International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Enhancing Speed, Agility and Dribbling in Adolescent Football Players: An 8-Week Training Intervention

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Abstract
Speed and agility are critical performance components for football players, influencing overall athletic success and injury prevention. This study aimed to evaluate the impact of a speed and agility training program on adolescent football players aged 13 to 18 years, focusing on improvements in speed, agility, and dribbling skills. An experimental research design was employed, involving 60 male adolescent football players from The Football Academy, divided into two equal groups (30 experimental and 30 control). The experimental group underwent an 8-week speed and agility training program, consisting of exercises like A skips, mini-hurdle drills, zigzag drills, and lateral shuffles, with progressive intensity. Key performance indicators, including the 35m sprint (speed), Balsom Agility Test (agility), and a dribbling test (speed and agility), were measured pre- and post-training. Data was analyzed using measures of central tendency to compare mean scores before and after the intervention. The experimental group demonstrated significant improvements across all performance measures. In the Balsom Agility Test, mean scores improved from 15.65s (pre-test) to 15.54s (post-test), indicating a 0.11s improvement. Dribbling performance improved from 14.78s to 14.60s, reflecting a 0.18s enhancement. The 35m sprint times decreased from 5.84s to 5.81s, showing a 0.03s gain. In contrast, the control group exhibited negligible improvements, confirming the effectiveness of the targeted training intervention. The findings support the efficacy of structured speed and agility training programs in enhancing the speed, agility, and dribbling skills of adolescent football players. Such programs, when incorporated into regular training, can significantly improve athletic performance, potentially translating to better on-field outcomes. Further studies with larger sample sizes and varied age groups are recommended to validate these findings.

Keywords: Speed Training, Agility, Football Performance, Dribbling Skills, Physical Fitness, Performance Enhancement, Youth Football Development, Motor Skills Improvement, Athletic Performance Testing, Physical Conditioning, Reaction Time.

1. INTRODUCTION

1.1 Background

Speed and agility are essential physical attributes for football players, significantly influencing performance on the field. Speed determines how quickly a player can reach the ball or move into position,

while agility reflects the ability to change direction rapidly without losing balance or control. These skills are critical for both offensive and defensive actions in football, impacting overall game success.

1.2 Importance of Study

Understanding the impact of structured speed and agility training is crucial for optimizing athletic performance. Such training not only enhances physical fitness but also reduces the risk of injuries by improving balance, coordination, and muscle strength. This study aims to provide valuable insights for coaches and athletes, enabling them to develop targeted training plans for youth football players.

1.3 Objectives of the Study

- To assess the impact of speed and agility training on the speed, agility, and dribbling skills of adolescent football players.
- Comparing the performance improvements between trained and untrained groups.

1.4 Hypotheses

- H1: Speed and agility training significantly improves the speed of adolescent football players.
- H2: Speed and agility training significantly improves the agility of adolescent football players.
- H3: Speed and agility training significantly improves the dribbling skills of adolescent football players.

1.5 Scope and Limitations

This study focuses on adolescent male football players aged 13 to 18 years. It is limited to a single training intervention lasting eight weeks and may not account for long-term effects or performance in competitive match settings.

2. Methodology

2.1 Research Design

This study used an experimental research design, involving two groups: an experimental group receiving targeted training and a control group following standard football practice.

2.2 Participants

A total of 60 adolescent male football players from The Football Academy participated in the study. The participants were divided into two equal groups (experimental and control) of 30 players each.

2.3 Training Program

The training program lasted 8 weeks, with sessions focusing on:

- A Skips
- Pogo Jump to Sprint
- Resistance Band 'A' Marches
- Mini Hurdle Change of Direction
- Zigzag Drills
- Lateral Shuffle and Stick

2.4 Data Collection Tools

- 35m Sprint Test (Speed)
- Balsom Agility Test (Agility)
- Dribbling Test (Speed and Agility)

2.5 Data Analysis

The pre- and post-test data were analyzed using measures of central tendency to identify significant improvements in speed, agility, and dribbling skills.

3. Results and Discussion

The statistical analysis of the results obtained for the experimental and controlled group before and after the training program on the collected data and a discussion of findings are presented in this chapter. The study was conducted to find out the effect of speed training program on speed and agility of male football players ranging in age from 13 to 18 years. The data analysis collected from male football players from The Football Academy has been presented by the researcher in this chapter. The experimental group had undergone speed training for a period of eight weeks with three training sessions per week. The pre-test and post-test were administrated to collect data on selected variables. The tests selected were Balsom agility test for agility and dribbling test for dribbling skills also the 35mtr sprint for speed. The pre-test and posttest data of the experimental and controlled group on the respective variables were analyzed using measures of central tendency mean.

3.1 Comparison of Mean Scores of Pre and Post-Test Data of 35mtr sprint of the Controlled Group

Controlled Group	35 mtr sprint (in sec) mean score
Pre-Test	6.3
Post-Test	6.29

Table 3.1 Comparison of mean scores of pre and post-test data of 35mtr sprint of the controlled group.

