

## ANALYSIS OF THE PHYSICAL CONDITION COMPONENTS OF PHYSICAL EDUCATION STUDENTS OF PGRI UNIVERSITY PALEMBANG

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### ABSTRACT

This study aims to analyze the components of the physical condition of students of the Physical Education Study Program, University of PGRI Palembang class of 2024/2025. The research method used is a quantitative descriptive analysis method, with a sampling technique using purposive sampling. The sample in this study amounted to 40 students who met the criteria of being active in college and were willing to take a physical condition test. The data collection technique was carried out through the Indonesian Physical Freshness Test (TKJI) for the age group of 19–25 years which consisted of five test items, namely 60-meter sprint, *pull-up*, *sit-up*, *vertical jump*, and 1200-meter run. The results of the study show that the physical condition of students in general is in the good category. The average test results included 32 times arm muscle strength, abdominal muscle strength 35 times, cardio-pulmonary endurance 2,500 meters, speed 7.0 seconds, agility 10.8 seconds, flexibility 22 cm, and leg muscle explosiveness 48 cm. Based on these results, it can be concluded that Physical Education students of the University of PGRI Palembang class of 2024/2025 have good physical condition, but continuous improvement through a systematic exercise program is still needed to achieve an optimal level of physical fitness.

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### INTRODUCTION

Sport is a physical activity that contains elements of play and contains the spirit of competition, both against oneself, others, and facing challenges from the natural environment. In its implementation, sports require a spirit of sportsmanship (Manullang et al., 2024; Setiawan et al., 2024). In team sports, individuals are encouraged to compete in a fun atmosphere, while upholding the values of honesty and togetherness. Through sports,

a sense of mutual understanding, solidarity between participants, and an unselfish attitude can be created (Kharisma Tambunan et al., 2023; Li, 2022).

In addition to functioning as an activity aimed at improving physical fitness and health, sports also have a strategic role in social life as a means of integration, interaction, and unifying society. Sports activities can be an effective medium in building harmonious social relations regardless of differences in ethnicity, religion, culture, social status, and economic background. In this context, sports are not only seen as physical activities, but also as an instrument of social development that has educational and humanist value.

Through sports activities, various positive values such as sportsmanship, cooperation, discipline, responsibility, solidarity, and the spirit of unity can grow and develop in community life. These values play an important role in shaping individual character while strengthening social cohesion in the community. In addition, sports are also able to create a sense of togetherness, increase a healthy competitive spirit, and instill an attitude of mutual respect between individuals and groups.

Sports are able to bridge differences in social, cultural, and economic backgrounds so that they become an effective medium in strengthening national unity and identity (Wahyuningsari et al., 2022). In supporting this role, the government has made various strategic efforts through policy formulation, development of sports coaching systems, provision of facilities and infrastructure, and increased community participation in sports activities (Ina Lorian Lorenza, 2022; Aprilia et al., 2025). In addition to aiming to cultivate sports in the community, these various steps are also directed to improve the quality of athlete coaching and encourage the achievement of national sports achievements at the regional, national, and international levels. Thus, sports are not only seen as a purely recreational activity, but also as an important instrument in the development of human resources and strengthening the nation's character.

Improving achievement in the field of sports requires the readiness of all supporting factors that lead to the achievement of the desired achievements. To improve achievements in sports can also be done through efforts to maximize the physical condition of the players (Mohamad Rizal Febrianto et al., 2020). Physical condition is the ability to the extent to which a person can perform exercise. If the physical condition is good, there will be an improvement in the ability of the circulatory system and the work of the heart (Yasir et al., 2025; Aliriad et al., 2024).

Physical condition is one of the important factors that a person must have to improve and develop sports achievements to the maximum (Nidomuddin et al., 2023) (Sagiyonar et

al., 2023). Therefore, physical condition must be trained and improved according to the specific characteristics and needs of each sport. Physical condition is not just a requirement, but a basic element that cannot be postponed or ignored in an effort to improve athletes' achievements. The physical condition itself is a combination of various components that are interrelated and inseparable, both in terms of their improvement and maintenance (Fauzen et al., 2022).

