

THE RELATIONSHIP BETWEEN HEIGHT AND *SHOOTING* ACCURACY OF PETANQUE ATHLETES AT GUNUNG LEUSER UNIVERSITY ACEH

Rio Sahputra ¹, Afrizal ^{1*}, Husaini ²

¹Gunung Leuser University Aceh

²Abulyatama University Aceh

Email Correspondence: afrizalmpo@gmail.com

Abstract

The purpose of this study was to determine the relationship between height and shooting accuracy in the sport of petanque at Petanque University Gunung Leuser Aceh. The purpose of this study was to determine the relationship between height and shooting accuracy in the sport of petanque at Petanque University Gunung Leuser Aceh. The population in this study were those who had participated in the Regional Student Sports Week (POMDA) of petanque sports and researchers used the total sampling theory of the entire population as a sample. The instrument used to determine height is the stadiometer / meter test. Meanwhile, to measure shooting accuracy using the shooting game station. From hypothesis testing the results obtained, height has a relationship with shooting accuracy in petanque sports in petanque athletes at Gunung Leuser University Aceh, where the correlation coefficient (r_{xy}) = 0.45 > r_{table} value α (0.05 = 0.444) with a coefficient of determination = 0.20 or 20%. Based on data analysis, it can be concluded that there is a significant relationship between height and shooting accuracy in petanque sports in petanque athletes at Gunung Leuser University Aceh.

Keywords: Height, Accuracy, Petanque Shooting.

INTRODUCTION

The importance of sports development in producing globally competitive athletes for a country and also being an important asset for the country to promote the country's development (Pilus, Amin, & Muhammad, 2017). The sport of petanque is a sport that greatly contributes to the development of sports in the country and is highlighted at the national and international levels (Pilus et al., 2017). It is important to know what factors can achieve maximum achievement. Sports achievement is the actualization of various elements which include physical condition, technical ability, tactical mastery, and mental maturity. Aerobic and anaerobic capacity also play an important role in achievement (Nickytha, Fitri, & Sultoni, 2019). Physical aspects are the basis for supporting other aspects (Kusuma, 2019)

Petanque sports have 2 stages of playing, namely *pointing* and *shooting*. Pointing is a way to deliver bosi as close as possible to the boka. Shooting is a way to keep the opponent's iron ball away from the wooden ball by aiming at the opponent's iron ball, then trying to throw our bosi to fall right on the target and push it away. *Shooting* is predominantly done by standing, because the view is wider and the position is more stable. (Souef, 2015)

In the petanque match for the shooting match number is carried out with a distance of six meters, seven, eight and nine meters with points that can be obtained 0, 1, 3, and 5 points for each successful shooting session. Performers are only given the opportunity to shoot once at each given discipline distance. The purpose of its main mechanics Petanque is included in a sport that has a target of achieving maximum accuracy. In meaning that the throws made must be right on certain targets to get victory points. From the above statement, accuracy greatly affects the *shooting* number match, the more precise the throw at the given obstacle, the more points are obtained. To produce the right throw on the target, the right method is needed. The coach must be more creative in providing training programs to his athletes.

In the book of sports tests and measurements Widiastuti (2011) suggests height is the vertical distance from the floor to the tip of the head (vertex). height is an important factor in various sports. height is also very influential because if the athlete has a high posture, it is better at shooting than athletes who have a short posture. height can be measured from the foot to the highest point in an upright position. Sanjoto's opinion quoted by Soleh (2007), accuracy is a person's ability to control free movements against targets. Accuracy is a factor that a person needs to achieve the expected target. Shooting is one of the basic throwing techniques in petanque sports, keeping the opponent's bosi away from the target boka or boka. This technique is needed when the opponent's bosi is close to the boka. The difficulty level of the shooting technique is also influenced by the position of the body and the position of the feet which must be stable when the ball is delivered, so that all limbs have good balance.

