Jurnal Pendidikan Jasmani (JPJ)
Vol. 5, No.3, April 2025
ISSN: 2723-2816 (Online)

The Effectiveness of Illinois Agility Test in Improving Agility of Soccer Athletes Football Deltras FC

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Abstract
This study aims to test the effectiveness of Illinois Agility Test training in improving agility and motor reaction of Deltras FC soccer athletes. Agility and motor reaction are important physical components in soccer that affect the player's ability to make quick changes of direction and respond optimally to the movement of the opponent and the ball. This study used an experimental method with a pretest and posttest design involving two groups the experimental group that received Illinois Agility Test training and the control group that underwent conventional agility training. The data obtained were analyzed using a paired t-test to determine significant differences between the pre-test and post-test in each group. The results of the analysis showed that there was a significant increase in agility and motor reaction in the experimental group compared to the control group ($p < 0.05$). The average Illinois Agility Test time of the experimental group experienced a greater increase compared to the control group. Likewise in the motor reaction test where the experimental group showed a faster response increase compared to before the intervention.

Keywords: *Illinois Agility Test, Agility, Soccer*

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INTRODUCTION

Football is a sport that requires a combination of various physical skills, such as speed, endurance, agility, and motor reactions. Agility is a major factor in a player's ability to change direction quickly and effectively, especially when facing opponents in one-on-one situations or when avoiding pressure from defenders (Wibowo et al., 2023). In addition, fast motor reactions are very important in responding to ball movements, opponent movements, and overall game strategy. Therefore, a training method is needed that can optimally improve agility and motor reactions (Owen et al., 2020). Agility is a person's ability to move quickly and precisely in various directions without losing balance or body control. In the context of sports and physical activity, agility includes the ability to change direction quickly, change positions efficiently, and adjust body movements to changing situations (Pendidikan et al., 1803). One of the training methods

widely used to improve agility is the Illinois Agility Test. This exercise is designed to develop athletes' ability to change direction quickly through a zigzag trajectory pattern that requires coordination between speed, balance, and body control (Mocanu, 2022). Several studies have shown that this exercise can have a positive impact on agility and motor reaction abilities, especially in athletes in sports that require fast and dynamic movements such as soccer (JASMINE, 2014). Physical in general refers to everything related to a person's body or physique, especially that which can be seen or felt in the context of physical education or sports. Physical refers to the condition of the body related to physical ability and fitness, such as muscle strength, endurance, agility, speed, flexibility (Forthomme et al., 2005).

Agility is a person's ability to change direction quickly without losing balance and body control. In football, agility is very important for Avoiding opponents when dribbling the ball, Changing direction quickly in defensive or attacking situations, Maintaining balance when making fast movements or physical contact with opposing players. Training such as the Illinois Agility Test is often used to measure and improve agility because it reflects movement patterns that often occur in football matches (Pamungkas et al., 2023). According to (Ayala et al., 2012) Reaction Time & Motor Response Reaction time refers to the speed of an athlete in responding to stimuli, be it visual, auditory, or kinesthetic. In soccer, reaction time is essential to quickly respond to an opponent's pass or shot, adjust body position in suddenly changing situations, read the opponent's movement and the ball to make the right decision. Training methods such as the Illinois Agility Test aim to improve the athlete's response speed to visual stimuli, such as the movement of the ball or an opponent. The relationship between agility and reaction time Agility and reaction time are intertwined in soccer.

METHOD

The research method used in this study is the data analysis technique Quantitative analysis of statistical tests t-test to see significant differences between pretest and posttest (Cassidy et al., 2017). This study uses an experimental method to test the effectiveness of the Illinois Agility Test in improving the agility and motor reaction of Deltras FC soccer athletes.

Research Design This study uses a pretest and posttest experimental design with experimental and control groups, where the experimental group follows the Illinois Agility Test training in a training program for a certain period. The control group follows conventional agility training without the Illinois Agility Test. Measurements were taken before and after the

intervention to assess improvements in agility and motor reaction. The subjects in this study were 20 Deltras FC soccer athletes, purposive sampling was selected based on appropriate physical conditions.

The research variables are the independent variable of the Illinois Agility Test training and the dependent variable is the agility and motor reaction of athletes. The data collection technique used is the agility test using the Illinois Agility Test before and after training. The motor reaction test uses a reaction time test to measure the speed of movement response. Observation & documentation monitors training progress and athlete responses. Interviews & Questionnaires collect athlete perceptions of training effectiveness. Qualitative Analysis describes the results of observations and interviews to understand the athlete's experience during the training program. Illinois Agility Test Implementation Procedure

1. Participants prepare at the starting line, lying face down on the floor.

2. At the command "yes" participants run as fast as possible towards the first cone straight with one foot must touch the line.

3. Then turn towards the first cone, doing a zig-zag movement passing the middle/second cone.

4. Spin past the end cone, then do a zig-zag movement back to the middle/second cone to the end.
5. Spin towards the third row of cones in the second row and spin towards the finish line.

