

ANALYSIS OF AEROBIC ENDURANCE AND ATHLETES' CONFIDENCE IN PASSING QUALITY IN AFA ACADEMY FOOTBALL PLAYERS

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Abstract

This study aims to understand the relationship between aerobic endurance and confidence and passing quality in football athletes. The applied research methodology is a quantitative approach with a correlational design. Information was obtained through aerobic endurance evaluations, confidence questionnaires, and passing ability tests. The findings of this study indicate a positive relationship between aerobic endurance and confidence in the passing quality of players. Players who have good aerobic endurance and a high level of confidence tend to pass more precisely and consistently when competing. Collectively, these two variables contribute significantly to improving the quality of passing. Therefore, the development of passing skills must be accompanied by comprehensive physical training and mental development.

Keywords: *Aerobic Endurance; Confidence; Passing Quality; Football Player*

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INTRODUCTION

Football is one of the most popular team sports in Indonesia and in various countries in the world. This game can be played by various groups, ranging from children, teenagers, to adults with diverse backgrounds. In addition, football is a sport that is relatively easy to do because it does not require too complicated facilities and infrastructure and has fairly simple game rules. The game can be played in a variety of places, both in official courts and in other open spaces, thus providing an opportunity for many people to participate in playing it. This convenience makes football one of the most popular and popular sports by people around the world. The game is played on every continent, in almost all countries, as well as at various levels of competition, from amateur to professional.

In addition, football also demands a combination of technical ability, tactics, and good physical condition. The physical condition in question includes several important components such as speed, endurance, power, flexibility, precision, and coordination of movement. These components are interconnected and support in improving player performance during the match. If a player has a good physical condition, then he will be better able to carry out various game tasks effectively and efficiently. Therefore, the development of physical condition is one of the important aspects of the football training process to improve the player's overall abilities (Suryadi et al., 2023). In addition, an athlete also needs to have good endurance and fitness so that the oxygen distribution process in the body can run smoothly so that it is able to produce energy that involves the work of the lungs and heart (Hidayati et al., 2022).

Endurance is a person's body's ability to withstand or overcome fatigue when doing physical activity for a certain period of time. In sports activities, endurance is one of the important factors that must be possessed by an athlete in order to be able to maintain performance during training and matches. Athletes who have a good level of endurance will be able to carry out sports activities continuously without experiencing a significant decrease in ability. According to (Boby, 2023) Endurance is the body's ability to fight fatigue when doing sports activities so that it can help athletes achieve optimal achievements.

Athlete confidence is one of the psychological aspects that has an important role in influencing performance, including in the modern world of professional football. In the context of team play, confidence not only impacts individual players' abilities, but also affects the overall dynamics and performance of the team. Players who have a high level of confidence are generally better able to deal with the pressure of the match, make the right decisions on the pitch, and maintain consistency of performance throughout the game. If an athlete loses confidence, it is likely that he or she has lost even before the game starts. Conversely, if an athlete has excessive self-confidence, the defeat he or she experiences can cause his or her

mental collapse suddenly. Athletes who lack confidence, or often referred to as diffident individuals, are usually caused by doubts about their own abilities.

In a football match, confidence plays a very important role, especially in a stressful match situation. Pressure can arise at any time, such as when taking a shot on goal, providing an important pass, or running a penalty kick. At such times, players are required to stay focused and calm. Players who have high confidence can usually overcome the pressure, so they are able to display technique well and appropriately. They are not easily affected by the shouts of the crowd, pressure from opponents, or situations on the pitch. On the other hand, players who lack confidence often experience excessive anxiety. This can involve doubts in decision-making, such as hesitation when passing the ball or fear of making mistakes. As a result, the performance displayed becomes less than optimal, and can even cause mistakes that are detrimental to the team. For this reason, confidence not only affects the mental condition of players, but also has a direct impact on the quality of technique on the quality of technique and the final result of the game on the field (Jufrianis et al., 2024)

This study aims to explore the relationship between aerobic endurance and passing quality in football players. In addition, this study also wants to uncover the relationship between athletes' confidence and the quality of passes in football players. Furthermore, this study focuses on the analysis of the relationship between aerobic endurance and athletes' confidence at the same time on the quality of passing of football players, so that it is hoped that the role of these two aspects in improving players' passing ability can be understood.