Petanque in Southeast Aceh Regency is currently starting to develop with students who are interested and have talent in petanque, especially Gunung Leuser University Aceh students who have often participated in petanque sports championships such as regional championships, Aceh Sports Week and Regional Student Sports Week and the results of Gunung Leuser University Aceh students being able to achieve various achievements in this one sport. However, in the *Shooting* match class number, only a few players or athletes are proficient or have good shooting skills, some of them have not been able to shoot proficiently, especially shooting with a distance of 9 meters and besides that there is no training media. Based on the above statement, accuracy affects the *shooting* number, the more precise the throw at the given obstacle, the more points are obtained. That way the researcher chose the research title "Relationship between Height and Accuracy of *Shooting* Petanque Athletes at Gunung Leuser University Aceh".

RESEARCH METHOD

This study is a correlational study with the aim of knowing the relationship between height and shooting accuracy. The population in this study were petanque athletes POMDA Gunung Leuser University Aceh totaling 12 people where the number of male athletes was 6 people and 6 women. Sampling in this study was a *total sampling* technique. samples taken from this study were 12 athletes. The instruments in this study were a height test using a stadiometer / meter and a petanque shooting accuracy test. Data collection techniques in this study are height tests and petanque shooting accuracy game station tests with a distance of six, seven, eight and nine meters. This research is a correlation research, so the data analysis technique used in this study is to use product moment correlation statistical techniques.

RESULTS AND DISCUSSION

1. Results

The results of the descriptive statistical analysis in question are the average, standard deviation, maximum value and minimum value of each research variable. Descriptive statistical data can be seen in the table below. The results of the descriptive statistics of the research variables are as follows

Table 1. Mean and Standard Deviation of Height Variables (X) and *Shooting* Accuracy (Y)

Variable s	Ave rage	Standa rd Deviasi on	Maxim um Value	Minimu m Value
X	166. 8	9	180	37
Y	22.5 5	7	150	15

The results of descriptive analysis in table 1. can be known:

- The mean of height (X) is 166.8 with a standard deviation of 9.
- Average *shooting* accuracy (Y) 22.55 with a standard deviation of 7
- The maximum ability score for height is 180 while the minimum ability is
- The maximum score for *shooting* accuracy is 150 while the maximum ability is 15.

To see the frequency distribution of height data can be seen in the following table and graph.

Table 2: Frequency Distribution of Height Data

Interval Class	Absolute Frequency	Frequenc kumulatif	Relative Frequency %
150-158	2	5	25%
159-165	5	11	30%
166-175	2	16	25%
176-180	1	20	20%

Graphically, the frequency distribution of height data addressed in table 2. can be seen in the following graphic image.

