering sports clubs, to develop sports coaching centers, national and regional, and meyengenggarakan competitions tiered and sustainable”[2].

From the quote above is clear that coaching achievements are fully supportive of sports activities by establishing policies of support for the achievement of a healthy society, fit, and accomplished and capable of forming a human quality that has moral and noble character, and appoint dignity banga Indonesia, and of the many No one of the sports that sports instill human

qualities that have moral and noble character is a martial sport.

Pencak Silat is a traditional sport that is growing and developing. In addition, pencak silat is a martial art that has been cultivated and developed by the ancestors of Indonesia and spread all over the country and even has developed kembangan countries.

Pencak silat is also growing outside Indonesia, namely in the Netherlands, Germany, Belgium, Denmark, France, Australia and the United States. With the development of martial arts is widespread, then is our obligation as a nation that has a source of martial arts to nurture and develop it, especially on the younger generation of Indonesia in order to achieve the skills of martial arts as a whole.

At the present time the martial arts are increasingly popular with martial arts dipertandingakannya regional and internasional. Pencak this martial art has been getting a medal for Indonesia in various international events. Even the other ASEAN countries such as Vietnam, this sport become a mainstay to reproduce the medal count in the event the SEA Games and the World Championship martial arts, this country is the toughest rival for Indonesia.

“In martial arts there are some basic techniques that sidestep, defense, attack, dropping, and so forth, one of the basic techniques of attack in the martial arts and are often used by an athlete is a crescent kick” [3].

Crescent kick is a kick executed by using the foot and leg, while the other leg as a footstool, this kick track as the name falcate / sickles, namely from the side to the front. “Crescent kick is done by taking a stance position put the horses”[4]. Eyes focus towards the intended target, then lift the knee to be kicked, after which the body is rotated so that the knees in line with your body and rested his toes facing out. Then the kicking leg straightened to form a crescent and pulled back with bent knees. Hand in a relaxed state to maintain balance. Furthermore, the legs back to the original stance. In addition to a good basic technique,

In the development of physical conditions, specifically based on the needs of the technique and tactics in attacking or being attacked. In the process, “the basic techniques of kick crescent is often done by a fighter, and to kick the crescent was good there were some aspects of the factors that affect one of which is the power of leg muscle, muscle power is a combination of

maximum power and maximum speed, in which the muscles must issued a high power and speed in order to bring the body at the time of the motion," [5]. So, power muscle is a very important element in making a crescent kick, power is a major factor in carrying out all kinds of motor skills in various sports.

For that we need the exercise programmed to get the good kick in martial arts college athletes Satria Muda Indonesia Pekanbaru. Untuk achieve the ultimate goal in getting a good kick sickle there are ways that programmed in order to achieve the desired presrtasi. But the technique should be supported also by the physical condition that allows for maximum achievement.

Based on field observations of the college martial arts athletes Satria Muda Indonesia Pekanbaru through observations made and information obtained from the coach, then the martial arts athlete information obtained largely not maximized in implementing kicks especially sickle kick. The issues at the center of this study is the lack of good basic technique, resulting in maximal kick sickle, lack of speed and leg muscle strength possessed athletes so that maximal to kick crescent, kick sickle can still be avoided opponent, it was due to his lack of speed at the time of the crescent kick. Berpengaruh the power and speed and maximum power capability crescent kick,

So that maximum performance is expected by college martial arts coaches Satria Muda Indonesia Pekanbaru difficult to achieve. Based on these descriptions the author is interested in conducting research on "The Contribution of Leg Muscles Power Against Sickle kick Ability Athletes Universities Pencak Silat Indonesia Satria Muda Pekanbaru"

II. RESEARCH METHODOLOGY

This research uses a correlational study that aims to determine how big contribution to the ability of leg muscle power athletes pencaka crescent kick parried Satria Muda Indonesia Pekanbaru Education. The variable in this study is the leg muscle power (X) and variable capability crescent kick (Y). As for the population in this study are all martial arts athletes Satria Muda Indonesia Pekanbaru Education amounting to 12 sons.

III. RESULTS

A. Data Description

1. Contributions Power Muscle Limbs

From the results of limb muscle power tests that have been done by 12 people martial arts athletes College Satria Muda Indonesia Pekanbaru, the data can be obtained highest and lowest 58 32, thus the average (mean) of 47.3, a middle value (median) 49 and A recurring value (mode) at the interval 49.5 to 4, and a standard deviation of 51.4.

