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### Sabit Kick Speed Profile and General Speed of Pencak Silat Club Achievement

Muhammad Riski Adi Wijaya<sup>1</sup>, Deny Pradana Saputro<sup>2</sup>, Alfira Nuril Aissya<sup>3</sup>

<sup>1,3</sup> Faculty of Health Sciences, Universitas Muhammadiyah Pekajangan Pekalongan, Jl. Raya Ambokembang No.8, Kambang Tengah, Ambokembang, Kec. Kedungwuni, Pekalongan, Central Java 51172, Indonesia

<sup>2</sup> Faculty of Teacher Training and Education, Universitas Riau, Bina Widya KM Campus. 12.5, Simpang Baru, Kec. Handsome, Pekanbaru City, Riau 28293, Indonesia

email: [riskiadi@umpp.ac.id](mailto:riskiadi@umpp.ac.id), [deny.pradana@lecturer.unri.ac.id](mailto:deny.pradana@lecturer.unri.ac.id), [alfiranurilaissya@gmail.com](mailto:alfiranurilaissya@gmail.com)

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#### Abstract

This research aims to describe the general speed profile and the specific speed of the athletes of the achievement Pencak silat club (PSP). The method used in this study is a non-experimental quantitative method with a quantitative descriptive approach. The sample of this study amounted to 20 athletes of Pencak silat achievement Pencak silat club (PSP). The data collection technique in this study uses a Pencak silat parameter test (Lubis, J & Wardoyo, 2016), a general speed test using a running speed test as far as 20 meters, while a particular speed test using a sabit kick speed test for 10 seconds. The data processing technique uses a percentage for each classification with a formula (Anas Sudijono, n.d.). This study found results with a rate of 5% of achievement Pencak silat club athletes have the excellent classification, and 95% have a little variety in available speed through a 20-meter running speed test. In comparison, a remarkable speed 10% have the perfect classification, and 90% have good classification through tests Sabit kick speed for 10 seconds. The researcher concludes that the physical component of velocity is a crucial component to be improved in supporting achievement, both speed in general and speed specifically according to the needs of the sport of Pencak silat.

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✉ Alamat korespondensi: Jl. Raya Ambokembang No.8, Kambang Tengah

E-mail : [riskiadi@umpp.ac.id](mailto:riskiadi@umpp.ac.id)

## INTRODUCTION

The popularity of martial arts has helped contribute to a growing interest in martial arts research over the years, which can be illustrated in several ways. Firstly, there are

indications that more papers on martial arts are presented at scientific sports congresses (Vertonghen, J & Theboom, 2010). "Pencak Silat is one of the cultures of the Indonesian nation, where it is strongly believed by its

warriors and martial arts experts that the Malay community at that time created and used this martial art since pre-historic times" (Lubis, J & Wardoyo, 2016) martial arts system inherited by ancestors as the culture of the Indonesian nation so that it needs to be preserved, fostered, and developed" (Kriswanto, 2015). In Indonesia, Pencak silat extends through Pencak silat colleges and achievement development clubs spread across various regions. The Indonesian Pencak Silat Association is the official parent organization of pencak silat in Indonesia (Yulio Pratama & Trilaksana, 2018). As the parent organization of Pencak silat, IPSI is also responsible for fostering the sport of Pencak silat achievements.

The development of achievement sports is very complex, so it takes a long time to produce an achievement at the regional, national, and international levels (Lismadiana et al., 2008). The development of Pencak silat sports achievements from the bottom up through Pencak silat colleges spread across various regions and through Pencak silat clubs. The Achievement Pencak Silat Club (PSP) is a forum that fosters Pencak silat achievements which has a secretariat and training ground in Pekalongan City by implementing a sports science training program and is open to the public or all martial arts colleges. PSP Club was founded in December 2020 which currently has 20 athletes and four coaches. The PSP club has the goal of bringing its members to excel in every championship they participate in. The development of these

achievements is through physical, technical, mental, and strategic aspects. These four aspects are essential in supporting competitive performance in martial arts, especially Pencak silat.

The excellent physical aspect is a vital asset in a Pencak silat competition, where athletes with an ideal physical condition or physical fitness will more easily win matches and support other elements. Physical condition is one of the most critical aspects to achieving optimal sports performance. (Deny Pradana Saputro, Muhammad Riski Adi Wijaya, 2020). Physical condition is a requirement to improve athlete achievement, and it can even be said as a basic need that cannot be postponed or negotiable (Yulingga Nanda Hanief, Puspodari, Septyning Lusianti, 2016). One of the components of physical fitness or physical condition needed in Pencak silat martial arts is speed. Speed in sports is a person's ability to move places, change direction, or perform branching sports technique movements at high speed effectively and efficiently. Speed is locomotor, and the action is cyclic (a type of motion repeatedly served such as running and so on) or the speed of movement of body parts such as hitting (Pasaribu, 2015).

