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Measurement of Pencak Silat Physical Activity in Indralaya 1 Public Senior High School

Desi Isnawati[1], Hartati[2]✉, Silvi Aryanti[3]

Program Study of Physical Education and Health Sciences, Faculty of Teacher Training and Education, Sriwijaya University, Palembang, Indonesia[123]

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Abstract

Physical fitness has an important role in training and competition conditions, therefore every athlete or student should pay attention to the components of physical fitness from an early age. Sports teachers or trainers must also know the physical condition of their students because it will have an impact on achievement. Therefore the trainer or teacher must be able to design learning aimed at improving the physical fitness of students, then the teacher must also have initial information about the level of physical condition of students as a reference in conducting training and learning. This research is a quantitative research with a descriptive design. The subjects of this study were students who took part in pencak silat extracurricular activities at Indralaya 1 Public Junior High School with a sample size of 30 students. In this study to determine speed by running a 20 meter test, strength test using push ups, agility test using a shuttle run and leg muscle strength test using a vertical jump. The data analysis technique uses descriptive percentages. The results obtained from the research on the measurement of the physical pencak silat test at Indralaya 1 Public Senior High School were that there were (30%) students in doing the strength test in the very good category, there were (16.7%) students in doing the speed test in the good category, there were (0%) students in doing the endurance test in the moderate category, there were (3.3%) students in doing the agility test in the poor category, there were students (0%) in doing the leg muscle strength test in the moderate category. So it can be concluded that the average student who takes part in the extracurricular pencak silat at Indralaya 1 Public Senior High School is in the moderate category.

How to Cite

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✉ Correspondence address :
E-mail: hartati@fkip.unsri.ac.id

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INTRODUCTION

Pencak Silat has become a highly regarded activity among people of various backgrounds, including adults, children, and even the elderly. According to Susanto (2020), Pencak Silat is one of the martial arts and cultural treasures of Indonesia that has developed from the past to the present. Essentially, Pencak Silat is a form of self-defense used by the Indonesian community to protect themselves from adversity. The term "Pencak Silat," originating from Indonesia, was officially recognized in 1973 at the Bogor monument.

Pencak Silat is a sport that offers easily learnable techniques for self-defense, involving various human body movements. Additionally, it encompasses four aspects: the mental-spiritual aspect, the martial art aspect, the sports aspect, and the artistic aspect. According to Saputro and Siswantoyo (2018), the art of Pencak Silat is an embodiment of culture realized through various forms of movements and rhythms, which carry meaning and are synchronized with the performed actions. In essence, in Pencak Silat, the influence of physical condition is crucial for students, particularly those who excel. Physical condition is one of the prerequisites that athletes must possess in order to maximize and enhance their sports performance. Therefore, their physical condition must be developed according to the characteristics, traits, and needs of each sports discipline. As stated by Susanto (2020), "According to Hartati (2019: 54), the development of Pencak Silat is divided into two aspects: physical development and mental development. Physical development serves as a supporting factor for performance, emphasizing the abilities of biomotor components. These biomotor components include endurance, strength, speed, agility, explosiveness, flexibility, and balance. This means that in the effort to enhance physical condition, all of these components must be improved, even though the focus may be on specific priority components based on the requirements and movement types within the sport.

Consequently, each athlete must maintain their physical condition by performing the designated components. Good physical fitness is essential for practicing Pencak Silat, as physical fitness can influence every aspect of an individual's activities. A healthy and fit body is the dream of everyone, enabling them to carry out daily activities to create a productive life. As social beings with complete bodily organs, humans must take care of them to keep moving and maintain physical fitness and health."

Physical fitness plays a crucial role in training and competition conditions; therefore, every athlete or student should pay attention to physical fitness components from an early age. Sports teachers or coaches should also be aware of the physical condition of their students, as it will impact their performance. Hence, coaches or teachers must be capable of designing learning objectives aimed at enhancing the physical fitness of their students. Additionally, teachers should have initial information about the physical fitness level of their students as a reference for training and learning.

