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Leg Muscle Explosive Power, Foot Coordination and Concentration Can Influence The Accuracy of Goal Shooting

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Abstract

By carrying out this research, the aim is to analyze the direct influence of Leg Muscle Explosive Power, Simultaneous Ankle Coordination on Shooting Accuracy through Concentration in SMKN 3 Sungai Full football players. The method used in this research was a quantitative method with 24 participants. The data analysis technique uses a path analysis approach using SPSS version 26. Based on the results of research that has been carried out, it can be stated that muscle explosive power has a contribution of 13.1%, and eye-foot coordination has a contribution of 12.8%, while concentration has a contribution amounting to 13.6%. So it can be conveyed that shooting accuracy can be influenced by explosive power, muscle coordination, eye-foot coordination and concentration, this needs to be understood and studied at an advanced level for shooting accuracy.

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INTRODUCTION

At this time, sport has become an important thing for society. The sport of football has become an important social phenomenon throughout the world (Alanis et al., 2022; Pruna et al., 2018). Exercise can also contribute to recovery, education, performance and health. Activities related to education, such as supervision of school children by physical education teachers (Afrizal, 2018; Fikri. Asdi & M, 2020). Improving the techniques, tactics and strategies used by players and coaches in managing a game is also no less important in today's football. The pinnacle of football is achieving achievement, achievement can only be achieved through coaching and it takes a long time (Pruna et al., 2018)

The world of football is a sport with the largest number of players, more than 250 million players (Fry et al., 2021; Kirkendall, 2020; Loftesnes et al., 2021), and effective shooting skills require various factors, including accuracy, speed and accuracy in directing the ball towards the goal. The main emphasis of this research is shooting accuracy in this environment. Shooting accuracy refers to a player's ability to direct the ball to the target point in the opponent's goal, and this is influenced by various elements, including body posture, foot position, perspective, and mental focus (Gardasevic & Bjelica, 2019).

Achievements in Indonesia are not yet optimal, so it is necessary to carry out coaching (Fitria, 2018; Rohman, 2017; Wahyu Edi Wijaya, 2021; Wahyu & Setya, 2017), physical condition, speed, dexterity needed when outwitting defenders to create good space for shots on goal. A soccer player must also have good ankle coordination so that the kick is on target and difficult for the goalkeeper to reach. Concentration is very important when taking a shot at goal, because the pressure exerted by opponents or teammates themselves requires good concentration from the footballer (Komaini & Gemaini, 2019). And having the motivation to practice is very important for soccer athletes, namely desire, will, perseverance, tenacity and seriousness in training to achieve success. Therefore, it is the mind that is able to overcome anything to achieve victory (Anton, 2021; Nugroho, 2017).

It is hoped that by highlighting the relationship between concentration, leg muscle explosive power and eye-foot coordination on shooting accuracy, this research will produce a better understanding of the complexity of learning football at the extracurricular level. The results of this research can also help coaches and educators to increase students' concentration in learning football. Therefore, this research can not only contribute to the scientific literature but also provide useful practical implications for the development of students' soccer sports potential.

METHODS

The relationship between variables in this study was examined through path analysis. The independent variables of this study are leg muscle strength, ankle coordination and concentration, while the dependent variable is goal shooting accuracy.

In this research, the sample used was 24 students of SMK N 3 Sungai Full who took part in extracurricular soccer games. Data collection was carried out using instruments for leg muscle strength, ankle coordination and concentration and scoring goals. The purpose of path data analysis is to test and understand the relationship between the independent variable and the dependent variable. Causal relationships are arranged in the form of a hypothetical model based on scientific substance: theoretical basis and/or researcher experience.

Inference analysis uses path analysis, which precedes requirements analysis testing, to test hypotheses. The endogenous variables of this research are goal scoring (Y) and concentration (X3), while the exogenous variables are leg muscle explosive power (X1) and ankle coordination (X2).

RESULTS AND DISCUSSION

In this section the author describes the data that emerged from testing and measuring all research objects. This research data consists of the results of skills tests, where target shooting accuracy (Y) is the dependent variable, leg muscle explosive power (X1) is the dependent variable, ankle coordination (X2) and concentration (X3) are the independent variables:

Table 1. Frequency Distribution of Shooting Accuracy Ability on Goal

Interval Class	Interval Class		Categories
	Percent Absolut	Percent	
≥ 67	0	0%	Very well
55-66	0	0%	Good
44-54	2	8,33%	Currently
32-43	16	66,67%	Not enough
≤ 31	6	25%	Very less

Table 1. Shows the results of shooting accuracy, it can be seen that from 24 people there were no players who got ≥ 67 very good and 55-66 in the good category. 2 people or 8.33% who got a score of 44-54 in the medium category. 16 people 66.67% who got a score of 32-43 in the poor category. 6 people 25% who got a score ≤ very poor category.

