

[https://doi.org/ 10.33472/AFJBS.6.9.2024.4637-4641](https://doi.org/10.33472/AFJBS.6.9.2024.4637-4641)



African Journal of Biological Sciences

Journal homepage: <http://www.afjbs.com>



Research Paper

Open Access

Effect of SAQ Training on Stride Length among Boys Sprinters

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Article History: Volume 6, Issue 9, 2024

Received: 30 Apr 2024

Accepted : 17 May 2024

doi: 10.33472/AFJBS.6.9.2024.4637-4641

Abstract

Speed, Agility and quickness (SAQ) training is an innovative training to develop the whole some efficiency of the athlete for the performance development. SAQ training is intended to increase the ability to exert maximal force during high-speed movements. It manipulates and capitalizes on the stretch-shortening cycle while bridging the gap between traditional resistance training and functional specific movement (Brown & Ferrigno, 2005).

Objective: The aim of this study was to analysis the effect of Speed, Agility, and Quickness (SAQ) Training program on Stride Length among Boys Sprinters.

Methods: Twenty Boys sprinters studying in Kalaburagi district were selected randomly as subjects. Their age ranged from 16 to 19 years. They were divided into 2 equal groups. Group 1 (Experimental group i.e., G1=10) was subjected to Speed, Agility, and Quickness (SAQ) training for 3 alternate days in a week and group 2 (Control group i.e., G2=10) under gone conventional training for a period of 4 weeks under normal conditions. Data from pretest and post-test was collected in 50 meters run to test the Stride Length. True Experimental Research Design was used. Paired t-test was used to find out the significant difference between pre and post-test.

Result: The result showed that there was a significant improvement in Stride Length among Boys Sprinters by undergoing Speed, Agility and Quickness (SAQ) training for 4 weeks.

Conclusion: Based on this result, it was concluded that SAQ training can be used to improve Stride Length in Boys Sprinters.

Key words: SAQ training, Stride Length, true experimental research design

Introduction

Speed, agility, and quickness (S.A.Q) training has become a popular way to train athletes. Whether they are school children on a soccer field or professional in a training camp, they can all benefit from speed, agility, and quickness training. This method has been around for several years, but it is not used by all athletes primarily due to a lack of education regarding the drills, speed, agility, and quickness training may be used to increase speed or strength, or the ability to exert maximal force during high speed movements. Some benefits of speed, agility, and quickness training include increases in muscular power in all multi planar movements; brain signal efficiency; kinaesthetic or body spatial awareness; motor skills; and reaction time.

SAQ training can cover the complete spectrum of training intensity, from low to high intensity. Every individual will come into a training programme at a different level; thus training intensity must coincide with the individual's abilities. Low intensity speed, agility, and quickness drills can be used by everyone for different applications. SAQ drills can also be used to teach movement, warm-up, or to condition an athlete. No significant preparation is needed to participate at this level of speed, agility, and quickness training. Higher intensity drills require a significant level of preparation. A simple approach to safe participation and increased effectiveness is to start a concurrent strength-training programme when starting speed, agility, and quickness training (McGhee, 1979).

Speed, agility and quickness (SAQ) is used to improve reaction speed, change of direction, co-ordination, balance and neuromuscular activity, (Brown et al. 2005). This training method is becoming the most common protocol to train soccer players. This type of training program touches on developing all the different movement patterns required within soccer. Sprints in soccer are usually not in straight line but include several changes of direction. Therefore SAQ should be useful to train all the components of soccer. Previous studies have shown that power, speed and quickness can be improved with SAQ training but not agility with and without the ball. This type of training only leads to improvements in lateral agility but no improvements occur with linear movements. Therefore, specific benefits can be achieved with SAQ training. Consequently, speed (linear direction), agility and quickness should be considered as separate motor abilities (Milanović, et al. 2013).

Objective of the study

The aim of this study was to find out the effect of Speed, Agility and Quickness (SAQ) Training program on Stride Length among Boys Sprinters

Hypotheses

It was hypothesized that 4 weeks of SAQ Training will have: 1) Significant improvement in the performance of Stride Length among Boys Sprinters.

Methodology

Twenty Boys sprinters studying in Kalaburagi district were randomly selected as subjects. Their age ranged from 16 to 19 years. Subjects were randomly assigned into two equal groups. Experimental group (G1=10) was subjected to SAQ training and Control group (G2=10)

was given conventional training in the morning session for a period of 4 weeks. Training group involved in SAQ training for 3 alternate days in a week. All trainings were under normal conditions.

Collection of data

Pre and post test data was collected from all subjects. Stride Length was assessed by 50 meters run test. Paired t-test was used to find out the significant difference between pre and post-test. True Experimental Research Design was used.

Selection of subjects

To achieve the purpose, 20 Boys sprinters were selected randomly from Kalaburagi district. The age group of subjects ranged between 16 years and 19 years.