Based on the researcher's observation at Indralaya 1 Public Senior High School, the majority of students participating in Pencak Silat extracurricular activities engage in little physical activity during school hours. They tend to sit and chat in or outside the classroom, play with gadgets during break times, and are less active in sports-related learning. Upon observation, it is noted that students tend to feel uncomfortable when engaging in too much physical activity as it can lead to fatigue, sweating, and disrupt their concentration in subsequent learning activities. According to interviews conducted by the researcher, students reveal that the time available for physical activity is limited due to various academic demands, including lessons and school assignments required for achieving good academic performance. Furthermore, interviews with students regarding their activities at home indicate that they spend a significant amount of time watching television, using their smartphones, and so on. Additionally, students often opt for public transportation and motorized vehicles for commuting to school and back home. The observations and interviews above indicate a lack of physical activity and low levels of physical activity among the students. If this issue is not addressed specifically, the consistently low levels of physical activity in students may lead to problems with their physical fitness. Given the indications of low physical activity levels in students, their physical fitness levels may be questioned.

Based on the background provided, the researcher identified a problem, namely the low physical fitness level of students who are fond of participating in Pencak Silat sports activities, especially considering that data regarding the physical activity levels of students at Indralaya 1 Public Senior High School is unknown. Given the importance of the physical condition of students, especially in the context of the martial art sport of Pencak Silat, the researcher aims to focus

the study on understanding the condition of the students by utilizing a test instrument specific to the Pencak Silat martial art discipline. With this issue in mind, the researcher intends to conduct a study titled "Measurement of Pencak Silat Physical Activity in Indralaya 1 Public Senior High School Students Using an Outdoor Laboratory at the Education Park."

METHODS

According to Kholis & Puspodari (2019), this type of research is quantitative descriptive, which is used to study a specific population and sample. The method used in this research is a survey method. A survey is a method or technique used to collect data through testing techniques. Sampling can be done randomly, data collection uses research instruments, data analysis is quantitative or statistical in nature, with the aim of testing established hypotheses. According to Arikunto (2011: 107), if the subject is limited to less than 100, it is better to include all of them in the study, making it a population study. Furthermore, it is stated that the number of subjects depends on at least:

a) the researcher's capacity in terms of time, manpower, and cost, and
b) the narrowness or wideness of the observation area.

According to Wardoyo (2017: 112), data collection for the research involves using instruments, namely the bleep test to measure the endurance of Pencak Silat athletes, push-up test for arm muscle endurance, a 30-meter sprint test to assess athlete speed, and the split slide test to measure athlete flexibility. According to Suharsimi Lestari et al. (2018), an instrument is a tool or facility used by researchers to collect data, making their work easier and improving the quality of results. In other words, instruments can support the research process to be more precise, comprehensive, and systematic, making data processing easier. According to Ariyanti et al. (2021), research instruments are aids chosen by researchers to systematically collect data. The physical fitness test used includes the following component:

Strength : Physical test performed is the Push-up

Figure. 1: Push Up
Source: Pusat Kesegaran Jasmani dan Rekreasi, Depdikbud (2012)

Purpose: to measure arm muscle strength.
Equipment: a mat or flat surface, a stopwatch.
Procedure:

a. Participants lie on the mat, and after receiving instructions, they can adjust to the most comfortable position for performing push-ups.
b. They place their hands on the floor with a wider distance apart. Ensure that the thumb position is straight with the chest. Position the fingers facing upwards and spread them wide.
c. A movement is counted when the participant lifts their body, passing a certain point, and when lowering, the arms should be straight.

Table 1. Push-Up Tes Norms

Norms	Man	Woman
Excellent	> 38	> 21
Good	29 – 37	16 – 20
Adquate	20 – 28	10 – 15
Inadequate	12 – 19	5 – 9
Very Poor	4 – 11	1 – 4

Source : Faizah (2022)

Speed : The physical test used is the 30-meter Sprint.