Table 2. Frequency Distribution of Leg Muscle Explosive Power

Interval Class	Interval Class		Categories
	Percent Absolut	Percent	
> 2.50	0	0%	Very well
2.41-2.50	3	12,5%	Good
2.31-2.40	5	20,83%	Enough
2.21-2.30	5	20,83%	Currently
2.11-2.20	6	25%	Not enough
< 2.10	5	20,83%	Very less

Table 2. Shows the accuracy results of leg muscle explosive power, it can be seen that from 24 people there were no players who got ≥ 2.5 very good and 3 people or 12.5% who got 2.14-2.50 in the good category. 5 people or 20.83% got a score of 2.31-2.40 in the medium category. 5 people or 20.83% got a score of 2.21-2.30 in the sufficient category. 6 people 25% who got a score of 2.11-2.20 in the poor category. 5 people 20.83% who got a score ≤2.10 in the very poor category.

Table 3. Frequency Distribution of Eye-foot Coordination

Interval Class	Interval Class		Categories
	Percent Absolut	Percent	
≥ 15,67	0	0%	Very good
11,89-15,66	8	33,33%	Good
8.11-11.88	6	25%	Enough
4,33-8,10	8	33,33%	Not enough
≤ 4,32	2	8,33%	Very less

Table 3. Shows the accuracy results of leg muscle explosive power, it can be seen that from 24 people there were no players who got ≥ 15.67 very good and 8 people or 33.33% who got 11.89-15.66 in the good category. 6 people or 25% got a score of 8.11-11.88 in the sufficient category. 8 people 33% who got a score of 4.33-8.10 in the poor category. 2 people 8.33% who got a score ≤4.32 in the very poor category.

Table 4. Frequency Distribution of Eye-foot Coordination

Interval Class	Interval Class		Categories
	Percent Absolut	Percent	
> 21	0	0%	Very good
16-20	11	45,83%	Good
11-15	8	33,33%	Enough
6-10	5	20,83%	Not enough
< 5	0	0%	Very less

Table 4. Shows the results of leg muscle explosive power accuracy, it can be seen that from 24 people there were no players who got ≥ 21 very good and 11 people or 45.83% got 16-20 in the good category. 8 people or 33.33% got a score of 11-15 in the medium category. 5 people or 20.83% got a score of 6-10 in the poor category. No one got a score ≤ 5 in the very poor category.

In the research that has been carried out, there are results of a study which show that the explosive power of the leg muscles has a direct influence on shooting accuracy with a coefficient of 0.362, and although coordination also has a direct influence on shooting accuracy with a coefficient of 0.359, concentration shows that it has an influence. directly on the shooting accuracy coefficient of 0.370. So it can be said that shooting accuracy has a good influence on ankle coordination, leg muscle explosive power and concentration. This aims to win the soccer game by aiming at the target, namely the goal (Darminto et al., 2023).

Shooting accuracy is something that all players must have, whose aim is to kick the ball into the goal and score the goal as expected. To get good accuracy, of course you have supporting components, such as leg muscle explosive power, ankle coordination and concentration. These are components that must be possessed so that shooting accuracy is as expected (Afrinaldi et al., 2021; Raharjo, 2018) and shooting accuracy also requires good coordination between eyes and feet (Anam et al., 2021)

Based on previous research, shooting accuracy is greatly influenced by leg muscle explosive power, eye-foot coordination and balance, and leg muscle explosive power, eye-foot coordination and balance together contribute 64.047% to soccer shooting accuracy (Afrinaldi et al., 2021). The research shows that leg muscle explosive power has a significant contribution to shooting accuracy with a percentage of 17.97% and ankle coordination shows a significant contribution to shooting accuracy with a percentage of 32.71%.

a shooting player (Cahyono & Sin, 2018)

From the results of this research, researchers can convey the findings of the research that has been carried out, that shooting accuracy has an influence, especially on leg muscle explosive power, ankle coordination and concentration, this has a big influence on shooting accuracy. Therefore, to get good shooting accuracy, of course you have to study and understand it, both from the coach and from the players. It can be assumed that a player who has good shooting accuracy at goal certainly has leg muscle explosive speed and good concentration. This means that to be a good player, soccer players must always improve their physical abilities that support the realization of their abilities. Shooting accuracy on goal.

CONCLUSION

From the results of research carried out in this study, it can be seen that children aged 5-6 years or who are still in kindergarten for hand eye coordination skills have an influence on object control skills, and nutritional status also has an influence on object control skills, from the results of this research, researchers can say that for children's object control skills it is better to provide learning at an early age because young children will get more control over children's learning and nutrition at an early age because this greatly influences object control skills the child himself.

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