Pencak silat athletes must have good speed in competing, both speed in general and speed in particular. The available rate in the research related to Pencak silat is the athlete's ability to move, change directions, avoid attacking or defending at high speed. In contrast, the rate expressly referred to in this study is the athlete's ability to perform

punches, kicks, and drops with high speed. High speed. The aspect of speed in Pencak silat is essential to support the achievement of athletes. Pencak silat athletes who have a reasonable rate will find it very easy to find points when competing.

The tight competition in the Pencak silat competition requires speed of movement. General speed, or the ability of the body to move from place to place and change

directions quickly, is a must for Pencak silat athletes in competing. Movement speed, in general, can be seen through running speed. Running speed is a person's ability to run to move places quickly with a certain distance. The following is a 20-meter running speed norm for Pencak silat athletes in junior and senior age groups according to (Lubis, J & Wardoyo, 2016):

Table 1. The norm of the 20-meter running speed test for juniors in the sport of Pencak silat (Lubis & Wardoyo, 2016)

Male 16-18 th	Male 13-15 th	Criteria	Female 13-15 th	Female 16-18 th
≤3.0	<3.1 detik	Very good	<3.5 detik	≤3.4
3.01 - 3.14	3.11 – 3.20	Well	3.51 – 3.95	3.41 - 3.85
3.15 - 3.30	3.25 – 3.40	Enough	3.13 – 3.96	3.86 - 4.03
≥3.31	>3.41	Not enough	>4.14	≥4.04

Table 2. Norms of 20 meter running speed for seniors in the sport of Pencak silat (Lubis & Wardoyo, 2016)

Male 19 and above	Criteria	Female 19 and above
<2.78 detik	Very good	<3.03 detik
2.32 – 2.76	Well	3.04 – 3.35
2.76 – 3.16	Enough	3.36 – 3.64
>3.17	Not enough	>3.65

The above norm is the 20-meter running speed norm for the junior and senior age groups of Pencak silat athletes that can be used as a reference for Pencak silat athletes to measure general speed conditions by using a 20-meter running speed test. Speed ability, in general, can be measured by referring to the

above norms so that both coaches and Pencak silat athletes can know the physical condition at an available speed which can be used as a benchmark in coaching achievement without leaving other abilities, namely technique, strategy, and mentality.

Physical, mental, tactical, strategic, and technical aspects (M. R. A. Wijaya & Yusuf, 2020). According to (Bompa T & Buzzichelli, 2015), to improve sports performance, several elements need to be considered that are systematically trained in physical education, namely physical, technical, tactical, and psychological aspects. Mental, technical, physical, and strategic abilities are achieved through a structured and controlled training program.

Tests and measurements in the preparation of training programs must be done to determine the initial conditions or conditions of athlete development as a parameter test to achieve achievement goals.

Speed, mainly through various techniques in the sport of Pencak silat both punches, kicks, and drops, is a critical necessity to support athletes' achievements in competing. The sickle kick is a kick that is very easy to do in finding points in a Pencak silat match. Pilat, who has a fast sickle kick speed, will find it easier to find topics and will not be easily caught by the opponent if the opponent is going to do an antigen technique. The following is an assessment of the speed of the Pencak silat sickle kick with the validity and reliability coefficient values taken through a sample of national training athletes from 1999 to 2005, with a reliability value of 0.87 and content validity with face validity (Lubis, J & Wardoyo, 2016):

Table 3. Category of standard crescent kick speed for national pencak silat athletes (Lubis & Wardoyo, 2016)

Category	Female	Male
Very well	>20	>25
Well	19-23	20-20
Enough	16-18	17-19
Not enough	13-15	15-16
Less once	<12	<14

Athletes must own the importance of speed ability in Pencak silat to support achievement to the top. Fast movements and quick reactions are the main qualities of achievement sports (Sidik, 2019). General speed in Pencak silat is needed to move from place to place or change direction when competing, both attacking and defending when competing. The specific rate in Pencak silat is

equally essential to support athlete achievement, wherein in a Pencak silat match, it is necessary to hit, kick and slam speed in competing to get as many points as possible. During the development of achievement at the PSP club, the general speed of the athlete and the specific speed of the PSP athlete were not known.