Figure. 2: 30-meter Sprint
Source: Pusat Kesegaran Jasmani dan Rekreasi, Depdikbud (2012)

Objective: To measure speed in Pencak Silat sports.
Equipment: Running track, whistle, stopwatch, bib number.
Procedure:

a. The testee stands ready behind the starting line;
b. With the command "ready," the testee starts running from a standing start;
c. With the command "go," the testee runs as fast as possible, covering a distance of 30 meters until they pass the finish line;
d. Running speed is calculated from the "go" command;
e. Time recording is done up to a tenth of a second (0.1 second), if possible, it can be recorded up to a hundredth of a second (0.01 second);
f. The testee performs the test twice, with the next runner starting after a minimum of one runner has completed the test. The best running speed is recorded;
g. The testee is considered unsuccessful if they cross or step out of their lane.

Table 2. 30 Meter Sprint Test Norms

Norms	Man	Woman
Excellent	< 4.2	< 5.1
Good	4.2 – 4.7	5.2 – 5.7
Adquate	4.8 – 5.2	5.8 – 6.2
Inadequate	5.3 – 5.7	6.3 – 6.8
Very Poor	< 5.8	< 6.9

Source : Faizah (2022)

Endurance : The physical test used is the Bleep Test.

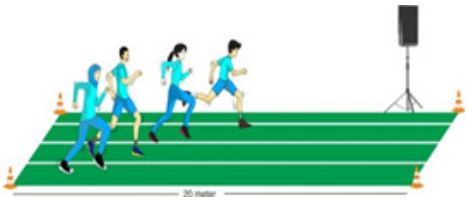

Figure. 3: Bleep Test
Source: Pusat Kesegaran Jasmani dan Rekreasi, Depdikbud (2012)

Objective: To measure the endurance of athletes.
Equipment: Flat running track, measuring tape, cassette and tape recorder, and a stopwatch.
Personnel: Distance measurer, Start official, Track supervisor, Scorekeeper.

Procedure:

a. The Bleep Test is conducted by running back and forth over a 20-meter distance.
b. It begins with slow and gradually accelerating running until the athlete can no longer keep up with the running pace in sync with the bleep sounds.
c. This means their maximum ability is at that particular back-and-forth level.

Table 3. Bleep Test Norms

Categor (Man)	Age (Year) 15-17	Category (Woman)	Age (Year) 15-17
Excellent	> 55.9	Excellent	> 41.9
Good	51.0 – 55.9	Good	39.0 – 41.9
Adquate	45.2 – 50.9	Adquate	35.0 – 38.9
Inadequate	38.4 – 45.1	Inadequate	31.0 – 34.9
Very Poor	> 32	Very Poor	> 26

Source : Faizah (2022)

Agility : The physical test used is the Shuttle Run.

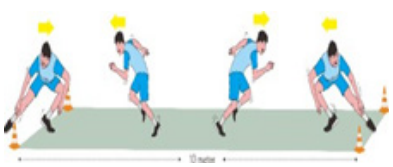

Figure. 4: Shuttle Run
Source: Pusat Kesegaran Jasmani dan Rekreasi, Depdikbut (2012)

Objective: To measure an individual's agility.
Equipment: Flat running track, stopwatch, and cones.

Procedure:

a. The testee stands behind the starting line in a ready-to-run position.
b. After the command is given, the testee runs on the prepared track following the directions.
c. The testee runs 2 laps around the track with a jogging pace.
d. Starting at A and finishing at B.

Table 4. Norms Shutle Run (20 Meter)

Categor (Man)	Second	Category (Woman)	Second
Excellent	< 12.10	Excellent	< 12.42
Good	12.11 – 13.53	Good	12.43 – 14.09
Adquate	13.54 – 14.96	Adquate	14.10 – 15.74
Inadequate	14.97 – 16.39	Inadequate	15.75 – 17.39
Very Poor	> 16.40	Very Poor	> 17.40

Source : Faizah (2022)

Leg Strength Test

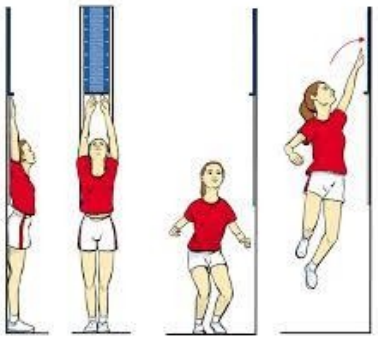

Figure 5: Vertical Jump
Source: Pusat Kesegaran Jasmani dan Rekreasi, Depdikbud (2012)

Objective: To assess the explosive leg muscle power of prospective Pencak Silat athletes.
Equipment and Facilities: Wall and measuring tape.

