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# Physical Condition of UNNES Pencak Silat Athletes at the 2025 Provincial Student Sports Week

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## ABSTRACT

This study was motivated by the importance of physical fitness in supporting the performance of pencak silat athletes, particularly in terms of endurance, speed, agility, and strength. However, research on the physical fitness profiles of college-level pencak silat athletes in relation to performance evaluation remains limited. This study aims to determine the physical condition profile of athletes from the Pencak Silat Student Club at Semarang State University at the 2025 Provincial Student Sports Week (POMPROV). The study employed a quantitative approach with a descriptive design. The sampling technique used was total sampling, with a sample size of 16 athletes, comprising 6 male and 10 female athletes. The research instruments utilized physical fitness tests, including the beep test for endurance, the 30-meter sprint for speed, the T-test for agility, as well as the bench press and back squat for strength. The results indicate that the speed and agility components of the athletes were predominantly in the "good" category, for both the male and female groups. The endurance component for male athletes tended to fall into the "good" category, while female athletes were predominantly in the "poor" category. Regarding the strength component, the results of the bench press and back squat showed that most athletes remained in the "adequate" to "poor" categories, particularly among the female group. Based on the research results, it can be concluded that the physical condition of UNNES Pencak Silat Club athletes in the speed and agility components is classified as good; however, improvements are still needed in the aspects of aerobic endurance and muscle strength through a more structured, specific, and sustained training program to support the improvement of athletes' performance and achievements in future competitions.

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## INTRODUCTION

Competitive sports are athletic activities conducted in a systematic, planned, and sustained manner with the goal of achieving optimal performance in a competition (Tudor O. Bompa; Carlo Buzzichelli, 2019). In the world of competitive sports, physical condition is a key factor that enables athletes to perform at their best throughout the training process and during competitions (Ruddock et al., 2021). Good physical condition can enhance an athlete's biomotor abilities such as endurance, strength, speed, and

agility which are essential for maximizing athletic performance (Vasconcelos et al., 2020). In addition, structured physical conditioning plays a key role in improving athletes' ability to achieve their desired performance goals (Emerson Franchini, 2023; Tudor O. Bompa; Carlo Buzzichelli, 2019).

As a sport that demands high-intensity movement, pencak silat relies on a combination of aerobic and anaerobic energy metabolism (Emerson Franchini, 2023). Excellent physical conditioning is essential for maintaining consistent performance and technical precision during competition (Vasconcelos et al., 2020). Success on the field is significantly influenced by various components of physical fitness, including endurance, agility, speed, and strength (Ruddock et al., 2021). A recent study on improvements in $VO_2$max among pencak silat athletes shows that aerobic capacity plays a significant role in enhancing athletes' endurance and recovery ability during high-intensity activities (Ittaqwa et al., 2025). In addition, effectiveness in both offense and defense also depends heavily on the athlete's speed and agility (Przybylski et al., 2021; Taati et al., 2022).

Regular monitoring of physical condition is crucial for assessing an athlete's readiness to undergo training phases or compete (Tudor O. Bompa; Carlo Buzzichelli, 2019). The data obtained from these physical evaluations serve as the primary basis for designing specific training programs tailored to the individual athlete's needs (Ruddock et al., 2021). In martial arts, optimal physical conditioning is closely linked to an athlete's performance effectiveness during competition (Emerson Franchini, 2023). Elements such as endurance, agility, speed, and strength are fundamental pillars that must be prioritized in the development of pencak silat athletes' performance (Vasconcelos et al., 2020). Thus, physical condition assessment is a crucial component in the effort to continuously improve athletes' performance (Taati et al., 2022; Tudor O. Bompa; Carlo Buzzichelli, 2019).

Several previous studies have examined the physical condition of pencak silat athletes at various training and competition levels. A study conducted by (Wahid et al., 2024) showed that the physical condition of pencak silat athletes plays a crucial role in supporting their performance during competitions. Research on PPLOP Central Java pencak silat athletes also showed that the components of strength, speed, agility, and endurance were in the good category and served as an important foundation for supporting athletes' performance during matches (Muftia et al., 2025). Another study by (Kamila & Aji Soleh, 2024) reported that the components of endurance and agility are important factors in supporting the performance of pencak silat athletes. Additionally, (Hardovi et al., 2022) explained that the physical condition of pencak silat athletes can serve as a basis for evaluation in the athlete development process. Research by (Gozali et al., 2024) also indicates that physical condition is one of the dominant factors influencing the competitive achievements of pencak silat athletes.