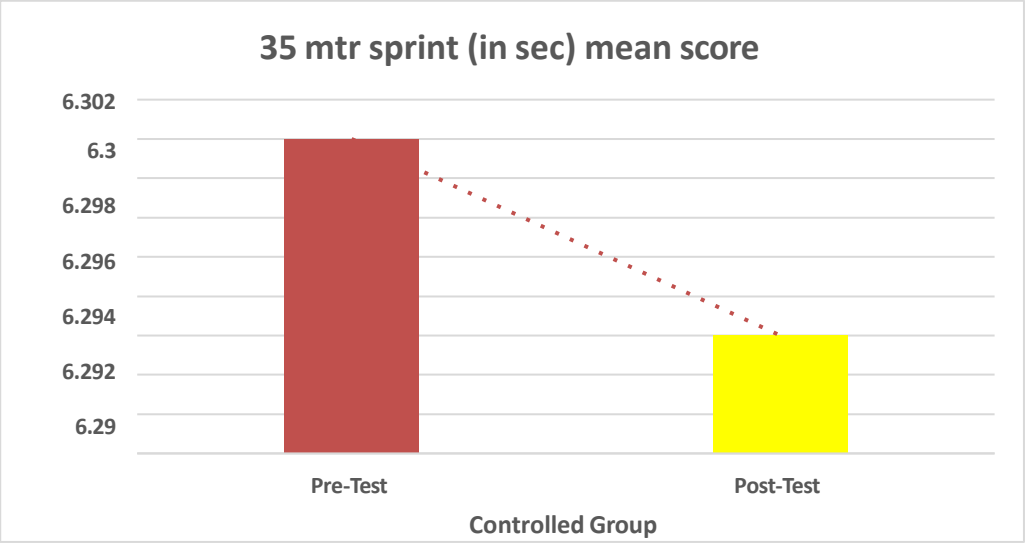

Figure 3.2 Graphical Representation of comparison of mean scores of pre and post-test data of 35mtr sprint of the controlled group.

From Table 3.1 and Figure 3.2, the controlled group negligibly improved with the mean scores at 6.30 in the pre-test and 6.29 in the post-test results respectively. Also, the analysis of the data shows that post-test results are better with a mean difference of 0.01.

3.2 Comparison of Mean Scores of Pre and Post-Test Data of Balsom agility test of the Experimental Group

Experimental Group	Balsom agility test (In sec) Mean Score
Pre-Test	15.65
Post-Test	15.54

Table 3.3 Comparison of mean scores of pre and post-test data of Balsom agility test of the experimental group.

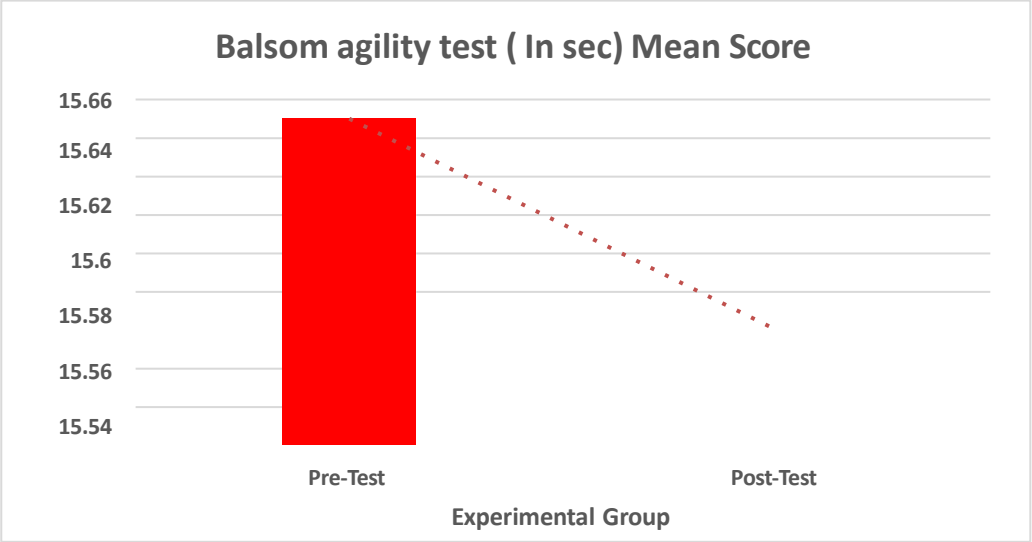

Figure 3.4 Graphical Representation of comparison of mean scores of pre and post-test data of Balsom agility test of the experimental group.

From Table 3.3 and Figure 3.4, it can be seen that the experimental group with mean scores of 15.65 in the pre-test and 15.54 in the post- test results respectively. Also, the analysis of the data shows that post-test results are better with a mean difference of 0.11.

3.3 Comparison of Mean Scores of Pre and Post-Test Data of Dribbling test of the Experimental Group

Experimental Group	Dribbling Mean Score
Pre-Test	14.78
Post-Test	14.6

Table 3.5 Comparison of mean scores of pre and post-test data of dribbling test of the experimental group.