Test Procedure

50 meters speed test

The test involves running a single maximum sprint over 50 meters, start from a stationary standing position.

Statistical Analysis

The data pertaining to the variables in this study were examined by using paired 't' test to find out the significant improvement tested at 0.05 level of significance. The analysis of paired 't' test on data obtained for Stride Length of the pretest and posttest means of Experimental and Control group are presented in Table 1.

Variable	Group	Test	Mean	SD	t- Value
Stride Length	Experimental Group	Pre-test	47.5500	9.55579	12.286*
		Post-test	68.8500	9.25245	
	Control Group	Pre-test	57.9000	23.94050	.201
		Post-test	57.3000	23.55754	

* Significance at 0.05 Tab 't' at 0.05 = 1.97

Table 1 Shows that the experimental group's mean performance value of Stride Length of pre-test is 47.5500 and the post test is 68.8500 the post-test Stride Length performance is more than pre-test Stride Length performance and also the 't'- value is more than the table value. Hence it indicates significant decreased of Stride Length. The control group's mean performance value of pre and post-test values are 57.9000 and 57.3000 respectively. The 't'- value is less than the table value. Hence the pre and post-test values indicate insignificant.

Figure No.1. The Pre-test and Post-test for SAQ Training Experimental Group and Control Group on Stride Length performance.

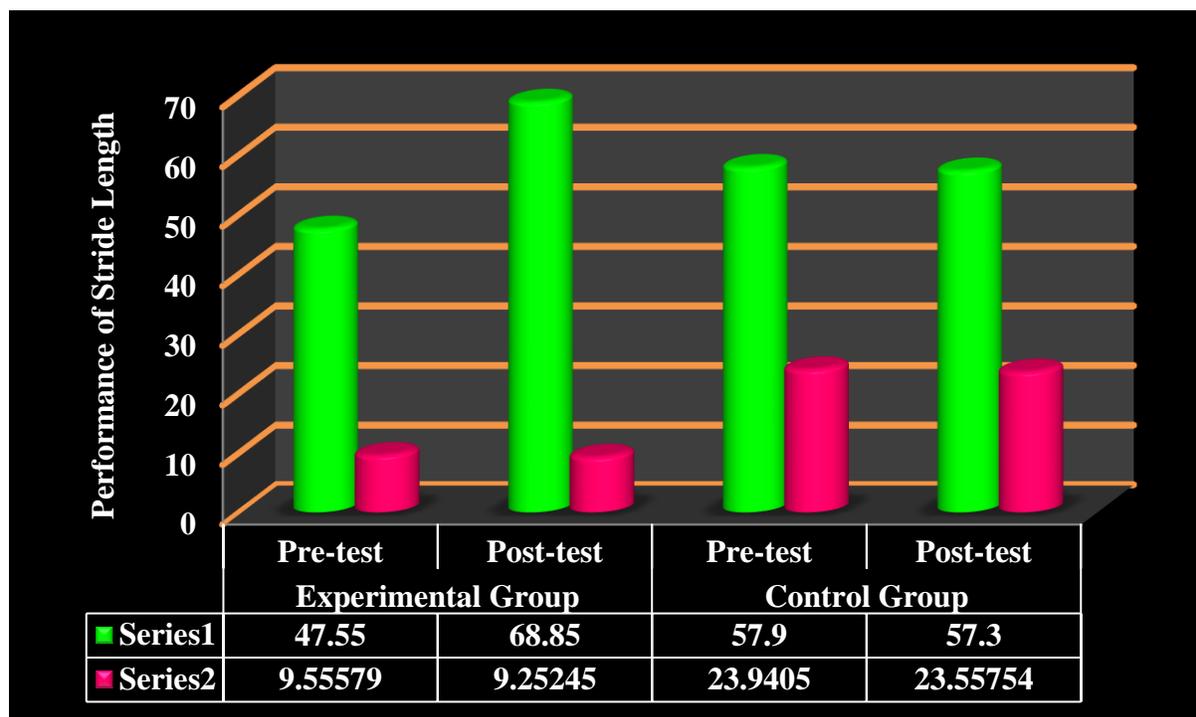


Figure1. (a) Indicates that the post test values of Experimental group significantly improved the performance of Stride Length and also the post-test values of Stride Length were more than the pre test values due to 4 weeks of SAQ Training. The Control group pre- test and post- test performance of Stride Length shows no improvement.

Summary

The purpose of this study was to find out the “Effect of SAQ Training on Stride Length among Boys Sprinters”. To achieve this purpose 4 weeks SAQ Training was given to selected Boys subjects. To know the SAQ Training increased Stride Length performance.

Conclusion

The SAQ training group had shown significant improvement in selected Sprinting Ability such as a Stride Length among Boys Sprinters. The control group had not shown any significant changes on selected Sprinting Ability of Stride Length among Boys Sprinters.

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