As a Physical Education student, optimal physical condition is an important component in supporting the success of the learning process in higher education. Lecture activities in the Physical Education study program not only require mastery of cognitive aspects, but also affective and psychomotor skills that require a good level of physical fitness. In its implementation, students are required to be able to participate in various sports practice activities, movement skill learning, and field activities that require endurance, strength, speed, flexibility, coordination, and other physical components to the maximum.

Good physical condition plays a role in improving students' ability to carry out psychomotor activities effectively and efficiently, so that the learning process can take place optimally. In addition, an adequate level of physical fitness can also help students maintain concentration, increase resistance to fatigue, and support physical and mental readiness while participating in academic activities (Astuti et al., 2026). On the other hand, poor physical condition can hinder students' performance in participating in practical and theoretical learning, which ultimately has the potential to affect learning outcomes.

Furthermore, optimal physical condition is also the basic capital for Physical Education students in developing professional competencies as prospective educators, coaches, and sports practitioners in the future. Thus, physical condition not only functions as a support for lecture activities, but also as one of the strategic factors that contribute to the achievement of learning achievements, skill development, and professional readiness of Physical Education students (Iful et al., 2024).

Based on observations made by researchers on students of the Physical Education Study Program, University of PGRI Palembang Class of 2025/2026, it was found that some students showed a lack of enthusiasm in following the lecture process, often sleepy, easily feeling tired, and less active in participating in learning activities. This indicates that there is a possibility that the physical condition of students is not at an optimal level. Poor physical condition can have an impact on declining student participation and involvement, both in theoretical and practical learning activities.

Based on this background, the researcher was motivated to find out the level of physical condition of physical education students at the University of PGRI Palembang through a scientific study entitled "Analysis of the Physical Condition of Physical Education Students of the University of PGRI Palembang Batch 2024/2025".

## **RESEARCH METHODS**

This research is a quantitative descriptive research. According to (Sugiono, 2017), Quantitative descriptive research is a research method used to describe or describe a phenomenon systematically, factually, and accurately based on data obtained in the field. Data analysis in quantitative descriptive research is carried out using simple statistical analysis techniques, such as calculating average values, frequency, percentages, and grouping of data categories to obtain an overview of the research object.

## **RESULTS AND DISCUSSION**

Based on the results of measurements of the seven components of the physical condition of students of the Physical Education Study Program, University of PGRI Palembang class of 2024/2025, a general overview was obtained that the level of physical condition and physical fitness of students as a whole was in the good category. The measurement includes several important components in physical fitness, namely muscle strength, endurance, speed, agility, flexibility, and explosiveness of leg muscles which are fundamental elements in supporting physical activity and sports performance.

These results show that Physical Education students have relatively adequate physical abilities to support the implementation of academic activities, especially in practical learning that requires optimal physical readiness. Good physical condition not only reflects the level of physical fitness of students, but also an indicator of their readiness to participate in various sports activities, learning movement skills, and activities related to the development of professional competencies in the field of physical education and sports. Thus, these achievements can be the basis for supporting the improvement of the quality of learning and the development of student achievement in the field of sports. Each component of physical condition is measured using a standard test instrument that has been adjusted to the Indonesian Physical Freshness Test (TKJI) for ages 19–25 years. The average results of the score of male and female students in each component are presented in the following table.

A 60-second push-up test is used to measure arm muscle strength. Male students earn an average of 32 times, while female students 22 times. These results fall into the good category, which indicates that most students have sufficient arm muscle strength capabilities to support sports activities, such as pushing, holding, and lifting body weights.



The results of the 60-second sit-up test showed that male students scored an average of 35 times, while female students scored an average of 28 times, both of which fell into the good category. These results indicate that students have an optimal level of strength and endurance of the abdominal muscles. The strength of the abdominal muscles is one of the important components in physical condition because it plays a role in maintaining body stability, maintaining posture, and supporting coordination of movements when doing various physical activities. Thus, the results of the test show that students of the Physical Education Study Program have adequate physical abilities to support the implementation of practical learning activities and other sports activities.