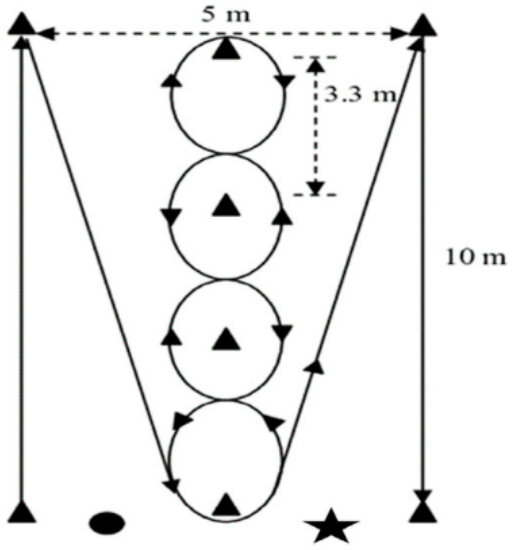

Figure 1. *Illionis Agility Run*

Table 1. Norma *Illionis Agility Run*

Male	
Norms	**Performance Norms (Seconds)**
Very Good	<15.2
Good	16.1 – 15.2
Fair	18.1 – 16.1
Poor	18.3 – 18.2
Very Poor	>18.3

***(Davis et al. 2000)*.**

RESULTS AND DISCUSSION

Result

Table 2. Descriptive Statistical Test

Research Variables	N	*Mean*	*SD*	*Min*	*Max*	*Sum*
Pretest Data Illionis Aglitiy test	20	157.5	3,692	155,77	159,22	825
Posttest Data Illionis Aglitiy test	20	144,9	6,134	142,07	148,82	937

According to the table 2 above, there is an increase in the application of the Illinois Aglitiy test before doing the Illinois Aglitiy test practice on the pretest, obtained an average value of 157.5, standard deviation 3.692, minimum value 155.77 maximum value 159.22, total 825. Meanwhile, in the changes in the Illinois Aglitiy test after implementation on the posttest, obtained an average value of 144.9, standard deviation 6.134, minimum value 142.07, maximum value 148.82, total 937.

Table 3. Normality Test Results

Research variables	**Asymp P > 0,05**	**Description**
(Initial Data) Illinois Aglitiy test	0,157	Good
(Final Data) Illinois Aglitiy test	0,144	Very Good

Table 3 above shows the results of the normality test on the initial data of the Illinois Aglitiy test before the reaction time test exercise was carried out, namely 0.157> 0.05. This shows that the initial data is well distributed. While the final data of the application of the Illinois Aglitiy test before the test was carried out was 0.144> 0.05. In these results it is proven that the final data has increased. Furthermore, the results of the hypothesis test below are obtained as follows

Table 4. Results of the Independent Sample T test

Data *pretest-postest*	*Treatment*	T.Count	P < 0,05	Description
Results of the Illinois Aglitiy test	Initial Data Final Data	5,81	0,000	Significant

Based on the results of the study, the Illinois Agility Test training was proven to be effective in improving the agility and motor reaction of Deltras FC athletes. Several factors that support the effectiveness of this training include.

Discussion

Structured training the illinois agility test program is designed with a systematic training pattern, so that it can improve the ability to change direction quickly. Improved coordination and balance this training requires athletes to optimize body balance when moving quickly, which contributes to improving overall performance. Impact on performance in matches athletes who underwent this training showed improvements in match situations, especially in terms of changing direction and responding quickly to opponent attacks.

Movement coordination Deltras FC as one of the football clubs actively competing in Indonesia, is always looking for the most effective training methods to improve the performance of its players (Abbasi et al., 2022). However, there is still little research that specifically evaluates the effectiveness of the Illinois Agility Test training in order to improve agility and motor reaction for professional football athletes in Indonesia. Therefore, this study was conducted to empirically test the effect of Illinois Agility Test training on these two important aspects in Deltras FC athletes (Fitrah et al., 2024). Agility and Motor Reaction in Football In football, agility and motor reaction are two important factors that affect athlete performance, especially in dynamic and rapidly changing match situations (Berliana et al., 2024).

The results of this study indicate that the Illinois Agility Test can be a recommended training method for soccer teams, especially for players who require optimal agility and reaction speed in the game. Discussion of Illinois Agility Test in Research results based on the research results, the application of the Illinois Agility Test showed a significant increase in the agility and motor reaction of Deltras FC soccer athletes. Some of the main points from the results of this study are: Athletes who underwent training using the Illinois Agility Test experienced an increase in

their ability to change direction quickly. The results of the tests before and after training showed a reduction in time in completing the agility test track. The reaction to visual stimuli also increased, as evidenced by the faster response time when facing changing situations in the game. Athletes were better able to respond to passes and opponent movements after following the Illinois Agility Test training program. Analysis of performance in the match showed that athletes who followed this training were superior in one-on-one duel situations and more efficient in movement without the ball. Increased agility also helps in maintaining balance when facing pressure from opponents.

The Illinois Agility Test has been shown to be an effective training method and can be integrated into a team's training program to improve overall player performance. It is recommended to combine this training with other methods that support the endurance and muscle strength aspects for more optimal results. The results of this study reinforce the importance of agility training in improving the performance of soccer athletes, especially in terms of rapid changes of direction and response to dynamic game situations.

CONCLUSION

This study aims to prove the effectiveness of the Illinois Agility Test in improving the agility and motor reactions of Deltras FC soccer athletes, which is expected to improve their performance on the field. The Illinois Agility Test training has been proven effective in improving the agility and motor reactions of Deltras FC soccer athletes. The results of this study indicate that the Illinois Agility Test method can be applied as part of a training program to improve the performance of soccer athletes, especially in terms of rapid changes of direction and responses to game stimuli.

ACKNOWLEDGMENT

With the highest respect and appreciation, we would like to thank all the Coaches, Staff and Deltras FC football players who have helped this research to be carried out. This research provides valuable insights into the field of sports, especially in the development of training methods to improve the performance of football athletes. Hopefully this achievement will inspire further research and continue to provide benefits to the world of sports.

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