



# EFFECTS OF GAME SPECIFIC AEROBIC TRAINING ON MOTOR FITNESS COMPONENTS AMONG FOOTBALL PLAYERS

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## ABSTRACT

The rationale of this study was to explore the effect of game specific aerobic training on motor fitness components among football players. To achieve this purpose of the study thirty college level men football players were selected from Saraswathi Narayanan College (Autonomous), Madurai, Tamilnadu, India were randomly selected as subjects. Their age ranged in between 21 and 25 years. The subjects were divided into two groups namely game specific aerobic group and control group. The game specific aerobic band group was subjected (for weekly three days monday, wednesday, friday) at evening session for eight weeks. Speed, agility & endurance were selected as dependent variable. After the collection of appropriate data, it was statistically analyzed by using paired 't' test. The level of significance was set at 0.05. The result of the present study showed that the game specific aerobic training has significant improvement on Speed, agility & endurance of football players.

**KEYWORDS:** Specific Aerobic Training, Speed, Agility & Endurance, Football Players.

## 1. INTRODUCTION

Aerobic training focuses on the aerobic energy system and the cardiovascular system, which promotes oxygen supply and use. Aerobic training should be done at least three times a week, at a heart rate of 70 to 80 percent of maximum heart rate, and should last 30 minutes or more. Aerobic training is appropriate for all sports since it establishes a foundation for an athlete's fitness. This is because the cardiovascular system will be specifically developed by exercise, and oxygen delivery is critical in the recovery of each energy system. Marathons, triathlons, long distance cycling such as the Tour de France, and Iron Man are some of the sports that aerobic training is better suited too.

## 2. REASONS FOR SELECTION OF THE TOPIC

The investigator reviewed the number of scientific articles, journals, books, self analyzed and found that selected motor fitness component would influence of aerobic training. The investigator, being a football player, coach, selector, and official was motivated to find out the impact of effect of game specific aerobic training on motor fitness components among

football players. Moreover, very little research had been done on game specific aerobic training among football players. This also motivated the investigator to take-up the study.

## 3. METHODOLOGY

The rationale of this study was to explore the effect of game specific aerobic training on motor fitness components among football players. To achieve this purpose of the study thirty college level men football players were selected from Saraswathi Narayanan College (Autonomous), Madurai, Tamilnadu, India were randomly selected as subjects. Their age ranged in between 21 and 25 years. The subjects were divided into two groups namely game specific aerobic training group and control group. The game specific aerobic training group was subjected (for weekly three days monday, wednesday, friday) at evening session for eight weeks. Speed, agility & endurance was selected as dependent variable. After the collection of appropriate data, it was statistically analyzed by using paired 't' test. The level of significance was set at 0.05.

**Table-I**  
**CRITERION MEASURES**

The test used to assess the motor fitness components are given in.

Variables	Test items	Unit of measurements
Speed	50 meters dash	Second (1/100 sec)
Agility	Zig Zag run	Second (1/100 sec)
Endurance	12 minutes run & walk	In Meters

#### 4. TRAINING PROCEDURE

For game specific aerobic group underwent their training programme as three days per week for eight weeks. Training was given in the evening session. The training session includes warming up and cool down. Every day the workout lasted for 45 to 60 minutes approximately. The

subjects underwent their training programmes as per the schedules such as slow movements, medium movements & fast movements under the strict supervision of the investigator. During experimental period control group did not participate in any of the special training.

#### 5. RESULTS

**Table-II**  
**Comparison of Mean, and 't'-Values of Motors Fitness Components between Pre & Post Test among Game Specific Aerobic and Control Groups**