Although numerous studies on the physical condition of pencak silat athletes have been conducted, most of these studies still focus on describing the athletes' physical profiles without linking physical condition outcomes to team performance in competitions (Hardovi et al., 2022; Wahid et al., 2024). Previous studies generally only described athletes' physical condition categories based on test results and

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measurements without analyzing how these physical conditions could influence the achievement of performance targets in a championship (Gozali et al., 2024; Kamila & Aji Soleh, 2024). Furthermore, research on the physical condition of pencak silat athletes at the university level, particularly in the context of multi-event student competitions, remains relatively limited. In fact, evaluating physical condition in relation to competition results can provide insight into the biomotor components that need improvement as part of the process of coaching and continuously enhancing athlete performance (Ruddock et al., 2021; Tudor O. Bompa; Carlo Buzzichelli, 2019).

The UNNES Pencak Silat Student Club is one of the student activity units that actively participates in various regional and national championships, including the 2025 Provincial Student Sports Week (POMPROV). At that event, the UNNES Pencak Silat Student Club team secured third place overall, winning 1 gold medal, 5 silver medals, and 5 bronze medals. Although these results indicate a fairly good achievement, they still fall short of the team's target of securing first place overall. This situation highlights the need for an evaluation of the athletes' physical condition as part of the training and performance enhancement process to prepare for future competitions (Tudor O. Bompa; Carlo Buzzichelli, 2019). By understanding the athletes' physical condition, coaches and the team can evaluate the biomechanical components that still need improvement to support more optimal performance (Emerson Franchini, 2023; Ruddock et al., 2021).

This study offers a novel perspective compared to previous research because it not only describes the physical condition profiles of pencak silat athletes but also links physical condition outcomes to team performance at the 2025 Provincial University Sports Week (POMPROV). Previous studies generally only described athletes' physical fitness levels without linking them to performance evaluations in a competition (Kamila & Aji Soleh, 2024; Wahid et al., 2024). Furthermore, this study focuses on college-level athletes, a group that has been relatively under-researched in studies of pencak silat physical fitness, particularly within the context of evaluating team performance in multi-event collegiate competitions. The results of this study are expected to provide information and evaluation material for coaches and athletes regarding the physical fitness components that need to be maintained and improved to support more optimal performance in future competitions (Gozali et al., 2024; Hardovi et al., 2022).

Based on the above description, this study aims to determine the physical condition profile of athletes from the Pencak Silat Student Club at Semarang State University at the 2025 Provincial University Sports Week (POMPROV), covering the components of endurance, speed, agility, and strength (Emerson Franchini, 2023). Additionally, this study aims to provide an overview of the athletes' physical condition as a basis for evaluation in efforts to improve team performance and achieve better results in future competitions (Ruddock et al., 2021; Tudor O. Bompa; Carlo Buzzichelli, 2019).

## METHODS

This study employed a quantitative approach using a descriptive research design to identify and analyze the physical condition profile of athletes from the Pencak Silat

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Student Club of Semarang State University (UNNES) who participated in the 2025 Provincial University Sports Week (Pekan Olahraga Mahasiswa Provinsi/POMPROV). A descriptive quantitative design is widely used in sports science research to provide a comprehensive overview of athletes' physical characteristics and performance capacities without manipulating variables or implementing experimental treatments. This approach is considered appropriate for evaluating the current status of athletes' physical fitness and identifying strengths and weaknesses that may influence competitive performance (Bompa & Buzzichelli, 2019; Slimani et al., 2018).

The research was conducted in 2025 at Semarang State University, Central Java, Indonesia. Data collection was carried out during the preparation and evaluation phases of athletes from the UNNES Pencak Silat Student Club before their participation in the 2025 POMPROV competition. Conducting assessments during the pre-competition period is essential because physical fitness serves as one of the primary determinants of athletic performance and competitive readiness in combat sports, including pencak silat (Chaabene et al., 2018; Kons et al., 2021). The population of this study consisted of all active athletes registered in the UNNES Pencak Silat Student Club who qualified for and participated in the 2025 Provincial University Sports Week. The study utilized a total sampling technique, whereby all members of the population were included as research participants. Total sampling is recommended when the population size is relatively small and researchers aim to obtain comprehensive information from all available subjects (Etikan & Bala, 2017). Consequently, the sample comprised 16 athletes, including 6 male athletes and 10 female athletes.