Procedure:

a. Prospective athletes stand with their feet shoulder-width apart, facing the side of a wall with a black manila card attached.
b. The testee measures the initial height of the candidate A by marking chalk on the manila card.
c. The testee jumps as high as possible and marks the jump by applying chalk to a piece of paper.

Table 5. Vertical Jump Norms

Category (Man)	Criteria
>70	Excellent
61-70	Good

51-60	Above Average
41-50	Adquate
31-40	Below Average
21-30	Inadequate
<21	Very Poor

Source: Johansyah lubis (2016)

Eye – Hand Coordination

Eye-hand coordination is the coordination between the visual senses of the eyes and the hands, from the wrist to the fingertips, to produce a forehand strike (Mahendra et al., 2022). Side split is a movement performed by stretching both legs sideways. Side split aims to maintain body flexibility (Nugraha et al., 2021).

Execution:

a. Sit with a cross-legged position, with the back against a wall.
b. Slowly open both legs to the sides while using both hands placed in front of the body as support.
c. Maintain a straight body position while attempting to lean forward to achieve optimal stretching, even though you may be leaning forward.

Table 6. Eye – Hand Coordination Norms

Category	Criteria
>35	Excellent
30-35	Good
24-29	Adquate
18-23	Inadequate
<18	Very Poor

The Side Split Flexibility Test

Side split is a movement performed by stretching both legs sideways. Side split aims to maintain body flexibility (Nugraha et al., 2021).

Implementation:

a. Sit in a cross-legged position with the back of the body against a wall.
b. Slowly open both legs sideways while using both hands placed in front of the body for support.
c. Maintain the entire body in a straight position while attempting to reach forward for optimal stretching

Table 7. Side Split Norms

Criteria	Side Split
Excellent	3,32 - 0 cm
Good	8 - 3,25 cm
Adquate	17,50 - 8,01 cm
Inadequate	22,50 - 17,51 cm
Very Poor	22, 51cm – up

Source: (Pertiwi et al., 2021)

Data analysis techniques are the methods used to manage and classify the collected data according to the research objectives. In this case, the author used statistical methods, and the statistical test used in the research is as follows: The physical fitness test data of Pencak Silat sports for male students of class X Science 1 and X Science 2 at Indralaya 1 Public Senior High School were processed using the SPSS application.

RESULTS AND DISCUSSION

This research was conducted in response to the decline in sports performance, especially in the Pencak Silat discipline, as detected through the observation of sports development at SMA Negeri 1 Indralaya, South Sumatra. To address this issue, the researchers carried out direct observations and identified that students or athletes practicing Pencak Silat easily experience fatigue during their training sessions.

To tackle this problem, the researchers measured the physical activity of students at SMA Negeri 1 Indralaya using the Outdoor Laboratory facilities at the Education Park. The aim of this research was to evaluate the level of physical fitness among students at SMA Negeri 1 Indralaya and to test the latest equipment and facilities available at the Education Park.

This study was conducted on May 8, 2023, at 08:00 AM, and involved 30 male students from the 10th-grade classes 10 at SMA Negeri 1 Indralaya, aged between 15-16 years. The research methodology involved using tests that were adjusted for gender and age to obtain relevant results and conclusions from this study. This research represents a critical step in improving athletes' performance and understanding the physical fitness of students in the context of Pencak Silat.

Description of the physical fitness test results for the sport of Pencak Silat.

Table 8. presents the age distribution data for the 30 participants in this study. Based on the analysis results, it was found that the average age of the participants is 15.57 years, with a median age of 16 years. The standard deviation (SD) of 0.50 indicates a relatively low level of variation in the age data. The recorded variance of 0.254 suggests that there is little variation among the

participants' ages. The observed age range is from 15 to 16 years, with a minimal and maximum difference of 1 year. This table provides essential information about the age distribution in the study and can serve as a basis for further analysis related to the age variable.