Therefore, the researcher wishes to identify the general speed profile through a running speed test of 20 meters and specific speed through a sickle kick speed test with a sickle kick speed test for 10 seconds. The results of this study are expected to be information for PSP trainers in particular and Pencak silat people in general. To strengthen the problem and confirm this research as well as become a supporting theory in formulating the concept of thinking in the study entitled the available speed profile and the speed of the sickle kick of the achievement Pencak silat club athlete, the researcher found several studies that were relevant to the problem of the object of this research.

The first relevant research is entitled Speed Profile of the Surabaya City Center Athletes (A. Wijaya & Wulandari, 2020); the research focuses on the speed profile. The results showed that of the 11 students, as many as two students (18.2%) were in the Less category, and six (54.5 %) were in the Medium category. The Good and Very Good types are one student, and only one student (9.1%) is in the inferior class. Many factors are thought to influence the speed test results, including that some forms of the test are still not familiar due to injury and fatigue for athletes at the City Center. This study is similar to researching speed profiles and differences in measuring instruments in their research using a 60 m running speed test.

The following relevant research is a study entitled Speed and Power Performance Analysis of Elite Level Pencak Silat Athletes

(Subekti et al., 2021). This research focuses on analyzing the speed and power performance of elite-level Pencak silat athletes. This study indicates that male athletes have an average running rate of 3.11 seconds, while female athletes have an average of 3.25 seconds. The equation in this study is researching the speed of silat athletes with the same measuring instrument, namely the running speed of 20 m. At the same time, the difference in this study is the focus on the comparison of speed and power.

The purpose of the study entitled the profile of the speed of the sickle kick and the general rate of the achievement Pencak silat club athlete is to determine the shape of the general physical condition of moving speed by using a running speed test as far as 20 meters and knowing the state of the rate of the sickle kick technique with a kick speed test for 10 seconds. From the results of this study, it was found that the profile of the general speed and speed of the sickle kick as information to PSP coaches in particular and Pencak silat people in general to determine the condition of the available speed parameters and the speed of the sickle kick of Pencak silat athletes.

## **METHODS**

This research is non-experimental quantitative research with a quantitative descriptive approach (Ramadan & Juniarti., 2020). The subjects of this study were 20 PSP club Pencak silat athletes. Data collection techniques were taken using a 20-meter

running speed test and a sickle kick speed for 10 seconds (Lubis, J & Wardoyo, 2016). The 20 meter running test is done using each athlete running as far as 20 meters as quickly as possible, and the test can be carried out twice, taking the fastest time. At the same time, the sickle kick speed test is carried out by performing a sickle kick using the right foot aiming at the pecing/sansak target as quickly as possible for 10 seconds and with the left foot. The test results are in the number of numbers obtained, which will be categorized with the scoring norms for the sickle kick speed test.

The data analysis technique in this study uses a percentage for each classification with the formula according to (Anas Sudijono, n.d.) as follows:

$$P = F/N \times 100\%$$

(Source: Anas Sudijono, 2008: 43)

The explanation above is P is the percentage, F is the frequency that is being searched for the rate, and N is the number of frequencies or the number of individuals.

Table 4. Data on the results of the 20-meter running speed test for PSP club Pencak silat athletes

NO	INITIALS	GENDER	AGE	TIME	Criteria
<b>20-meter running test data for junior athletes</b>					
1	NN	Female	13	4.31	Not enough
2	DMP	Female	14	4.19	Not enough
3	AS	Female	15	4.29	Not enough
4	EF	Female	15	4.31	Not enough
5	MFH	Female	15	4.34	Not enough

## FINDINGS AND DISCUSSION

The results and this discussion will describe the results of the study in the form of profile data for the speed of the sickle kick using test the speed of the sickle kick for 10 seconds and the general speed using a 20-meter running speed test for athletes of the achievement Pencak silat club (PSP). Furthermore, the results of this study are expected to be additional literacy for sportspeople and Pencak silat people in particular.