The research instruments consisted of a battery of standardized physical fitness tests designed to evaluate key performance components required in pencak silat competition. Aerobic endurance was measured using the Multistage Fitness Test (Beep Test) to estimate maximal oxygen uptake ($VO_2max$), which is recognized as an important indicator of cardiorespiratory fitness and endurance performance in combat sports athletes (Støren et al., 2020). Speed was assessed using a 30-meter sprint test, a widely accepted measure of acceleration and sprinting ability relevant to offensive and defensive movements during competition (Loturco et al., 2019). Agility was evaluated using the Agility T-Test, which measures the athlete's ability to rapidly change direction while maintaining balance and coordination, an essential skill in pencak silat performance (Sheppard & Young, 2016). Muscular strength was assessed through bench press and back squat tests to determine upper-body and lower-body strength capacities, respectively. These tests have demonstrated high reliability and validity in assessing strength performance among athletes (Comfort et al., 2019).

Data collection was conducted through direct testing and measurement procedures. Prior to testing, all participants received detailed explanations and demonstrations regarding the testing protocols to ensure consistency and reduce measurement errors. Standardized warm-up sessions were performed before testing to minimize injury risk and optimize performance outcomes. Each test was administered by trained assessors following established sports testing guidelines (Turner et al., 2019). The obtained results were recorded systematically and verified to ensure data accuracy and completeness.

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Data analysis was performed using IBM SPSS statistical software. Quantitative descriptive analysis was employed to calculate the mean, standard deviation, minimum value, and maximum value for each physical fitness component. Descriptive statistical analysis is commonly utilized in athlete profiling studies to summarize performance characteristics and identify overall fitness trends within a sample (Hopkins et al., 2019). Furthermore, athletes' scores were classified into predetermined fitness categories based on normative standards to determine the level of physical condition for each variable assessed. The results were subsequently presented in tables, frequencies, and percentage distributions to facilitate data interpretation and provide a clear overview of the physical fitness profile of UNNES Pencak Silat athletes preparing for the 2025 Provincial University Sports Week.

## RESULTS AND DISCUSSION

### Result

This study produced test data on physical components, including endurance, speed, agility, and strength. The results of the tests and measurements of the physical condition of UNNES Pencak Silat athletes at the Provincial Student Sports Week (POMPROV).

**Table 1.**

Results of the Physical Fitness Test for UNNES Pencak Silat Athletes (Men)

| No | Endurance | Speed | Agility | Strength | |
|---|---|---|---|---|---|
| | Beep Test | Sprint 30 M | Agility T-Test | Bench Press (kg) | Back Squat (kg) |
| 1 | 50,8 | 4,43 | 10,96 | 56 | 80 |
| 2 | 40,2 | 4,76 | 10,69 | 47 | 62 |
| 3 | 57,6 | 3,82 | 11,20 | 56 | 67 |
| 4 | 43,9 | 4,81 | 12,23 | 56 | 120 |
| 5 | 32,9 | 5,18 | 11,54 | 84 | 125 |
| 6 | 32,4 | 5,57 | 12,85 | 31 | 47 |
| 7 | 50,5 | 4,50 | 11,34 | 60 | 67 |
| **Average** | **44,0** | **4,72** | **11,54** | **55,7** | **81,1** |

Based on the results of physical fitness tests for the six male athletes of the UNNES Pencak Silat Club, the highest $VO_2$max value recorded was 57.6 ml/kg/min and the lowest was 32.4 ml/kg/min. In the 30-meter sprint component, the fastest time recorded was 3.82 seconds and the slowest was 5.57 seconds. Furthermore, in the agility component, the t-test showed a best time of 10.69 seconds and a slowest time of 12.85 seconds. In the bench press strength component, the highest value was 84 kg and the lowest was 31 kg, while in the back squat, the highest value was 125 kg and the lowest was 47 kg.

**Table 2.**

Results of the Physical Fitness Test for UNNES Pencak Silat Athletes (Women)

| No | Endurance | Speed | Agility | Strength | |
|---|---|---|---|---|---|
| | Beep Test | Sprint 30 M | Agility T-Test | Bench Press (kg) | Back Squat (kg) |
| 1 | 50,8 | 4,43 | 10,96 | 56 | 80 |
| 2 | 40,2 | 4,76 | 10,69 | 47 | 62 |
| 3 | 57,6 | 3,82 | 11,20 | 56 | 67 |
| 4 | 43,9 | 4,81 | 12,23 | 56 | 120 |