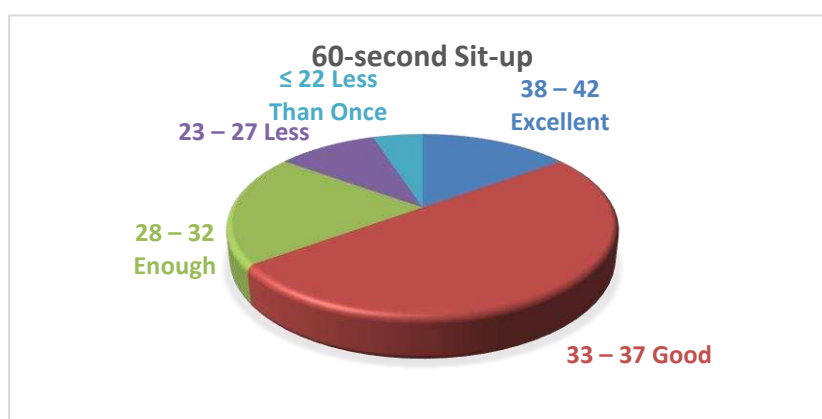


Figure 2. The results of the 60-second sit-up test

Students' endurance ability is measured through a 12-minute running test (Cooper Test). Based on the measurement results, male students obtained an average distance of

2,500 meters, while female students reached an average of 2,000 meters. Based on the physical fitness assessment standards, these results fall into the category of adequate, thus showing that students' aerobic capacity still needs to be improved through programmed and continuous exercise.

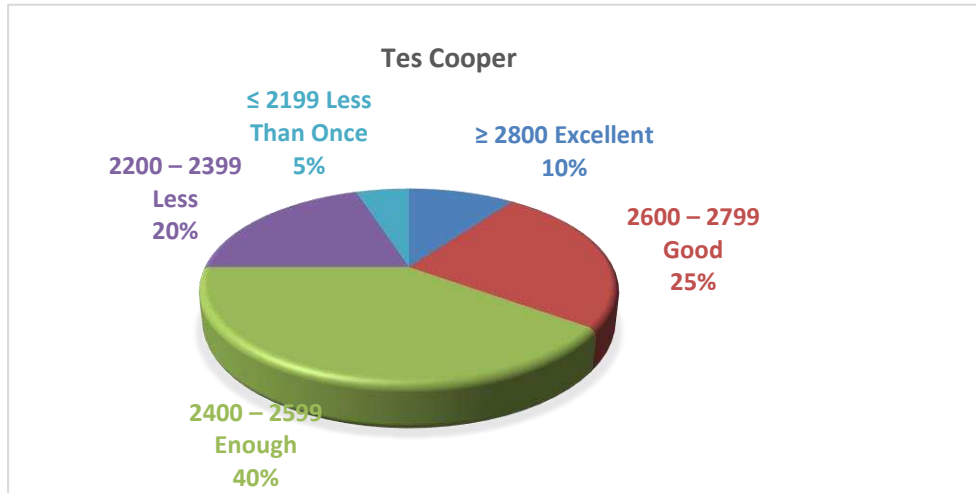


Figure 3. Cooper test

Speed is measured through a 50-meter run. Male students recorded an average time of 7.0 seconds and women 8.1 seconds, which was categorized as sufficient. These results indicate that students' ability to perform fast movements still needs to be developed through explosive exercises and short sprints so that their response and fast movement abilities increase.