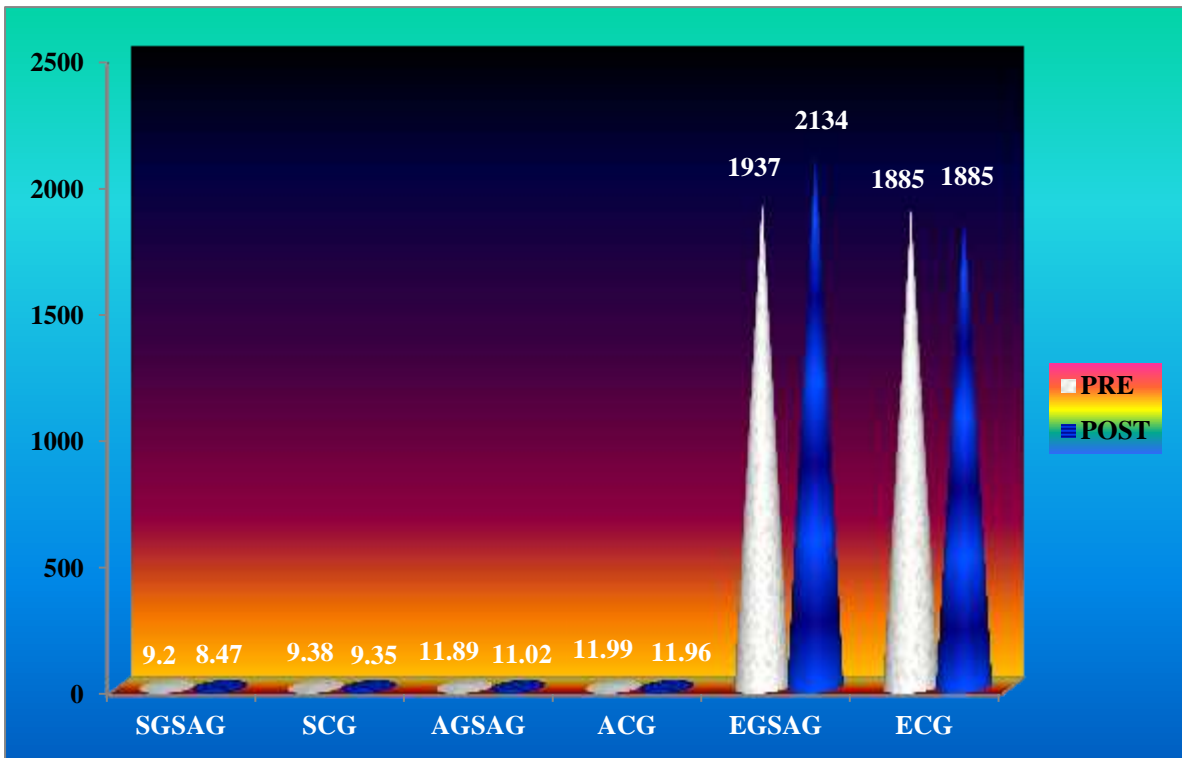
S. No	Motors Fitness Components	Groups	Test	Mean	't' Values
1.	Speed	Game Specific Aerobic group	Pre Test	9.20	8.41*
			Post Test	8.48	
		Control group	Pre Test	9.38	1.10
			Post Test	9.35	
2.	Agility	Game Specific Aerobic group	Pre Test	11.89	11.63*
			Post Test	10.92	
		Control group	Pre Test	11.99	1.16
			Post Test	11.96	
3.	Endurance	Game Specific Aerobic group	Pre Test	1937	47.13*
			Post Test	2134	
		Control group	Pre Test	1885	1.23
			Post Test	1885	

\*Significant at 0.05 level of confidence

Table-II reveals that the obtained mean values of pre test and post test of game specific aerobic group for Speed, agility & endurance were 9.20 and 8.47, 11.89 and 11.02, 1937 and 2110 respectively; the obtained 't' ratio were 8.41\*, 11.63\* and 47.13\* respectively. The tabulated 't' value is 2.14 at 0.05 level of confidence for the degree of freedom 14. The calculated 't' ratio was greater than the table value. It is found to be significant change in Speed, agility & endurance of the football players. The obtained mean values of pre test and post

test scores of control group were 9.38 and 9.35, 11.99 and 11.96, 1885 and 1885 respectively, the obtained 't' ratio was 1.10, 1.16 and 1.23. The required table value is 2.14 at 0.05 level of confidence for the degree of freedom 14. The calculated 't' ratio was lesser than the table value. It is found to be insignificant changes in Speed, agility & endurance of the football players. The mean values of motor fitness components among game specific aerobic group and control group are graphically represented in figure-1.

**Figure-1: Bar Diagram Showing the Pre Test and Post Test on Selected Skill Performance Variables of Game Specific Aerobic Training and Control Groups (SGSAG, SCG, AGSAG, ACG, EGSAG & ECG)**



## 6. DISCUSSION ON FINDINGS

The result of the study indicates that the experimental group namely game specific aerobic training groups had shown significant improvement in all selected motor fitness components among the football players. The control group football players had not shown significant changes in any of the selected variables. The analysis of the study indicates that the game specific aerobic training group had shown significant level difference in speed, agility, and endurance among football players.

It is inferred from the literature and from the result of the present study. That systematically designed training develops dependent variables are very importance quilts for better performance in almost all sports and games. Hence it is concluded that systematically designed training may be programmes of all the discipline in order to achieve maximum given due recognition and implemented properly in the training performance. These findings are in accordance with the findings of **Ooraniyan and Senthil Kumaran (2018)**, **Rashiti (2016)** and **Kumar (2013)**.

## 6. CONCLUSIONS

From the analysis of the data, the following conclusions were drawn.

1. The football players of control group had not shown significant changes in any of the selected variables.
2. The Game specific aerobic training group shown significant improvement in all selected motor fitness components among football players.

3. There football players who had undergone eight weeks of specific aerobic training showed significant improvement in speed, agility and endurance when compared with control group.

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