



Factors that Influence Long Stroke in Woodball Sports in Musi Rawas District

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Abstract

This study aims to determine the factors that influence long strokes and how much these factors influence long strokes in woodball sports in Musi Rawas Regency. The research method used is quantitative. The sample used was 20 athletes. Data processing using SPSS version 20. Data analysis using multiple regression analysis. The results of the study showed that there were four factors that influenced long strokes in woodball sports in Musi Rawas Regency. Namely the arm muscle strength factor (X₁), hand grip strength (X₂), hand eye coordination (X₃), and concentration (X₄). By using SPSS version 20, the regression equation $Y = -12.814 + 0.452 X_1 + 0.256 X_2 - 0.696 X_3 - 0.122 X_4$. The partial test results obtained from the four (4) factors are that the arm muscle strength factor has an influence of 43.2%, the hand grip strength factor has an influence of 24.4%, the hand eye coordination factor has an influence of 13.4% and the concentration factor has an influence of 12.3%.

Keywords: factors influencing, woodball, long distance shots.

INTRODUCTION

One of the competitive sports that is developing in Indonesia is woodball. Woodball sports were first introduced in Indonesia in 2006, this sport can be played anywhere including fields, parks, backyards and beaches, and contributed to its popularity (Chang & Lee, 2017). In When playing woodball, there are several basic techniques that players need to master, including long, medium, close, parking and gate shots (Kriswantoro, 2016).

One of the basic skills that an athlete needs to have in playing woodball is the skill of hitting the ball. When faced with a training or match, athletes will encounter various forms of fields, therefore it is important for an athlete to master several hitting techniques including long stroke techniques. Long strokes are performed when playing on a field that has a long distance. A successful hit can further increase the athlete's confidence, because the athlete will think that his first hit can pass half of the fairway, so it only takes a few more hits to finish the game, indirectly this can contribute to self-confidence.

In previous research conducted by Riyadi (2021) researchers found differences in research results stating that hand-eye coordination and target play did not affect long shot strokes in the Sukabumi City woodball branch . Meanwhile, research conducted by Arie, PS (2016) stated that there was a significant influence of the hand-eye coordination training method on the results of long-distance shot accuracy in the woodball sport . Previous research only examined 2 independent variables and 1 dependent variable, so as a form of improvement in this research, researchers conducted research with 4 independent variables and 1 dependent variable.

The accuracy of an athlete's long stroke must have better accuracy than other strokes (Riyadi, 2021). In line with research (Fayogi, 2021) states that long strokes can contribute more points than other strokes, because long strokes have a long distance, if the athlete hits the ball with this technique to the maximum, it is not difficult for an athlete to finish a game.

But in reality, mistakes that often occur when doing long strokes are when hitting the ball, the results of the hit are not optimal, which results in a lack of accuracy in the stroke movement. According to Imadudin, M. F (2020) In implementing the long stroke technique , there are several things that contribute to it, so that the technique can be done perfectly. The things in question are arm muscle strength, hand-eye coordination, grip strength, accuracy.

From the problems that have been found and obtained several differences from the results of previous research, the researcher will conduct research to find out how much these things affect long strokes in woodball sports.

METHOD

The method used in this study is quantitative research with an *ex-post facto* approach that is Correlational, which according to Kelinger (Sofanudin, 2011) ex-post facto research is research conducted on events that have occurred and explains or finds how the variables in the study are interrelated or influential. This type of research is used because in this study the researcher did not provide treatment to the variables studied. The research was conducted in the field of SMP YPBI 11 Lubulinggau Jl. Pioner, Majapahit, Lubuklinggau Timur I District. On Woddball athletes in Musi Rawas Regency, South Sumatra Province. The research time will be carried out on May 16-18, 2024.

The data collection technique in this study used tests and measurements, the data analysis technique used in the study was in the form of arm muscle strength tests (X1), hand grip strength (X2), hand eye coordination (X3), concentration (X4), long-distance punches (Y). The sample used was 20 athletes, the researcher's sampling technique used the *total sampling technique* where the number of samples was the same as the population.

Data analysis in this study used prerequisite tests including data normality tests, multicollinearity tests, heteroscedasticity tests and hypothesis tests including multiple linear regression tests, partial tests (t-tests), simultaneous tests (f-tests), and coefficient of determination tests.

RESULTS AND DISCUSSION

Results

In conducting the research, the researcher acted as a teacher. Before conducting the research, the researcher first conducted an instrument trial to see the quality of each athlete who did long-distance punches. The instrument trial was conducted by the researcher by testing arm muscle strength, hand grip strength, hand-eye coordination, concentration and the results of the long-distance punch test. Based on the trial obtained, 10 male athletes and 10 female athletes were valid in the results of the ability to the results of the long-distance punch test.