Table 1.Distribusi Limb Muscle Power Frequency Test Athletes Universities Pencak Silat Indonesia Satria Muda Pekanbaru.

Interval	Cumulative frequency	Relative Frequency (%)
57-61	2	16.7
52-56	2	16.7
47-51	4	33.3
42-46	1	8.3
37-41	2	16.7
32-36	1	8.3
Amount	12	100

2. Crescent Kick Test Results Athletes Pencak Silat Indonesia Satria Muda Pekanbaru Education.

From the results of tests on the ability of the crescent kick carried 12 martial arts athletes Satria Muda Indonesia Pekanbaru Education. Data showed the highest and lowest 24 19, thus yielding an average (mean) of 21.4 middle value (median) 21.25 recurring value (mode) of 21.2 and a standard deviation of 22.4.

Table 2.Distribusi frequency test data capabilities crescent kick martial arts athletes Satria Muda Indonesia Pekanbaru Education.

Single Data	Cumulative frequency	Relative Frequency (%)
19	1	8.3
20	2	16.7
21	4	33.3
22	3	25
23	0	0
24	2	16.7
Amount	12	100

B. Research Hypothesis Testing

The data collected from this study are as follows, the X data taken from measurements of muscle power leg and the data Y is taken from the results of tests the ability of kick sickle athlete College of Satria Muda Indonesia Pekanbaru, to determine the contribution of muscle power in the ability kicks sickle athlete martial arts College Satria Muda Indonesia Pekanbaru then use the correlation formula "r" on the product moment (r_{xy}) at significance level of 5% and it shows the count $r = 0.876$ at significance level $r_{table} = 0.576$ so $0.876 > 0.576$ or r count larger of r_{table} . This means that the variable X with variable Y limb muscle power correlation with a crescent kick ability of martial arts athletes Satria Muda Indonesia Universities Peknbaru is significant.

IV. DISCUSSION

The process of taking data in this study is based on the implementation of the provisions that have been analyzed in advance the results according to a predetermined plan. With the procedure and the data retrieval process carried out carefully and meticulously, the data obtained will be more objective.

Referring to the results of calculations on the analysis of the research, seen some contribution limb muscle power with the ability crescent kick martial arts college athletes Satria Muda Indonesia

Pekanbaru. Berpedoman of testing the hypothesis in this study, it can be seen that there is a contribution to the ability of leg muscle power athletes arts crescent kick Universities silat Indonesia Satria Muda Pekanbaru.

This was proved by using statistical analysis techniques which result $t = 0.876$ above a significant level of t table $= 0.576$. Then interpreted $t > t$ table and showed no limb muscle power contribution to the ability of the crescent kick significantly by 76.7%.

In everyday life limb muscle power is very important, especially in the field of limb muscle olahraga. Power is the ability to use muscle to accept loads at work, and in doing sabit. Power kick limb muscles is one thing that must be owned by an athlete in carrying out the motion so as to obtain maximum results that led to obtain the desired achievement.

Crescent kick refers to the name implies, is a technique that tracks the motion kick forming a half circle line, or kick it the way it works similar to a scythe / sickle, which swung from the outer side toward the side. Conflicts with the goal of going from the outside sampig direction laterally in the back kaki. Efisiensi kenaan the maximum motion obtained by whipping the legs are in kordinasikan with hip rotation direction of the kick, so this is where the limb was instrumental muscle power needed by an athlete and martial arts. In addition to limb muscle power there are also other factors that need attention trainers for coaching athletes, among others:

- 1) Basic technical training is exercise that emphasizes the overall perfection basic technique which aims to clarify and develop the habit of motor movement.
- 2) Mental exercise more leads towards mastery of technique that has been owned, tactics, and mentality when facing an opponent.
- 3) Exercise a useful strategy in controlling the pitch during a match.

Every sport has the techniques and strategies of each in competing for athletes to gain victory. Mastery of techniques and strategies that good play will be able to save and optimize the use of physical condition, this means mastering the techniques and strategies that will either be able to save the use of force. This means that the better an athlete mastering techniques and strategies will also be better for the movement mainly crescent kick to the maximum.

V. CONCLUSION

Based on the research that has been done at the University of martial arts athletes Indonesia Satria Muda Pekanbaru in Pekanbaru can be concluded there is a contribution to the ability of leg muscle power crescent kick martial arts athletes Satria Muda Indonesia Pekanbaru Education. Amounted to 76.7%.

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