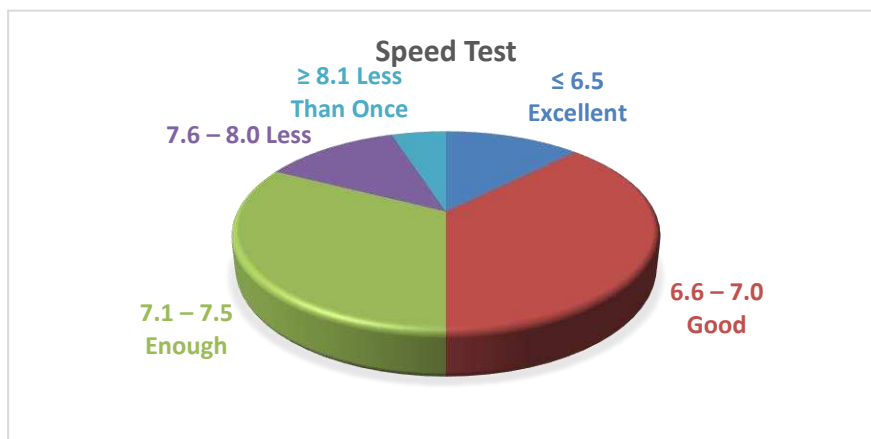


Figure 4. Speed test

The results of the 4x10 meter shuttle run test showed an average time of 10.8 seconds for men and 12.4 seconds for women, with the category of adequate. This score shows that students' ability to change direction quickly is still at a moderate level. Exercises that

emphasize coordination, balance, and change of direction need to be improved to improve this aspect of agility.

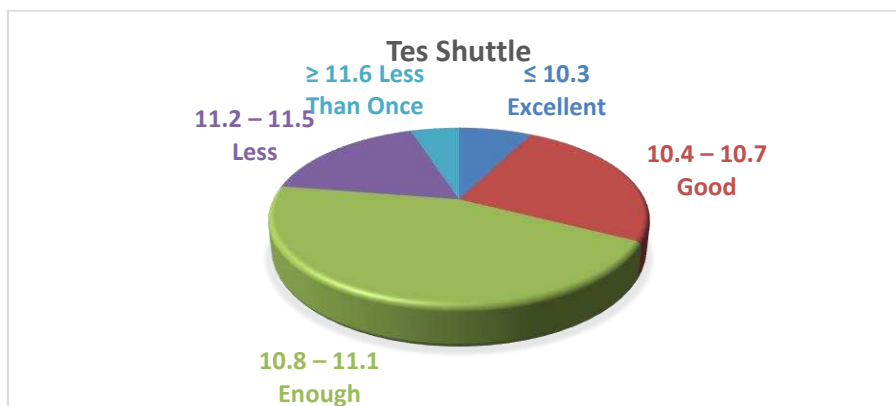


Figure 5. Shuttle test

The sit and reach test was used to measure the level of body flexibility, particularly in the lower back and hamstring muscles. Based on the measurement results, male students achieved an average score of 22 cm, while female students obtained an average score of 25 cm. According to physical fitness assessment standards, these results fall into the good category. These findings indicate that the students possess an adequate level of body flexibility to support various physical and sports activities.

Flexibility is an important component of physical fitness related to the ability of the joints and muscles to move through an optimal range of motion. A good level of flexibility contributes to improved movement efficiency, body coordination, and balance during physical activities and sports performance. In addition, optimal flexibility can help reduce muscle tension and minimize the risk of injuries during exercise and other physical activities.

Therefore, the results of the sit and reach test demonstrate that students of the Physical Education Study Program have good flexibility, which supports effective movement performance and the optimal implementation of practical sports activities.

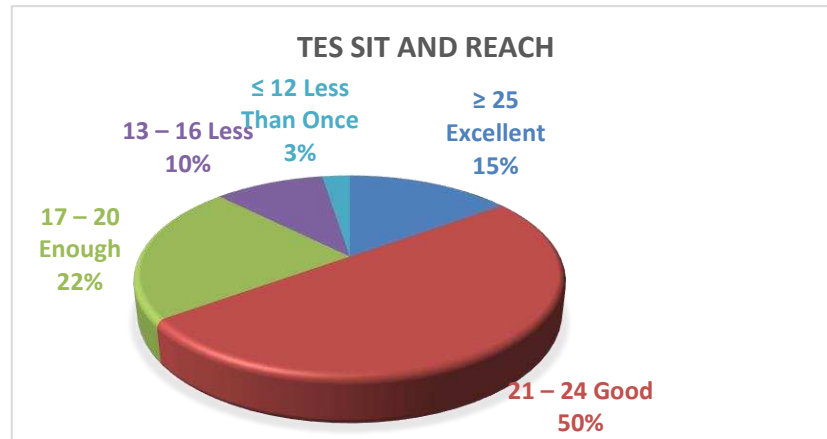


Figure 6. Tes Sit and Reach

The explosive power of the leg muscles was measured using the vertical jump test. The results showed an average score of 48 cm for male students and 36 cm for female students, both of which were categorized as good. These findings indicate that the students possess good explosive power, particularly in the lower limbs, which is essential for supporting various physical and sports activities.