### Findings

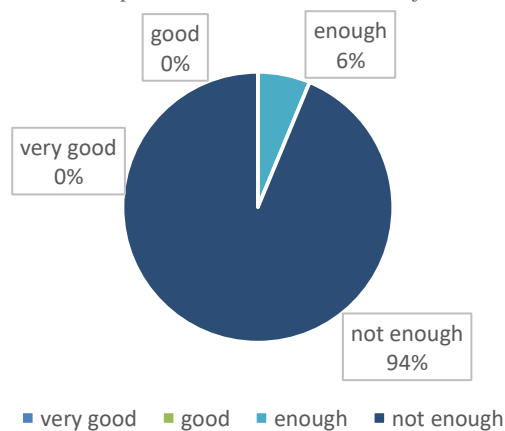
The results of this study obtained speed data, in general, using a 20-meter running test and speed data specifically from a 10-second sickle kick speed test conducted by 20 achievement Pencak silat club athletes referring to the assessment norms for the Pencak silat parameter test according to (Lubis, J. & Wardoyo, 2016):

<b>6</b>	DAA	Female	15	4.25	Not enough
<b>7</b>	ZR	Female	17	3.97	Enough
<b>8</b>	AF	Male	13	4.16	Not enough
<b>9</b>	MNF	Male	14	4.03	Not enough
<b>10</b>	SF	Male	15	3.44	Not enough
<b>11</b>	MAS	Male	15	3.62	Not enough
<b>12</b>	DK	Male	16	3.50	Not enough
<b>13</b>	RS	Male	17	3.59	Not enough
<b>14</b>	AAS	Male	17	3.31	Not enough
<b>15</b>	MBSW	Male	17	3.62	Not enough
<b>16</b>	SJ	Male	18	3.53	Not enough
<b>Senior athlete 20-meter run test data .</b>					
<b>17</b>	SSW	Female	20	4.10	Not enough
<b>18</b>	LNK	Female	21	4.03	Not enough
<b>19</b>	MRM	Male	20	3.38	Not enough
<b>20</b>	MFAG	Male	20	4.09	Not enough

So the results of data analysis with (Anas Sudijono, n.d.) found the percentage percentages using the formula according to recapitulation as follows:

Figure 1. Percentage Diagram of 20 meter running speed test results for PSP Junior club athletes

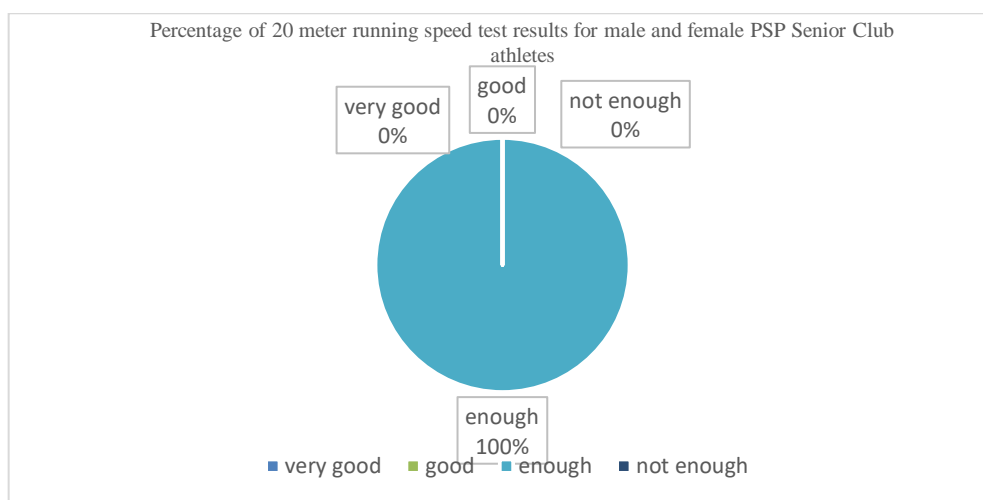
Presentase hasil tes kecepatan lari 20 meter atlet klub PSP junior Putra dan Putri



The results of the available speed using the 20-meter running test found 14.2% had an available rate with the excellent classification of junior female athletes, namely one female junior athlete out of seven female athletes had sufficient general speed, 85.7% of junior female athletes had an available rate with a classification less than as many as six athletes out of seven female athletes have less general

speed and junior male athletes have 100% available speed with minor type, namely nine male athletes have less overall rate. From the comprehensive data for both men and women, it was found that 94% of the 16 PSP club junior athletes had available speed in the less category, and 6% had a general rate in the middle class.

Figure 2. Percentage Diagram of 20 meter Running Speed Test Results for Senior PSP Club athletes



The tables and diagrams above describe the general speed test results with a 20-meter run for senior athletes, both male and female; it was found that 100% of the data had available speed in the less category, namely two male athletes and two senior athletes having less available rate.