Table 9 the push-up distribution table, presents statistical data related to the push-up variable from a study with 30 participants. The average number of push-ups performed by participants is 30.03, with a median of 27. The recorded standard deviation is 11.16, indicating a relatively significant level of variation in the push-up data. The push-up variance is 124.65, showing a wide spread of data. The observed range of push-up values ranges from 10 to 64. This table provides essential information about the distribution and characteristics of the push-up data in the study.

Table 10 the 30-meter run distribution table, provides statistical insights into the participants' performance in the 30-meter race. The average time taken by participants to complete the race is 11.86 seconds, with a median time of 11 seconds. The recorded standard deviation is 3.48, indicating a relatively significant level of variation in the running time data. The 30-meter run variance is 12.14, suggesting a substantial variation in the time required. The observed time range spans from 4.9 to 20.1 seconds. This table offers essential information about the distribution and characteristics of running times in the study.

Table 11 the bleep test distribution table, provides statistical data on the participants' performance in the Bleep Test in a study. The average score achieved by participants is 24.26, with a median score of 23.5. The recorded standard deviation is 6.30, indicating a significant level of variation in the test scores. The test score variance is 39.72, suggesting a substantial variation in the test results. The observed score range spans from 12 to 40. This table offers an overview of the distribution and characteristics of Bleep Test scores in the study, which can be used as a reference for analyzing participants' performance in this test.

Table 12 the shuttle run distribution table, provides statistical data related to the Shuttle Run variable from a study with 30 participants. The average distance covered by participants in the Shuttle Run test is 13.80, with a median of 13. The recorded standard deviation is 3.43, indicating a significant level of variation in the distances covered by participants. The Shuttle Run variance is 11.76, suggesting a substantial variation in the test results. The observed distance range spans from 9.5 to 25.5. This table offers essential information about the distribution and characteristics of the distances covered in the Shuttle Run test in the study, which can be used to assess participants' physical performance and conduct further analysis.

Table 13 the vertical jump distribution table, presents statistical data related to the Vertical Jump variable from a study with 30 participants. The average vertical jump height achieved by participants is 45.86, with a median of 45. The recorded standard deviation is 10.45, indicating a significant level of variation in participants' vertical jump heights. The Vertical Jump variance is 109.29, suggesting a substantial variation in the measurement results of Vertical Jump. The observed vertical jump height range spans from 27 to 89. This table provides crucial information about the distribution and characteristics of participants' vertical jump heights in the study, which can be used to assess participants' physical abilities and conduct further analysis.

Table 14 the hand-eye coordination distribution table, presents statistical data related to the Hand-Eye Coordination variable from a study with 30 participants. The average hand-eye coordination achieved by participants is 24.44, with a median of 24. The recorded standard deviation is 5.31, indicating a significant level of variation in hand-eye coordination. The Hand-Eye Coordination variance is 28.185, suggesting a substantial variation in the measurement results of hand-eye coordination. The observed range of hand-eye coordination spans from 16 to 35. This table provides crucial information about the distribution and characteristics of participants' hand-eye coordination in the study, which can be used to assess their physical abilities and conduct further analysis

Table 15 the Side Split distribution table, presents statistical data related to the Side Split variable from a study with 30 participants. The average Side Split achieved by participants is 3.25, with a median of 3.30. The recorded standard deviation is 1.996, indicating a significant level of variation in the Side Split measurements. The Side Split variance is 0.40, suggesting a notable variation in the measurement results of the Side Split. The observed range of Side Split values spans from 2.90 to 3.60. This table provides crucial information about the distribution and characteristics of participants' Side Split in the study, which can be used to assess their physical abilities and conduct further analysis

Table 8. Age Distribution

Variabel	30 Meter Sprint
N	30
SD	3,48
Mean	11,86
Median	11
Varian	12,14
Range	15,2
Min	4,9
Max	20,1

Table 9. Push Up Distribution

Variabel	Push Up
N	30
SD	11,16
Mean	30,03
Median	27
Varian	124,65
Range	54
Min	10
Max	64

Table 10. 30 Meter Sprint Distribution

Variabel	30 Meter Sprint
N	30
SD	3,48
Mean	11,86
Median	11
Varian	12,14
Range	15,2
Min	4,9
Max	20,1