Explosive power is an important biomotor component related to the ability of muscles to generate maximum force in a very short period of time. This ability plays a significant role in activities such as jumping, sprinting, rapid directional changes, and other sports skills that require high lower-body strength and speed. Good leg muscle explosive power also contributes to improved athletic performance and movement efficiency during sports participation.

Therefore, the results of the vertical jump test demonstrate that the Physical Education students have adequate lower-body explosive strength, which supports their performance in practical learning activities and various sports disciplines that demand powerful and dynamic movements.

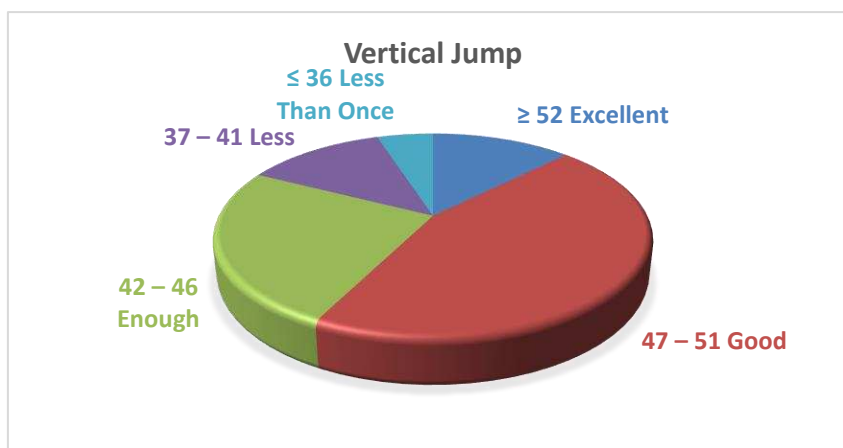


Figure 7. Speed test

The results of the study indicate that the physical condition of students in the Physical Education Study Program at Universitas PGRI Palembang is generally categorized as good, although there are variations in the level of achievement across each biomotor component. These differences in performance indicate that the development of students' physical condition is not entirely balanced, thus requiring special attention in improving certain physical components that are still categorized as moderate.

The variation in biomotor abilities reflects differences in students' physical capacities, training intensity, exercise habits, and levels of participation in physical activities. Components such as muscular strength, flexibility, and leg muscle explosive power showed relatively better results, while other components, including endurance and speed, still require further improvement through systematic and continuous training programs.

Therefore, efforts to enhance students' physical condition should be carried out comprehensively by focusing on all biomotor components in a balanced manner. This approach is important to support students' academic performance, practical learning activities, and professional competence as future educators and sports practitioners.

Based on the measurement results, the components of muscular strength, flexibility, and lower-body explosive power demonstrated the highest levels of achievement compared to the other biomotor components. These findings indicate that the students have received adequate training stimuli through practical learning activities, regular sports participation, and engagement in various other physical activities. The high performance in these components also reflects positive physical adaptation to dynamic exercise activities oriented toward the development of movement skills and physical performance.

Furthermore, the achievement in several biomotor components suggests that the practical learning process implemented in the Physical Education Study Program contributes positively to improving students' overall physical condition. Practical courses and sports-related activities appear to provide meaningful experiences that support the development of students' physical abilities in a systematic manner.

With a good level of physical condition, students are expected to enhance their academic performance, improve their sports skills, and develop the competencies required to become professional physical education teachers, coaches, and sports practitioners in the future. Therefore, maintaining and improving physical fitness remains an important aspect in supporting the educational and professional development of Physical Education students.