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| | | | | | |
|---|---|---|---|---|---|
| 5 | 32,9 | 5,18 | 11,54 | 84 | 125 |
| 6 | 32,4 | 5,57 | 12,85 | 31 | 47 |
| 7 | 50,5 | 4,50 | 11,34 | 60 | 67 |
| **Average** | **44,0** | **4,72** | **11,54** | **55,7** | **81,1** |

Based on the results of physical fitness tests for the 10 female athletes of the UNNES Pencak Silat Club, the highest $VO_2$max value recorded was 43.9 ml/kg/min and the lowest was 30.6 ml/kg/min. In the 30-meter sprint component, the fastest time recorded was 4.70 seconds and the slowest was 5.91 seconds. Furthermore, in the agility component, the t-test showed a best time of 12.06 seconds and a slowest time of 14.71 seconds. In the bench press strength component, the highest value was 40 kg and the lowest was 23 kg, while in the back squat, the highest value was 67 kg and the lowest was 47 kg.

**Speed**

Speed is an athlete's ability to perform movements in the shortest possible time, and it is essential in pencak silat to ensure the effectiveness of attacks and smooth transitions during a match (Ruddock et al., 2021; Taati et al., 2022).

**Table 3.**
Description of the Speed of UNNES Pencak Silat Athletes (Men)

| Score (seccond) | Subject | Percentage (%) | Category |
|---|---|---|---|
| < 4,2 | 1 | 16,7% | Excellent |
| 4,2 – 4,7 | 3 | 50,0% | Good |
| 4,7 – 5,2 | 2 | 33,3% | Fair |
| 5,2 – 5,7 | 0 | 0% | Poor |
| > 5,7 | 0 | 0% | Very Poor |

The results of the 30-meter sprint test showed that the male athletes of the UNNES Pencak Silat Club fell into a variety of performance categories. One athlete (16.7%) was in the "very good" category, three athletes (50.0%) were in the "good" category, and two athletes (33.3%) were in the "fair" category. No athletes fell into the "poor" or "very poor" categories.

**Table 4.**
Description of the Speed of UNNES Pencak Silat Athletes (Women)

| Score (second) | Subject | Percentage (%) | Category |
|---|---|---|---|
| < 5,1 | 0 | 0% | Excellent |
| 5,1 – 5,7 | 6 | 60,0% | Good |
| 5,7 – 6,2 | 4 | 40,0% | Fair |
| 6,2 – 6,8 | 0 | 0% | Poor |
| > 6,8 | 0 | 0% | Very Poor |

Meanwhile, among female athletes, the majority fell into the "good" category, comprising 6 athletes (60%), while 4 athletes (40%) were in the "fair" category. No female athletes were found in the "very good," "poor," or "very poor" categories.

Overall, it can be concluded that the speed levels of UNNES pencak silat athletes are dominated by the "good" and "fair" categories, for both male and female groups. The descriptive profile of UNNES pencak silat athletes can be seen in the following table.

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**Agility**

Agility is the ability to change direction quickly and precisely without losing balance, and thus plays a crucial role in supporting the effectiveness of pencak silat athletes' techniques and movements during competition (Przybylski et al., 2021; Taati et al., 2022)

**Table 5.**
Description of the Agility of UNNES Pencak Silat Athletes (Men)

| Score (second) | Subject | Percentage (%) | Category |
|---|---|---|---|
| < 9,50 | 2 | 33,3% | Excellent |
| 9,51 – 10,50 | 4 | 66,7% | Good |
| 10,51 – 11,50 | 0 | 0% | Fair |
| 11,50 – 12,50 | 0 | 0% | Poor |
| > 12,50 | 0 | 0% | Very Poor |

Among the male athletes, the majority fell into the "good" category, totaling 4 athletes (66.7%), while 2 athletes (33.3%) fell into the "very good" category. No athletes fell into the "fair," "poor," or "very poor" categories.

**Table 6.**
Description of the Agility of UNNES Pencak Silat Athletes (Women)

| Score (second) | Subject | Percentage (%) | Category |
|---|---|---|---|
| < 10,50 | 2 | 20,0% | Excellent |
| 10,51 – 11,50 | 7 | 70,0% | Good |
| 11,51 – 12,50 | 1 | 10,0% | Fair |
| 12,51 – 13,50 | 0 | 0% | Poor |
| > 13,50 | 0 | 0% | Very Poor |

Among the female athletes, the majority also fell into the "good" category, namely 7 athletes (70.0%), followed by 2 athletes (20.0%) in the "very good" category, and 1 athlete (10.0%) in the "fair" category. No female athletes were found in the "poor" or "very poor" categories. Based on the results of the agility measurements using the agility T-test, the results can be seen in the following table.

