The Relationship Of Agility against Crescent Kick To Persaudaraan Setia Hati Athletes In Rokan Hulu Regency

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Abstract. Agility is a physical condition factor that plays an important role in improving the performance of pencak silat so it must be considered carefully. The purpose of this study was to determine whether there is a relationship between agility and sickle-kicking agility in the pencak silat athletes of the Setia Hati Terate Brotherhood in Rokan Hulu Regency. This research is a type of correlational research with a sample size of 19 people and analyzed using product moment correlation. The results showed that: There is a significant relationship between agility and the crescent-kicking agility of the Persaudaraan Setia Hati Terate athletes in Rokan Hulu Regency. With the R value calculated (0.523) then rxy > Rtable, namely (0.523 > 0.456).

1. Introduction
Pencak silat is an achievement sport that is competed at the regional, national and international levels starting from the children's level to the adult level, both students and the general public. Therefore, the physical components should have begun to be developed and applied to athletes youth or young pencak silat which direction will lead to the peak of achievement. Because pencak silat is the work of the Indonesian nation itself, and has a role as a means and infrastructure to form a whole human being who is healthy, strong, skilled, agile, calm, patient, knights and believes in himself [1].

In pencaksilat matches, the dominant attack technique used in competing is the sickle kick technique. [2] A sickle kick is a kick that is done by kicking the leg in a semicircle in the direction of the instep. This kick is very liked by fighters because the way to do it is very easy and if the fighter can do a kick and hit the target then the fighter will get a score of 2.

In addition to the sickle kick, the kick must also be done quickly so that the kick is not easily read by opponent or captured by the opponent resulting in additional points for the opponent. Agility is one component of motor freshness that is indispensable for all activities that require the speed of changes in body position and its parts. In addition, agility is a prerequisite for learning and improving movement skills and sports techniques, especially movements that require coordination of movements [3].

Furthermore [4] explaining agility (agility) is the body's ability to change direction quickly without balance disorder or loss of balance. In line with the above opinion, [5] also explains that Agility is a person's ability to change direction quickly and precisely when moving without losing balance. The agility of the sickle kick is the ability of the athlete to take kicks that are carried out by changing places and followed by a sickle kick which is carried out quickly without losing balance. The agility of motion is very influential on the agility of kicks, this is explained from research [6] that the agility of motion affects kick speed.

The purpose of this study was to determine the relationship between agility and sickle kick agility.
The results of this study can be used as references in improving athletes' achievement, especially in improving physical abilities and basic techniques of pencaksilat.

2. Methodology.

This type of research is correlation research. Where this research is used to determine the level of relationship between different variables. As mentioned by [7] that the type of correlation research is to find the presence or absence of a relationship and if, how close is the relationship and whether the relationship is meaningful or not. The number of samples in this study were 19 athletes with the sampling technique, namely saturated sampling technique. The data collected in this study are the agility test data and the sickle-kick agility test.

The instruments in this study were 1) a sickle-kick agility test, while the athlete was getting ready to stand behind the sandsack / target with two feet in the middle of the line. On cue, the athlete kicks with the right foot by jumping, where the left leg is the footstool in the right line, then performs the left sickle with the right foot as the support which is next to the left line. Each athlete alternates as many right and left foot kicks for as many as 15 seconds. The implementation is carried out 3 times and the best time is taken with the sandsak / target heights of 75 cm (women) and 100 cm (men)[8]. 2) Agility test, the goal is to find out our agility, we can use the 10 x 10 meter running test, the steps for the agility test are as follows:

1. Agility test : running 10 x 10 meters
2. Objective : to determine the agility of prospective pencak silat athletes.
3. Facilities and tools:
   a. Running track 10 x 10 meters
   b. Stopwatch
   c. Whistle / flag
4. Officer:
   a. Measuring time for the
   b. scorer
5. Executor: Prospective athlete stands behind the star A line, with a floating star attitude, on cue 'yes' the candidate runs as fast as possible to pass point B to point C, return to point B, continue to run to point D, return to point B, and continue to point E and run again to point E and run again to point B continues to point to the finish line A.

From the data obtained, data processing is carried out using correlation analysis technique. To determine whether the variables X and Y can be connected significantly, the product moment formula is used below:

1. Product moment correlation formula [9]

\[ r_{xy} = \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N \Sigma X^2 - (\Sigma X)^2\} \{N \Sigma Y^2 - (\Sigma Y)^2\}}} \]

Description:

- \( r_{xy} \) the correlation coefficient=yan calculated
- \( \Sigma X \) = number of product score X
- \( \Sigma Y \) = Total product score Y
- \( \Sigma XY \) = sum of all product score of X multiplied by the number of product score score Y
- \( N \) = Muchsamples

Further values obtained is converted into t-score form with the formula from Nurhasan (2001: 175)

\[ T\text{-Score} = 50 + 10 \left( \frac{X - X}{s} \right) \]

2. The next examiner is the significance test which functions if the researcher wants to find the meaning of the relationship between X and Y variables, then the results of the correlation The PPM was tested with a significance test with the formula:
\[ T_{\text{count}} = \frac{r \sqrt{n-2}}{\sqrt{n-r^2}} \]

Where: \( T \) count  = \( t \)
R value = correlation coefficient value
N = number of samples

3. Then to state the size the contribution of variable X to variable Y can be determined by the coefficient formula is reflected as follows:

\[ KD = r^2 \times 100\% \]

KP = magnitude of the determinant coefficient (determinant)
R = correlation coefficient.