Meanwhile, the results of the speed test, specifically from the 10-second sickle kick speed test carried out by 20 achievement Pencak silat club athletes, refer to the assessment norms for the Pencak silat parameter test according to (Lubis & Wardoyo, 2016) as follows:

Table 5. Data on the results of the 10-second sickle kick speed test for PSP Club pencak silat athletes

NO	NAME	GENDER	KICK SPEED TEST			
			RIGHT	CRITERIA	LEFT	CRITERIA
1	NN	Female	22	Good	22	Good
2	DMP	Female	22	Good	24	Very Good



3	AS	Female	22	Good	21	Good
4	EF	Female	22	Good	20	Good
5	MFH	Female	23	Good	21	Good
6	DAA	Female	23	Good	21	Good
7	ZR	Female	24	Very Good	23	Good
8	AF	Male	24	Good	23	Good
9	MNF	Male	23	Good	21	Good
10	SF	Male	24	Good	23	Good
11	MAS	Male	24	Good	24	Good
12	DK	Male	26	Very Good	23	Good
13	RS	Male	24	Good	23	Good
14	AAS	Male	24	Good	25	Good
15	MBSW	Male	25	Very Good	27	Very Good
16	SJ	Male	23	Good	23	Good
17	SSW	Female	24	Very Good	22	Good
18	LNK	Female	21	Good	21	Good
19	MRM	Male	20	Good	27	Very Good
20	MFAG	Male	23	Good	23	Good

In the table describing the results of the proper crescent kick speed test for 10 seconds, it was found that 20% had right sickle kick speed with excellent category, namely two male athletes and two female athletes, and

80% had right sickle kick speed with good class, namely nine male athletes and seven female athletes. Female athlete. No athlete has enough, less and significantly less category in right sickle kick speed.

Table 6 Data recapitulation of the results of the sickle kick speed test for 10 seconds for PSP Club Pencak silat athletes

CLASSIFICATION	MALE				FEMALE			
	RIGHT		LEFT		RIGHT		LEFT	
	Quant ity	Percent age (%)	Quant ity	Percen tage (%)	Quant ity	Percen tage (%)	Quant ity	Perce ntage (%)
Very Good	2	18,1	2	18,1	2	22,2	1	11,1

<b>Good</b>	9	81,8	9	81,8	7	77,7	8	88,8
<b>Enough</b>	0	0	0	0	0	0	0	0
<b>Not enough</b>	0	0	0	0	0	0	0	0
<b>Not much</b>	0	0	0	0	0	0	0	0
<b>Total</b>	11	100	11	100	9	100	9	100

In the table describing the results of the left crescent kick speed test for 10 seconds, it was found that 15% had a left crescent kick speed with an excellent category, namely two male athletes and one female athlete, and 85% had a left crescent kick speed in a suitable class, namely nine male athletes and eight female athletes. No athlete has enough, less and significantly less category in left sickle kick speed. Furthermore, from the data results above, it can be helpful in evaluation needs by Pencak silat trainers in particular. As stated by (Endang Sepdanius, Muhammad Sazeli Rifki, 2019), "The data obtained from the measurement results are beneficial for the needs of evaluation and decision making in the training process."

### Discussion

Referring to the results of the study using 20 samples of achievement Pencak silat club athletes, it was found that the general speed profile with a 20-meter running speed test and impressive speed with a sickle kick speed test for 10 seconds obtained data based on the following percentages:

The results of the available speed using the 20-meter running test found 14.2% had an available rate with a good classification of

junior female athletes, namely one female junior athlete out of seven female athletes had sufficient general speed, 85.7% of junior female athletes had an available rate with a classification less than as many as six athletes out of seven female athletes have less general speed and junior male athletes have 100% available speed with minor type, namely nine male athletes have less available rate. From the overall data for both men and women, it was found that 94% of the 16 junior athletes of the PSP club had available speed in the less category, and 6% had a general rate in the excellent class. Son and two senior athletes had less prevalent speed.

The results of a particular speed test using a sickle kick speed test for 10 seconds found 22.2% of female athletes had right sickle kick speed with perfect classification, 77.7% with good variety, namely two female athletes had right sickle kick speed with excellent type. , seven athletes have the right sickle kick speed with good classification. In the left sickle kick speed test, it was found that 11.1% had a perfect type, 88.8% had a suitable style, namely, one female athlete had a left sickle kick speed in an outstanding category, eight female athletes had a left sickle kick speed with a good classification. While the

male athletes found 18.1% had right sickle kick speed and left sickle rate with excellent type, 81.8% male athletes had right sickle kick speed and left sickle speed with good classification, namely two male athletes had right sickle kick speed and speed left sickle with excellent type, nine male athletes have right sickle kick speed and left sickle rate with good classification.