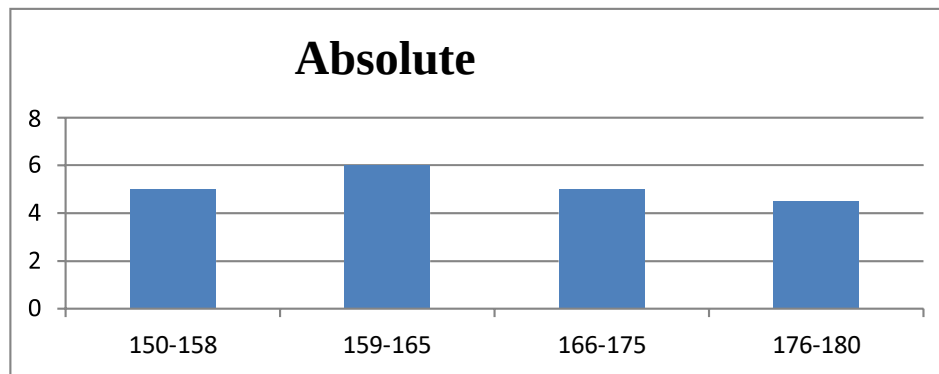


Figure 1: Frequency Distribution Chart of Height Data

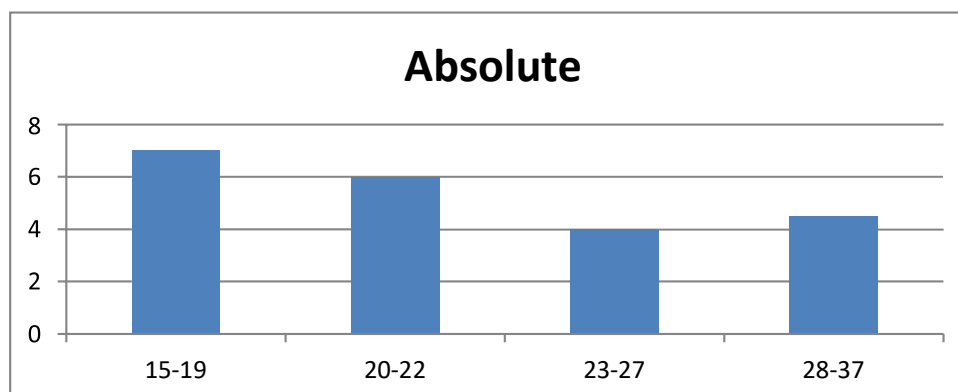
To see the frequency distribution of *shooting* accuracy data can be seen in the following tables and graphs.

Table 3. Frequency Distribution of *Shooting* Accuracy Data.

Interval Class	Absolute Frequency	Cumulative Frequency	Relative Frequency %
17-19	7	7	35%
20-22	6	13	30%
23-27	4	17	20%
28-37	3	20	15%

Graphically, the frequency distribution of *shooting* accuracy data addressed in table 3. can be seen in the following graphic image

Figure 2. Frequency Distribution Chart of *Shooting* Accuracy Data in Petanque Sport



The research data regarding height and *shooting* accuracy of petanque sports can be seen in the table below. Furthermore, to find out how the relationship between body height and *shooting* accuracy can be done product moment correlation statistical test. From the correlation test, the results are obtained as listed in the following table:

Table 4. Height (X), and Shooting Accuracy (Y)

Variable Correlation	Coefficien Correlation (r)	Coefficien Determination (r ²)	r table (0.05:25)
X with Y	0,45	0,20	0,444

Based on table 4, it can be seen that there is a significant relationship between height and shooting accuracy in Aceh Gunung Leuser University petanque athletes. Where $r_{xy} 0.45 > r_{tab} (0.05: 25 = 0.444)$, while the coefficient of determination (r^2) = 0.20 or 20%.

2. Research Discussion

The purpose of this study was to determine the relationship between height and shooting accuracy of Gunung Leuser University Aceh athletes. In theory, petanque shooting accuracy is determined by several biomotor aspects such as strength, balance, flexibility accuracy and coordination. Another aspect is the ideal posture, but the focus of this research is the psychomotor aspect, especially regarding height. Based on statistical analysis with the product moment correlation test, it is found that there is a correlation between height and shooting accuracy in petanque sports, this can be seen from the R_{xy} obtained of 0.45 where these results if entered on the correlation map then the relationship between the two variables is in the medium correlation category, besides that it indicates a meaningful relationship this can be seen from the acquisition of the value of $r \text{ count} = 0.45 > r \text{ table} (\alpha 0.05 = 0.444)$, while the coefficient of determination $r^2 = 20$, which means that height contributes or contributes to shooting accuracy in petanque sports by 20%. The contribution of the percentage given by height illustrates the relationship or correlation between variable x and variable y which is significant.

Descriptive research results that have been described confirm that height has an important role in shooting accuracy in petanque sports. Thus it is true that height has a significant relationship with shooting accuracy in petanque sports in petanque athletes at Gunung Leuser University Aceh. According to Sutriani (2013) height has a relationship with shooting ability where height is one of the most important parameters in identifying an individual's body, the relationship to shooting is that if someone who has a good height then the body control when shooting will be right on the target or target in seven by each individual. Based on the explanation above, the height component is very supportive in improving the achievement of playing petanque, especially in shooting. The supporting factors other than the element of height that can affect shooting ability by 80% are the training methods applied, training intensity, psychological factors, knowledge factors and, elements of other physical components.

CONCLUSIO

The results of data collection, data processing, and research results obtained and have been stated previously, it can be concluded that height has a meaningful relationship with shooting accuracy in petanque sports, where r_{xy} equal to zero point forty-five is greater than r table

with a significant level of zero point zero five of a sample size of twelve people equal to zero point four hundred forty-four with a coefficient of determination equal to zero point twenty or twenty percent, height contributes to shooting accuracy in petanque sports. In the correlation map, the value of zero point forty-five is in the medium category, with the statistical results above it can be concluded that someone who has a good height, the body control when shooting will be right on the target or target aimed at by each individual.

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