Table 11. Bleep Test Distributio

Variabel	Bleep Test
N	30
SD	6,30
Mean	24,26
Median	23,5
Varian	39,72
Range	28
Min	12
Max	40

Table 12. Shuttle Run Distribution

Variabel	Shuttle Run
N	30
SD	3,43
Mean	13,80
Median	13
Varian	11,76
Range	16
Min	9,5
Max	25,5

Table 13. Vertical Jump Distribution

Variabel	Vertical Jump
N	30
SD	10,45
Mean	45,86
Median	45
Varian	109,29
Range	62
Min	27
Max	89

Table 14. Hand-Eye Coordination Distribution

Variabel	Hand-Eye Coordination
N	30
SD	5,31
Mean	24,44
Median	24
Varian	28,185
Range	19
Min	16
Max	35

Table 15. Side Split Distribution

Variabel	Side Split
N	30
SD	1.996
Mean	3,25
Median	3.30
Varian	0.40
Range	0.70
Min	2.90
Max	3.60

Strength Test Results for Male Participants

Based on the results of the strength measurements conducted on male students participating in the extracurricular Pencak Silat at Indralaya 1 Public Senior High School, which were assessed using the push-up test, as shown in distribution **Table 9** the strength measurements in the form of push-ups for male students of Indralaya 1 Public Senior High School show excellent criteria with an average of 30.03. According to Widiastuti (2015: 75), muscle strength is the ability of muscles or a group of muscles to perform a single maximal contraction against resistance or load, and one of the exercises to improve strength is push-ups.

Furthermore, according to Hartati (2018), power involves dynamic and explosive muscle contraction strength and speed, involving the maximal output of muscle strength in the shortest time possible. Based on the explanations of these experts, it can be concluded that power, as described by Hartati (2018), involves dynamic and explosive muscle contraction strength, and it requires the maximal output of muscle strength in the shortest time possible. Therefore, the male students participating in the extracurricular Pencak Silat at Indralaya 1 Public Senior High School exhibit excellent strength, which is essential for dynamic and explosive movements in their training and performances.

Speed Test Results for Male Participants

Based on the results of the speed measurements conducted on male students participating in the extracurricular Pencak Silat at Indralaya 1 Public Senior High School, which were assessed using the 30-meter sprint test, as indicated in distribution **Table 10** the speed measurements

in the form of the 30-meter sprint for male students of Indralaya 1 Public Senior High School show excellent criteria with an average of 11.86 seconds. According to the theory of Insan et al. (2022), the 30-meter sprint training is considered a short-distance run because in a 30-meter sprint, the objective is to run as fast as possible. This training aims to enhance maximal speed. Additionally, according to Lamusu et al. (2022), speed is the ability to cover a specific distance quickly, and it is highly emphasized in short-distance running, including the 30-meter sprint. The strong and rapid muscle contractions from each muscle are transformed into very smooth movements, resulting in high-speed motion. Therefore, the speed of male students participating in the extracurricular Pencak Silat at Indralaya 1 Public Senior High School falls into the excellent category, and it should be maintained to support athletes in performing movements that require speed, especially during competitions.

Endurance Test Results

Based on the results of endurance measurements conducted on male students participating in the extracurricular Pencak Silat at Indralaya 1 Public Senior High School, which were assessed using the bleep test, as shown in distribution **Table 11** the endurance measurements in the form of the bleep test for male students at Indralaya 1 Public Senior High School indicate excellent criteria with an average of 24.26.

According to Fajriyudin et al. (2021), endurance is the ability to perform an activity or exercise for an extended period without excessive fatigue after performing that activity and exercise. This is also echoed by Mardius dkk (2020), who defines endurance as the body's ability to train for an extended period without experiencing excessive fatigue after completing the exercise. An athlete is considered to have good endurance when they are not easily fatigued, can continue to move when approaching fatigue, and can work without experiencing excessive fatigue after completing their tasks.