**Endurance**

Cardiorespiratory endurance or $VO_2$max, is the body's ability to utilize oxygen to its fullest extent during physical activity and plays a crucial role in maintaining an athlete's performance in high-intensity martial arts such as pencak silat (Emerson Franchini, 2023; Vasconcelos et al., 2020).

**Table 7.**
Description of the Endurance of UNNES Pencak Silat Athletes (Men)

| VO2max (ml/kg/minutes) | Subject | Percentage (%) | Category |
|---|---|---|---|
| > 55 | 1 | 16,7% | Excellent |
| 49 – 55 | 1 | 16,7% | Good |
| 44 – 48 | 0 | 0% | Fair |
| 38 – 43 | 4 | 66,7% | Poor |
| < 38 | 0 | 0% | Very Poor |

Based on the results of VO2max measurements using the beep test, it was found that among the male athletes, 2 athletes (33.3%) were in the "very good" category, 2

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athletes (33.3%) were in the "good" category, 1 athlete (16.7%) was in the "fair" category, and 1 athlete (16.7%) was in the "poor" category. No male athletes were in the "very poor" category.

**Table 8.**
Description of the Endurance of UNNES Pencak Silat Athletes (Women)

| VO2max (ml/kg/minutes) | Subject | Percentage (%) | Category |
|---|---|---|---|
| > 49 | 0 | 0% | Excellent |
| 44 – 49 | 0 | 0% | Good |
| 39 – 43 | 2 | 20,0% | Fair |
| 31 – 38 | 8 | 80,0% | Poor |
| < 31 | 0 | 0% | Very Poor |

Meanwhile, the majority of female athletes fell into the "below average" category, totaling 8 athletes (80.0%), while 2 athletes (20.0%) were in the "average" category. No female athletes were found in the "good" or "very good" categories.

**Strength**

Strength is the ability of a muscle to generate force during a single maximal contraction. In the martial art of pencak silat, strength is essential for effective attacks and for defending against an opponent's pressure (Tudor O. Bompa; Carlo Buzzichelli, 2019).

The strength assessment categories in this study employ a data distribution approach (descriptive statistics), specifically based on the mean and standard deviation of the data, which are then classified into the categories of excellent, good, fair, poor, and very poor. This approach is widely used in sports research because it aligns with the characteristics of the athlete sample under study.

Descriptive analysis using mean values and standard deviations is a commonly used method in physical condition assessments to classify athletes' abilities into specific categories. The use of relative norms based on the characteristics of the athlete group is also considered more relevant in describing levels of physical ability than the use of general norms, particularly in sports with specific characteristics such as pencak silat (Tudor O. Bompa; Carlo Buzzichelli, 2019).

**Table 9.**
Male Upper Body Strength (Bench Press) Data

| Score | Subject | Percentage (%) | Category |
|---|---|---|---|
| Very High | 1 | 16,7% | Excellent |
| High | 2 | 33,3% | Good |
| Moderate | 1 | 16,7% | Fair |
| Low | 1 | 16,7% | Poor |
| Very Low | 1 | 16,7% | Very Poor |

Based on the results of upper body muscle strength measurements using the bench press among male athletes, it was found that 1 athlete (16.7%) fell into the "very good" category, 2 athletes (33.3%) into the "good" category, 1 athlete (16.7%) into the "fair" category, 1 athlete (16.7%) into the "poor" category, and 1 athlete (16.7%) into the "very poor" category.

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**Table 10.**
Female Upper Body Strength (Bench Press) Data

| Score | Subject | Percentage (%) | Category |
|---|---|---|---|
| Very High | 1 | 10,0% | Excellent |
| High | 2 | 20,0% | Good |
| Moderate | 3 | 30,0% | Fair |
| Low | 2 | 20,0% | Poor |
| Very Low | 2 | 20,0% | Very Poor |

Based on the results of upper body muscle strength measurements using the bench press among female athletes, it was found that 1 athlete (10.0%) fell into the "very good" category, 2 athletes (20.0%) into the "good" category, 3 athletes (30.0%) into the "adequate" category, 2 athletes (20.0%) into the "poor" category, and 2 athletes (20.0%) into the "very poor" category.