METHOD

This research is included in quantitative research with a correlational approach. Quantitative research is research that uses data in the form of numbers which is then analyzed using statistical techniques. This approach was chosen because the study aimed to find out the relationship between aerobic endurance and confidence in the passing quality of football players.

The correlational approach is used to see the existence of a relationship and the level of strength of the relationship between the variables studied. In this study, agility and confidence were independent variables, while passing success was a bound variable. Through this approach, this study, the researcher was able to find out whether there was a significant relationship between the two free variables and the passing success of football players.

This research was conducted at the Afa Academy Banjarnegara Football Academy (SSB) located in Banjarnegara Regency. The selection of the location for this study was based on the suitability of the characteristics of the subjects with the purpose of the study, namely the football players who actively participated in the training program at the SSB.

Meanwhile, the research is scheduled to last for about one month, from April 18, 2026 to May 23, 2026. In this time span, the researcher underwent several stages of research which included tool preparation, data collection, test implementation, and processing of data obtained from the research.

The population analyzed in this study included all children in the age group of 10 to 12 years who underwent training at the AFA Academy Football School (SSB) located in Kalibening District, Banjarnegara Regency. This group was chosen because they met the characteristics necessary for research on the relationship between aerobic endurance, athlete confidence, and passing quality among soccer players.

For this study, the sample used consisted of 30 individuals taken from existing populations. These samples serve as research subjects or respondents who provide the required data, and are selected with a specific sampling method. This study applies a nonprobability sampling technique and uses the purposive sampling method, where the selection of samples is based on specific considerations and criteria that have been determined by the researcher. The criteria for the sample in this study included: (1) athletes who actively participated in football training at SSB AFA Academy Banjarnegara, (2) athletes who were classified as 10–12 years old (KU 10–12), (3) athletes who participated in regular training with a frequency of at

least 2–3 times a week, and (4) athletes who were in good health and did not have injuries at the time the study was conducted. With the use of these criteria, it is expected that the selected sample can reflect the population and provide relevant data to achieve the research objectives. The instrument to be used is the Multistage Fitness Test (Bleep Test) a type of test that is recommended to measure the physical condition component of aerobic endurance (VO2Max) with a validity = 0.710 and reliability test results = 0.521 (Saputra et al., 2018). (Jaisy Annisa Nabilal, Sagittarius2, 2025)

The validity of the instrument was examined to evaluate how effective each item was in measuring athlete confidence variables. The findings of the validity test show that the valid items have a correlation coefficient value (r calculated) between 0.45 and 0.80, thus meeting the validity standards that have been set. Out of a total of 30 items tested, 11 items were found to be valid because the calculated r value was greater than the r table, while items that did not meet the validity requirements were left out in this study. These results indicate that the Athletic Self-Confidence Questionnaire (ASQ) instrument has adequate validity and is able to accurately measure athletes' confidence.

The next activity is a reliability test to check the consistency of measuring instruments in research. This reliability test is applied by the Cronbach Alpha method and uses statistical software. An instrument is considered reliable if its Cronbach Alpha value exceeds 0.70. Based on research conducted by Nursaba et al. (2024), an instrument that measures athletes' confidence obtained a Cronbach Alpha value of 0.979. This figure indicates that the instrument has a very high level of reliability, and therefore is worthy of being relied upon as a data collection tool in research, as it can provide consistent and credible results (Nursaba et al., 2024).