The description describes the general speed condition or profile and the specific speed of the PSP club athletes with the results that 95% of the achievement Pencak silat club athletes have available speed with minor classification, 5% have general speed with suitable type and on the sickle kick speed with the results found 90% have sickle kick speed with the correct type and 10% have excellent sickle kick speed. The results of this study describe general speed conditions and impressive speeds with different and disproportionate scythe kick speeds, where general speed conditions with a 20-meter running speed test 95% of athletes with minor classification during exceptional speed with a crescent kick speed 90% with good classification and 10% with excellent type.

This needs special attention by the PSP coach in compiling an exercise program to increase the speed of athletes in general, not only focusing on specific speed on kick techniques, where speed of moving from place to place and change direction is needed by Pencak silat athletes when competing both at the same time and at the same time. attack or defend so that the expected achievement can

be achieved easily. "Performance of speed and power is a specific physical condition in the martial arts sport of Pencak silat in terms of the characteristics of the motion of the match technique" (Subekti et al., 2021). "Speed is the physical ability needed by athletes to be able to finish the race in a fast time" (Cania & Alnedral, 2019). "One of the important elements in achievement sports is speed" (Ihsan, 2018). Some of the opinions above state the importance of the physical component of speed in an achievement sports competition.

Physical condition development must be carried out by athletes who have achievement goals (Syarif Hidayat, 2014). The physical component of speed is a must for athletes in the sport of Pencak silat. Pencak silat athletes who have the rate to move or change the direction and speed of kicking in attacking or defending will quickly get points in competing to achieve achievements. Kick is one of the movement techniques in Pencak silat, which has a high value and is often used in matches (Amrullah, 2015). The right kick, fast and directed, will be more challenging to catch and anticipate by the opponent. Therefore the training process is essential to determine the training program, using media and adding weight (Maulana & Wijaya, 2018). As well as in using moving speed and performing punching or kicking techniques, high concentration is needed as stated (Ihsan, 2018). "About kick speed, engagement plays a vital role in determining fatigue where the beginning of a kicking process is the athlete's

ability to focus attention on the object that will be the target of the kick.

Speed is an essential physical component aspect that must be improved to achieve peak performance. "Speed as an essential component of physical condition .." (Rahmat et al., 2016). "Speed is the ability to perform a movement or cover a distance in a short time" (Corbin, 2007). The physical component of speed must be considered and explicitly developed without leaving other details. Pavol Horička explained that speed is an independent or independent physical ability and, therefore, the development of speed requires its specifications (Pavol Horička, 2014). The explanation from Pavol Horicka confirms the results of this study, which is that the general speed of PSP athletes with a 20-meter running test 95% has a poor classification. This is not comparable to the specific speed through a sickle kick speed test for 10 seconds has a 90% good and 10% good calcification. Very. The results of this study can describe all sports people and Pencak silat people, especially PSP trainers, regarding the profile of moving speed or changing specific directions and speeds through the kicks of PSP athletes. In increasing the speed component, it is not only focused on one aspect of the speed requirement of the sport, but other speed components must have their attention or focus with the right programmed exercises to achieve peak performance. Because peak performance can be achieved through complex training, this is emphasized by (Anggriawan, 2015) who states, "Optimal achievement can

only be achieved if an athlete has gone through a very complex training process." Peak achievement is also obtained not in a short time. This is confirmed by (Harsono 2018) "High achievement results from years of hard training that is adequately planned, systematically, intensively, methodically.

## CONCLUSION

According to empirical studies that exist in reality in the field and reinforced by theoretical analysis that data from the results of measuring the general speed profile with a 20-meter running speed test and a specific speed test with a sickle kick speed test for 10 seconds on achievement Pencak silat club athletes with a total research sample of as much as From 20 athletes, it was found that 5% data had sufficient classification, 95% of PSP club athletes had general speed with minor type, namely one athlete had a good style, and 19 athletes had a poor variety. While at a special rate through a sickle kick speed test for 10 seconds, it was found that 10% of the data had a perfect classification, and 90% had a good variety. The researcher concludes that the physical component of speed is a crucial component to be improved in supporting achievement, both speed in general and speed specifically according to the needs of the sport of Pencak silat. Efforts to increase speed do

not only focus on one aspect of kick speed but also other speed aspects such as general speed, reaction speed, and so on that need to be considered and developed to support the athlete's performance in achieving achievements.

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