Therefore, cardiovascular endurance is crucial for an athlete's ability to engage in long-duration activities, overcome fatigue during continuous training over extended periods, and perform optimally, whether in training or in competitions, especially in a sport like Pencak Silat. In Pencak Silat, an athlete must have the ability to reach maximum heart rate or increase stroke volume to execute movements optimally

Agility Test Results

Based on the results of agility measurements conducted using the shuttle run test, as indicated in distribution **Table 12** the agility measurements in the form of the shuttle run for male students at sman 1 indralaya show excellent criteria with an average of 13.80.

According to Udam (2017), Shuttle Run is a form of general agility training, this training consists of two points, each point is 4 – 5 meters away. Additionally, repetitive muscle contractions can build muscle strength that is useful for improving agility. During training, there is coordination of muscle functions that serve to enhance agility and maintain balance. Agility is a combination of flexibility, strength, and speed.

As per the insights of Mappaompo (2011), Agility is a form of movement that requires a person or player to move quickly, change direction and be agile. Agility is crucial for improving performance in pencak silat and other sports. An agile martial artist can swiftly and accurately change body position and direction while in motion without losing balance or body awareness. Therefore, the male students' agility at sman 1 indralaya is in the excellent category, which is essential for their success in pencak silat and other sports.

Power Test Results for Leg Muscle Strength

Based on the results of power measurements for leg muscle strength, which were conducted using the vertical jump test, as indicated in distribution **Table 13** the power measurements for leg muscle strength through the vertical jump for male students at Indralaya 1 Public Senior High School demonstrate excellent criteria with an average of 45.86.

According to Purwo (2020), what is required in Pencak Silat is leg muscle strength and muscle power, particularly leg muscle power. Leg strength is essential for both offensive and defensive maneuvers in Pencak Silat. Muscle power, being one of the ten components of physical conditioning, refers to the muscle's ability to overcome resistance with very rapid contractions.

In Pencak Silat, the explosive power of leg muscles is crucial for executing swift and powerful moves, which is why the results of the vertical jump test are vital. The excellent average score of 45.86 for leg muscle strength among male students at Indralaya 1 Public Senior High School indicates their impressive power, which is fundamental for their performance in Pencak Silat and other sports.

Hand-Eye Coordination Test Results

In the research conducted at Indralaya 1 Public Senior High School, hand-eye coordination emerges as a crucial factor in Pencak Silat. The purpose of training hand-eye coordination is to refine the precision of hand movements, par-

ticularly in delivering strikes, ensuring that these strikes hit their intended targets.

According to Awan Hariono (2006: 112), coordination is the combined performance of muscle quality, bones, and joints in producing a single motion. The motion produced is influenced by motion components, such as energy, muscle contractions, nerves, bones, and joints.

Based on the insights mentioned above, coordination is influenced by various components, including energy, nerves, bones, joints, and muscle contractions. Therefore, continuous coordination training is essential to continuously train the body to produce precise movements. In Pencak Silat, where precision in striking and movement is paramount, the results of hand-eye coordination tests are significant.

Side Split Test Results

Side Split is often a challenge in various sports, including Pencak Silat and Taekwondo. There is a lack of specialized equipment to measure side split flexibility, which is a common issue in the field. This limitation often leads to challenges in measurement, as conventional tools like rulers are used, as noted by Nugraha et al. (2021).

To address these limitations, this research was conducted to provide a solution for measuring Side Split flexibility, which is essential in Pencak Silat training. Pertiwi et al. (2021) emphasize the importance of balance in both the initial and final stages of Pencak Silat movements. The research results show that most participants at Indralaya 1 Public Senior High School achieved an excellent category, indicating a very good level of Side Split flexibility. It's crucial to maintain and further develop this flexibility to enhance Pencak Silat movements and achieve outstanding results in the sport.

CONCLUSION

Based on the research findings, it can be concluded that the results of physical fitness tests for students participating in the extracurricular Pencak Silat at Indralaya 1 Public Senior High School show that (30%) of students perform the strength test in the "excellent" category, (16.7%) of students perform the speed test in the "good" category, (0%) of students perform the endurance test in the "moderate" category, (3.3%) of students perform the agility test in the "poor" category, and (0%) of students perform the lower limb muscle power test in the "very poor" category. Therefore, it can be concluded that on average, students participating in the Pencak Silat extracurricular at Indralaya 1 Public Senior High School fall into the "moderate" category.

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