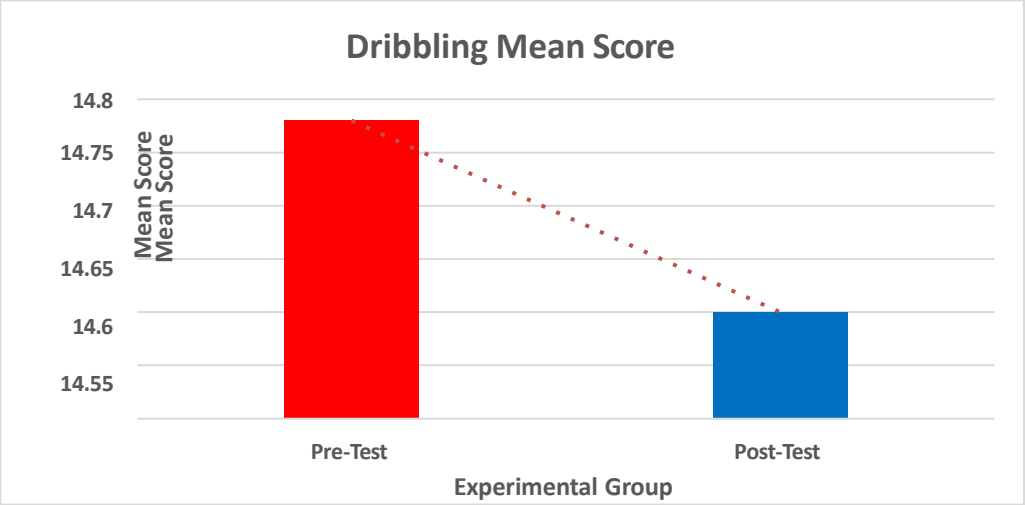

Figure 3.6 Graphical Representation of comparison of mean scores of pre and post-test data of dribbling test of the experimental group.

From Table 3.5 and Figure 3.6, the experimental group showed good improvement with mean scores of 14.78 in the pre- test and 14.60 in the post-test results respectively. Also, the analysis of the data shows that post-test results are better with a mean difference of 0.18.

3.4 Comparison of Mean Scores of Pre and Post-Test Data of 35mtr sprint of the Experimental Group

Experimental Group	35 mtr sprint (in sec) mean score
Pre-Test	5.84
Post-Test	5.81

Table 3.7 Comparison of mean scores of pre and post-test data of 35mtr sprint test of the experimental group.

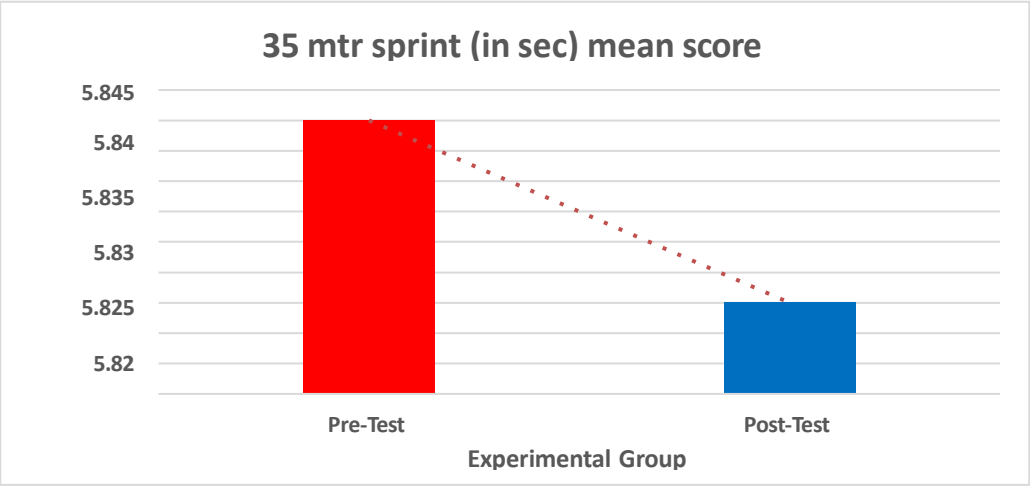

Figure 3.8 Graphical Representation of comparison of mean scores of pre and post-test data of 35mtr sprint test of the experimental group.

From Table 3.7 and Figure 3.8, the experimental group showed good improvement with mean scores of 5.84 in the pre- test and 5.81 in the post-test results respectively. Also, the analysis of the data shows that post-test results are better with a mean difference of 0.03.

4. Conclusion

The findings demonstrate that structured speed and agility training significantly improves the performance of adolescent football players. The study provides a solid foundation for developing effective training programs for youth athletes. Within the limitations of the study and based on the results, the following conclusions may be drawn.

1. The speed training program made a significant improvement in the agility with a mean difference of 0.11sec in the pre-test (15.65sec) and post-test (15.54sec) scores.
2. The speed training program made a significant improvement in dribbling skills with a mean difference of 0.18 sec in the pre-test (14.78sec) and post-test (14.60sec) scores.
3. The speed training program made a significant improvement in speed with a mean difference of 0.03sec in the pre-test (5.84sec) and post-test (5.81sec) scores.

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