The research data was obtained from the results of observations conducted by researchers by looking at the pattern of arm muscle strength tests, hand grip strength, hand eye coordination and concentration on long-distance punch tests. Then the results of the observations were analyzed to obtain a measuring instrument that was worthy of being presented as a test. Then it is done the final test result is a long distance shot to know the ability to use the t-test and F-test formulas to determine the results of arm muscle strength tests, hand grip strength, hand eye coordination and concentration on long-distance punch tests. The research results can be seen in the following presentation:

Table 1. Partial test (t-test)

Variables	T count	Sig.	Partial
Arm muscle strength (X1)	6,692	.000	4,960
Hand muscle strength (X2)	5,539	.000	3.357
Hand eye coordination (X3)	-8,484	.000	2.158
Concentration (X4)	-2.220	.042	2.248
			<i>t_{tabel}</i> 2,131

From the results of the data processing, the following multiple regression model equation was obtained: $Y = -12.247 + 0.428 X_1 + 0.278 X_2 - 0.723 X_3 - 0.121 X_4$.

Based on the data results using the SPSS version 20 program, it can be seen that for the arm muscle strength factor variable (X_1), the value is $t_{score} > t_{tabel}$ (6.692>2.131) with a significance of $0.000 < 0.05$, which means H_0 is rejected and H_a is accepted or there is a real influence between the arm muscle strength factor and long-distance punches. Hand grip strength (X_2) value $t_{hscore} > t_{tabel}$ (5.539>2.131) with a significance of $0.000 < 0.05$, which means H_0 is rejected and H_a is accepted or there is a real influence between the hand grip strength factor on

long-distance punches. Hand eye coordination (X_3) $t_{hscore} > t_{tabel}$ ($-8.484 > 2.131$) with a significance of $0.000 < 0.05$, which means H_0 is rejected and H_a is accepted or there is a real influence between the hand eye coordination factor on long-distance punches. And concentration (X_4) $t_{hscore} > t_{tabel}$ ($-2.220 > 2.131$) with a significance of $0.042 < 0.05$, which means H_0 is rejected and H_a is accepted or there is a real influence between the concentration factor on long-distance punches.

The magnitude of the partial influence of each independent variable on the dependent variable can be seen from the square of the partial correlation of each variable. Based on the table above, it can be seen that the partial correlation coefficient for the arm muscle strength factor is 4.960 and r^2 for this variable is 0.432, which means that the magnitude of the influence of the arm muscle strength factor is 43.2%. The partial correlation for the handgrip strength factor is 3.357 and r^2 for this variable is 0.244, which means that the magnitude of the influence of handgrip strength is 24.4%. The partial correlation for the hand-eye coordination factor is 2.158 and r^2 for this variable is 0.134, which means that the magnitude of the influence of the hand-eye coordination factor is 13.4%. And the partial correlation for the concentration factor is 2.248 and r^2 for this variable is 0.123, which means that the magnitude of the influence of the concentration factor is 12.3%.

Discussion

From the research results, it is known that there are 4 (four) factors that influence long strokes in woodball sports in Musi Rawas Regency. These factors are as follows:

Arm Muscle Strength

According to Imaduddin (2020) arm muscle strength is one factor which affects long-distance strokes. Based on research data with a sample of 20 athletes, it shows that arm muscle strength affects long-distance strokes (*long strokes*) in woodball sports in Musi Rawas Regency. The magnitude of the influence of arm muscle strength on long-distance strokes (*long strokes*) is by 43.2%.

Hand Grip Strength

According to Dewi (2021) hand grip strength is the activity of a group of muscles for gripping and gripping, what is meant is holding a *mallet*. Wrong one factor which affects long-distance strokes, namely hand grip strength. Based on research data with a sample of 20 athletes, it shows that hand grip strength affects long-distance strokes (*long strokes*) in woodball sports in Musi Rawas Regency. The magnitude of the influence of hand grip strength on long-distance strokes which is 24.4%.

Hand Eye Coordination

According to Asri et al. (2017), coordination is one aspect of physical condition in woodball sports, coordination can also affect the level of accuracy. One of them is one factor which affects long-distance strokes is hand-eye coordination . Based on research data with a sample of 20 athletes, it shows that hand grip strength affects long-distance strokes in woodball sports in Musi Rawas Regency. The magnitude of the influence of hand grip strength on long-distance strokes is 13.4%.

Concentration

Woodball sports require concentration in hitting the ball, in order to produce a good and accurate hit . one factor which affects long-distance strokes is concentration . Based on research data with a sample of 20 athletes, it shows that concentration affects long-distance strokes in woodball sports in Musi Rawas Regency. The magnitude of the influence of concentration on long-distance strokes is 12.3%.

CONCLUSION

Based on the results of the research that has been conducted, the following conclusions can be drawn:

1. Factors that influence long-distance shots in *woodball sports* in Musi Rawas Regency are arm muscle strength, hand grip strength, hand eye coordination, and concentration.
2. Partially, the test results obtained from the four (4) factors are that the arm muscle strength factor has an influence of 43.2%, the hand grip strength factor has an influence of 24.4%, the hand eye coordination factor has an influence of 13.4% and the concentration factor has an influence of 12.3%. With the results of the determination coefficient test, the independent variables together influence the variable by 93.3%.

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