Good muscular strength reflects optimal physiological adaptation within the musculoskeletal system, enabling individuals to effectively perform various fundamental movements such as supporting, pushing, and lifting body weight. Muscular strength also plays an essential role in maintaining body stability, improving movement efficiency, and supporting physical performance during sports and daily activities. This is in accordance with the opinion (Bompa, T. O., & Haff, 2019), which affirms that strength is the main foundation in the development of other physical abilities. In addition, the flexibility of students who are in the good category indicates that the habit of warm-ups, stretching, and regular physical activity has helped improve joint range and reduce the risk of injury during sports activities. This good flexibility also supports movement efficiency and improves the quality of sports technique implementation.

In contrast to these components, the ability of cardio-pulmonary endurance, speed, and agility is still in the sufficient category, which indicates the need for improvement through directed and continuous exercise. Not optimal cardiopulmonary endurance indicates that the intensity and frequency of students' aerobic exercise is inconsistent, even though continuous aerobic exercise is needed to increase the working capacity of the heart and lungs, as explained by (Dale, 2012). The ability to speed is quite sufficient to show that neuromuscular adaptation to explosive exercise has not been formed optimally. This is likely due to the lack of sprint exercises or fast-reaction exercises that are integrated into student practice activities. Similarly, the agility of students who are still in the category of enough shows that aspects of coordination, balance, and the ability to change direction have not developed optimally (Manullang et al., 2021). The lack of specific exercises such as ladder drills, zig-zag runs, or cone drills also affects the low agility ability of students, as emphasized (Rizkiyanto et al., 2018) that agility is a combination of speed, coordination, and strength that need to be trained simultaneously.

Meanwhile, the explosiveness of the leg muscles that are in the good category shows that students have obtained explosive training stimuli such as plyometrics, sports games, and fitness exercises that support the ability to produce maximum power in a short period of time (Khusna et al., 2023). Good muscular strength reflects optimal physiological adaptation of the musculoskeletal system, which includes muscles, bones, joints, tendons, and ligaments as the primary components supporting body movement. These adaptations occur as a response to regular physical activity and systematic exercise, resulting in an increased ability of the muscles to generate force and perform maximal contractions. Such conditions enable individuals to carry out various fundamental movements effectively and

efficiently, including supporting, pushing, pulling, lifting, and maintaining body posture during physical activities and sports performance.

Physiologically, muscular strength is closely associated with the ability of muscle fibers to produce tension, neuromuscular coordination, and the efficiency of the nervous and muscular systems in generating movement. The greater an individual's muscular strength, the better the body's ability to maintain postural stability, enhance balance, and control body movements optimally. In addition, muscular strength plays an important role in improving movement efficiency, reducing fatigue, and minimizing the risk of injuries caused by high levels of physical activity.

In the context of physical education and sports, muscular strength is considered one of the essential biomotor components because it serves as the foundation for supporting various movement skills and athletic performance. Good muscular strength contributes significantly to an individual's ability to perform activities requiring endurance, speed, agility, and explosive power more effectively. Therefore, the development of muscular strength through structured and continuous training programs is an important aspect of improving physical fitness, athletic performance, and overall functional capacity in daily life.

## **CONCLUSIONS AND SUGGESTIONS**

Based on the results of the study, the physical condition of Physical Education students of PGRI Palembang University is generally in the good category, although there are variations in each component of physical ability. The physical components that show the best achievement are muscle strength, flexibility, and explosiveness of the leg muscles, which describes the existence of adequate exercise stimuli from practical lecture activities and fitness activities.

Meanwhile, the components of heart-lung endurance, speed, and agility are still in the category of sufficient, so they require further attention and development. This condition shows that physiological adaptation to aerobic exercise, explosive exercise, as well as coordination exercises and changes in direction are not optimal due to inconsistent intensity, frequency, and variation of exercise.

Overall, the results of the study confirm that a systematic, planned, and continuous physical exercise program needs to be integrated into the learning process to improve

students' overall biomotor skills. Strengthening the components of endurance, speed, and agility is very important so that students have ideal physical readiness, both as participants in practical lectures and as prospective physical educators who are expected to be able to be role models in an active and healthy lifestyle.

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