RESULTS

Table 1. Normality Test Results

Variabel	Kolmogorov-Smirnov Sig.	Shapiro-Wilk Sig.	Remarks
VO2Max	0,200	0,787	Normal
Confidence	0,200	0,666	Normal
Fitting	0,087	0,307	Normal

Based on Table 1. The results of the normality test used the Kolmogorov-Smirnov and Shapiro-Wilk methods, all study variables showed a significance value greater than 0.05 so that the data was declared to be normally distributed. The consistency rate of normality testing results with the Shapiro-Wilk test reached 71.11% and was the most effective method especially in small and medium samples, while Kolmogorov-Smirnov was more appropriately applied to large samples (Sianturi, 2025).

The normality test is a major prerequisite before parametric analysis can be performed, as the normality test is a critical step in data analysis, especially when using parametric statistical methods such as t-test, ANOVA, or linear regression that require the assumption of data normality (Sianturi, 2025). With the fulfillment of the assumption of normality in the three variables, namely aerobic endurance (VO2Max), confidence, and passing quality, Pearson correlation analysis and double linear regression can be legitimately applied. In sports research, the data distribution is declared normal when the p-value is greater than 0.05 and the test is generally carried out using SPSS software (Syamsuryadin et al., 2026).

Table 2. Pearson Correlation Test Results

Variabel	Pearson Correlation (r)	Sig. (2-tailed)	Category
VO2Max to Passing	0,668	0,001	Strong
Confidence in Passing	0,715	<0.001	Strong
VO2Max on Confidence	0,529	0,016	Medium

Based on Table 2. The results of the correlation test showed that aerobic endurance (VO2Max) had a significant relationship with passing quality with a correlation value of 0.668 and a significance of 0.001. The higher the VO2Max as the maximum capacity of the lungs in consuming oxygen, the better the player's aerobic and cardiorespiratory endurance, so that the player's ability to maintain consistent physical and technical performance during the match will be increased (Attamimi et al., 2024). This shows that the better the player's aerobic endurance, the better the quality of passing tends to be because players with excellent physical condition are able to maintain technical performance throughout the game.

Confidence also showed a significant relationship with passing quality with a correlation value of 0.715 and a significance of less than 0.001. Soccer players who have high confidence are shown to be calmer when controlling the ball, making decisions, and making passes on target despite the high pressure of the game, because confidence is a cognitive mechanism that affects physical readiness and the ability to execute technical skills (Salam et al., 2025). Research on extracurricular football players found a strong and positive relationship between confidence and technical performance of players, with a correlation coefficient of 0.56 indicating that the higher a player's confidence, the better his technical ability (Syarifulloh et al., 2025). In addition, the relationship between VO2Max and confidence showed a moderate category with a correlation value of 0.529 and a significance of 0.016, indicating that good physical condition also supports the player's psychological confidence.

Table 3. Results of Multiple Linear Regression Test

Components	Value
R	0,792
R Square	0,628
Adjusted R Square	0,584
Sig. ANOVA	<0.001

Based on Table 3. The results of the double linear regression showed an R value of 0.792 which indicates a strong relationship between aerobic endurance and confidence in the passing quality of football players. The R Square value of 0.628 shows that the two variables contribute 62.8% to the quality of passing. In the context of football, the difference in performance between players who have similar physical abilities is greatly influenced by psychological factors such as confidence, so the balance between physical and mental readiness is a crucial aspect that determines the quality of a player's performance (Irawan et al., 2025).

In designing a training program, it is important to not only focus on the physical aspect, but also consider psychological factors so that players are more motivated to develop their potential, because structured physical exercises supported by strong motivation will help players maintain game consistency and

apply techniques better (Kurniawan et al., 2025). The rest is influenced by other factors such as basic technique, coordination, playing experience, and understanding of tactics. The results of the ANOVA test also showed a significance of less than 0.05 so it can be concluded that the two variables together have a significant effect on the quality of passing of football players.