3. Results and Discussion

Data obtained in this study are data and information that the author obtained when conducting research in the field. In this study, as stated earlier, to find out whether there is a relationship with agility against the agility of the sickle kick in the Pancak Silat athletes of the Setia Hati Terate Brotherhood in Rokan Hulu Regency which numbered 19 people.

The discussion in this study is the results of the agility of the athletes and the results of the agility of the sickle kick of the Setia Hati Terate Brotherhood Pancak Silat athlete in Rokan Hulu Regency.

To know clearly about the picture, the following will describe the data that the authors succeeded in getting from the field as a result of research the author has done.

1. Description of the Agility of Setia Hati Terate Pancak Silat Athletes in Rokan Hulu Regency

Based on the results of the research on the agility of the Pancak Silat athletes at the Setia Hati Terate Persaudaraan Setia Hati Terate, it was obtained an average value of 15.45, a standard deviation of 1.01, the highest value of 13.2, and the lowest value amounting to 17.3. Based on the data above, the existing values/scores are adjusted to the agility assessment table as follows:

| NO | Category    | Achievement  | Frequency |
|----|-------------|--------------|-----------|
| 1  | Very Good   | <13.43       | 1         |
| 2  | Good        | 13.44 - 14.47| 3         |
| 3  | Fair        | 14.48 - 15.51| 8         |
| 4  | Less        | 15.52 - 16.56| 7         |
| 5  | Very Poor   | >16.57       | 0         |

Based on the results of the agility test that can be in the field then included in the assessment above, it can be seen that the frequency distribution of 19 samples has the agility that is carried out by running fast and back and forth classified with a moderate average.

2. Description of the Sickle Kick Agility Test of the Setia Hati Terate Brotherhood in Rokan Hulu Regency

Based on the results of the research on the sickle kick agility test of the Setia Hati Terate martial arts athletes, the average score was 23 standard deviation of 2.333, the highest value was 19 and the lowest value was 28. Based on the data above, the existing scores / scores are adjusted to the assessment table for the sickle kick agility test of pencak silat athletes as follows:
### Table 2. Classification of the score of the sickle-kick agility test score for the Setia Hati Terate Persaudaraan Setia Hati Terate athletes with the assessment of the agility of the pencak silat kicks

| Category | Achievement | Frequency |
|----------|-------------|-----------|
| Very Good | > 30        |           |
| Good     | 25-29       | 3         |
| Enough   | 20-24       | 13        |
| Less     | 15-19       | 3         |
| Poor     | <14         |           |

Based on the test results that can be included in the assessment above, it can be seen that the frequency distribution of 19 samples has agility a quick kick of a pencak silat sickle for 15 seconds is classified as moderate average.

The data collected is then analyzed, for variable X is agility and variable Y is agility from sickle kick. The hypothesis tested is 2 hypotheses, namely the null hypothesis and the alternative hypothesis. The purpose of proving this hypothesis is to see the magnitude of the relationship between the independent variables, namely agility towards the dependent variable, namely the results of the sickle kick agility.

These results will be tested for a significance level of 95%. Thus the results of the analysis can be concluded:

1) **$H_0$** = There is no relationship between agility and sickle kicking. If $R$-count < from $R$-table, the hypothesis is nil accepted.

2) **$H_A$** = There is a relationship of agility to sickle kick agility. If $R$-count > from $R$-table, the null hypothesis is rejected and $H_A$ is accepted.

Based on the calculation of the value of $r$, it is obtained that $r_{count} = 0.523$ then compared with the value of $r$ in the distribution table of the $r$ value in the statistics book with a significance level of 5%. From table $r$, it is known that the value of $r_{table} = 0.456$ means that $r_{count}$ is greater than $r_{table}$. Thus, Ho's research hypothesis (null / initial hypothesis) is rejected and Ha's hypothesis (alternative hypothesis) is accepted. Based on the results of this hypothesis test, it can be concluded that there is a significant relationship between agility and the agility of the martial arts sickle of the Setia Hati Terate Brotherhood athletes in Rokan Hulu Regency.

Based on the results of research data analysis, obtained through testing the proposed research hypothesis provides information that agility provides a significant (convincing) relationship to the agility of the sickle kick in the Setia Hati Terate Brotherhood Pencak Silat athlete in Rokan Hulu Regency. [10] agility is a person's ability to be able to change direction quickly and precisely when moving without losing balance.

Researchers saw that agility contributed greatly to the agility of the sickle kick. That's why in this study the researcher made agility as an independent variable ($X_i$) in this study. However, the researcher also included the results of previous studies as a comparison of the research results of the researchers. The research results are as follows. Research conducted by [11] with the title "The Effect of Limb Muscle Explosive Power, Speed and AgilityKick Speed in Setia Hati Terate Pencak Silat Athletes in the City of Pekanbruon Sickle" states that agility has an influence on the speed of the sickle kick in 57% of the Pencak Silat athletes of the Setia Hati Terate Brotherhood in Pekanbru City. Furthermore, Dair's research [12] entitled "The Contribution of Agility and Speed to the sickle kick in male pencak silat athletes aged 12-14 years", the results of his research stated that agility contributed to sickle kicks by 91.9%.

Based on this description, it can be concluded that agility is the ability to change direction quickly as a sign of losing balance. Agility plays a very important role in the agility of sickle kicks, because with good agility, the athlete will be easy to make sickle kicks.
4. Conclusion
Based on the analysis and discussion of agility with sickle kick agility, it can be concluded that there is a relationship with sickle kick agility in the Pencak Silat Persaudaraan Setia Hati Terate athletes in Rokan Hulu Regency.

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