**Table 11.**
Male Lower Body Strength (Back Squat) Data

| Score | Subject | Percentage (%) | Category |
|---|---|---|---|
| Very High | 2 | 33,3% | Excellent |
| High | 1 | 16,7% | Good |
| Moderate | 1 | 16,7% | Fair |
| Low | 1 | 16,7% | Poor |
| Very Low | 1 | 16,7% | Very Poor |

Based on the results of lower-body muscle strength measurements using the back squat among male athletes in the UNNES Pencak Silat Club, it was found that 2 athletes (33.3%) were in the "very good" category, 1 athlete (16.7%) was in the good category, 1 athlete (16.7%) in the fair category, 1 athlete (16.7%) in the poor category, and 1 athlete (16.7%) in the very poor category.

**Table 12.**
Female Lower Body Strength (Back Squat) Data

| Score | Subject | Percentage (%) | Category |
|---|---|---|---|
| Very High | 0 | 0% | Excellent |
| High | 1 | 10,0% | Good |
| Moderate | 2 | 20,0% | Fair |
| Low | 3 | 30,0% | Poor |
| Very Low | 4 | 40,0% | Very Poor |

Based on the results of lower-body muscle strength measurements using the back squat among female athletes in the UNNES Pencak Silat Club, it was found that no athletes fell into the "excellent" category; 1 athlete (10.0%) was in the "good" category; 2 athletes (20.0%) were in the "adequate" category; 3 athletes (30.0%) were in the "poor" category; and 4 athletes (40.0%) were in the "very poor" category.

## Discussion

The results of the study indicate that the physical condition of the UNNES Pencak Silat Club athletes in 2025 varies across the physical components measured, namely endurance, speed, agility, and upper and lower body strength. These differences suggest

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that each physical component develops in accordance with the characteristics of the training, training intensity, and movement requirements in the sport of pencak silat.

Regarding aerobic endurance (VO2max), male athletes tend to perform better than female athletes. Among male athletes, 33.3% fall into the "good" category and 33.3% into the "very good" category, whereas the majority of female athletes fall into the "poor" category, at 80.0%. These findings suggest that female athletes' aerobic capacity still requires improvement through more structured training programs. This aligns with research indicating that aerobic capacity is closely linked to an athlete's ability to maintain performance during pencak silat matches (Chabibullah et al., 2022).

In the speed component, male athletes were predominantly in the "good" category (50.0%) and the "fair" category (33.3%), while female athletes were predominantly in the "good" category (60.0%). These findings align with research indicating that sprint and speed training can improve speed ability and support the performance of pencak silat athletes in competitions (Muzaffar, 2022).

In the agility component, male athletes were predominantly in the "good" category at 66.7%, while female athletes were predominantly in the 'good' category at 70.0%. Additionally, there were athletes in the "very good" category, accounting for 33.3% of males and 20.0% of females. Agility is a crucial component in pencak silat because this sport requires the ability to move quickly, change direction, and effectively process an opponent's movements. Previous research explains that agility is a key physical component in pencak silat as it supports the speed of changing direction during both offensive and defensive maneuvers. These abilities can be enhanced through specific training such as footwork and reaction drills (Hidayat & Haryanto, 2021).

In the upper body strength component (bench press), male athletes were predominantly in the "good" category at 33.3%, while female athletes were predominantly in the "adequate" category at 30.0%. Meanwhile, in the lower body strength component (back squat), male athletes were predominantly in the "very good" category at 33.3%, while the majority of female athletes were in the "very poor" category at 40.0%. These differences in results may be influenced by biological factors such as muscle mass, hormones, and the intensity of the strength training undertaken by the athletes. Previous research has shown that strength training and plyometric training have a positive effect on increasing muscle power, kicking speed, and the physical performance of pencak silat athletes (Sinulingga et al., 2023).

## CONCLUSION

Based on the results of the study, it can be concluded that the physical condition of the UNNES Pencak Silat Club athletes at the 2025 Provincial University Sports Week demonstrated varying levels of ability across each physical component. Agility and speed were generally in the "good" category and were sufficient to support the movement requirements of pencak silat matches. Meanwhile, the endurance and strength components still require improvement, particularly among female athletes, who tend to

fall into the low category in several measurement components. These differences in physical condition results indicate that training characteristics, training intensity, and the specific demands of the pencak silat sport significantly influence the development of athletes' physical abilities. Therefore, coaches need to design more structured, specific, and sustained training programs, particularly regarding aerobic endurance and muscle strength, so that athletes' physical abilities can develop optimally and support the achievement of better performance in future competitions.

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