DISCUSSION

The results showed that aerobic endurance (VO2Max) had a significant relationship with the passing quality of football players. A systematic literature review confirms that cardiorespiratory endurance (VO2Max) has a vital role to play in the performance of football athletes, where good aerobic capacity allows players to maintain a consistent intensity of physical activity during 90 minutes of a match (Putra & Priyono, 2026). Aerobic endurance or VO2Max means the maximum amount of oxygen that can be used to perform intensive exercise, where players who are in good physical condition with a higher VO2Max intake can perform physical activity more vigorously and are able to maintain their technical performance more stable without experiencing significant fatigue (Zakky Mubarak et al., 2022). Excellent physical condition helps players reduce fatigue so that coordination of movements and passing accuracy are maintained. High aerobic capacity has been shown to contribute to reducing the fatigue index of players, so players with good VO2Max have the advantage of maintaining the quality of their technical movements even at the end of the game (Rusdiana et al., 2024). These findings show that aerobic endurance is one of the important factors in supporting basic football technical skills, especially passing.

Confidence shows a significant relationship with the passing quality of football players. Confidence affects the quality of technical execution in football because when a player feels confident, he is better able to control his emotions and focus on the right technique, while a hesitant player often fails to maximize his abilities despite being in an advantageous position (Irawan et al., 2025). For footballers, confidence is more often shaped by factors directly related to performance such as skill mastery, physical readiness, and success in matches,

where psychological and technical/tactical attributes are considered to be the most important in determining a player's success (Cristiyan & Santoso, 2025). Anxiety is negatively correlated with technical skills, while confidence is significantly positively correlated with sports performance, and loss of confidence has been shown to have a noticeable impact on a player's decreased passing accuracy (Salam et al., 2025). On the contrary, low confidence can cause players to feel afraid of making mistakes so that the quality of passing becomes less than optimal.

The results of the double linear regression showed that aerobic endurance and confidence together had a significant influence on the passing quality of football players. In football, the achievement of peak performance depends on many factors including physical fitness, technical ability, tactical acumen, and mental readiness, so a training approach that integrates all of these dimensions is indispensable (Sumbayak et al., 2024). In the game of football, physical skills and psychological abilities are needed, where psychological factors are one of the important components in supporting success when doing sports activities in addition to physical and technical factors (Risqi & Arsila, 2021). Thus, improving the quality of passing needs to be done through exercises that pay attention to physical, technical, and mental aspects in a balanced manner so that player performance can develop optimally.

CONCLUSION

Based on the results of the data that has been carried out, it can be concluded that aerobic stamina and confidence are two crucial elements that affect the quality of passing in football athletes. Optimal aerobic stamina allows athletes to maintain physical condition, focus, and coordination of movements throughout the game. Players with high aerobic stamina capacity are better able to pass with better precision and consistency because they are not prone to decreased performance due to fatigue. The ability to maintain a level of intensity of the game for a long time gives players an advantage in maintaining basic technical standards, especially passing, which is one of the vital aspects in today's football game tactics.

In addition to the physical aspect, confidence has also been proven to have a significant influence on the quality of players' passes. Strong confidence makes players more confident in making decisions, braver in possession of the ball, and able to make passes with higher accuracy. Players who have high confidence are usually better able to handle the pressure of the match and are not prone to making technical mistakes due to doubts or fear of failure. On the other hand, a low level of confidence can hinder a player's ability to display their best skills, thus having an impact on the quality of the passes made.

The results of the study show that aerobic stamina and confidence simultaneously have a significant influence on the quality of football players' passing. These findings show that improving the quality of the pass can not only be focused on technical training alone, but needs to be done comprehensively through the physical development and mental aspects of athletes. A well-designed training program, which includes improving aerobic skills through endurance training as well as mental strengthening to build confidence, will have a positive effect on improving players' performance on the field.

Therefore, coaches, supervisors, and all parties involved in the development of football are encouraged to provide a balanced focus on physical, technical, and mental aspects during the training process. A holistic approach will support players in achieving better performance, improving pass quality, and helping teams achieve success in achieving higher achievements. This research also provides an idea that the success of a football player is not only determined by technical ability, but also by the physical readiness and mental strength possessed to face various situations in the match.

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