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**COMPARISON OF SPEED ENDURANCE BETWEEN RURAL AND URBAN ADOLESCENT SOCCER PLAYERS**

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**ABSTRACT**

*Speed endurance is an important factor to determine tempo of the game/ sport. In soccer the player who can immediately establish speed with low recovery may succeed the game demand. The aim of the study was to compare Speed Endurance between rural and urban adolescent boys. To achieve the purpose of the study forty footballers (15-17 years) purposively selected from Jaffna, Sri Lanka. The selected subjects were divided in two group of twenty each. Group I (urban, n=20, practice football 120 min/day/3days/week/ over the period of minimum 7 years) and Group II (n= rural 20, practice football 120 min/day/3days/week/ over the period of minimum 7 years). The Data were collected on speed endurance by using sprint fatigue test and collected data were statistically analyzed by using independent- samples 'T' test. The results revealed that urban footballers are better than rural footballers on speed endurance. Hence it was concluded that, urban footballers were better than rural footballers, due to the good nutrition, knowledge of the coach and the way to familiarize to advance science training. From the result of this study it was recommended that, science base training and good nutrition leads to good training adaptation. Thus enrich the tempo and beauty of the soccer match.*

**Key words:** Speed endurance, sprint, fatigue

**INTRODUCTION**

Football is the definition of beauty. All over the world large numbers of peoples are watch, play and enjoy this game, because of the duration, fluidity and feasibility. Soccer game is decided and become highly tempered by frequent sprints and high intensity running. This type of physical exertion may fatigue the players and loose the pressure of the match. So adequate and appropriate training on physiological as well as physical variables may influence on soccer to become beautiful.

Frequent Sprints in soccer up to 7 seconds utilizes the ATP/CP energy stores and the ATP and PCr system provides the immediate energy for exertion. Recovery between sprints during soccer match is very less, therefore every player has to get neutralize soon as possible. Good training regimen can improve the clearance rate of lactate and reduce early lactate formation. In recent years, short duration exercise (10–30 s) maximal/near maximal range, also called speed endurance training. This training can be innovative and time efficient strategy to induce rapid physiological remodeling and enhance work capacity (Iaia FM, and Bangsbo J 2010).

The intermittent exercise associated with soccer contributes both the aerobic and anaerobic energy systems. Training programmes for players will therefore need to include activities and exercise prescriptions that stress these systems. Players also need to possess muscles that are both strong and flexible. These attributes are important for the successful completion of the technical actions (e.g., passing, shooting, etc.) which ultimately determine the outcome of the match. Effective ways to develop both strength and range of movement, especially in the lower limbs, also needs to be systematically planned and performed in training (Morgans, R et al 2014).



*Speed endurance* is the ability to prolong the amount of time where a near maximal speed can be maintained. The lactic accumulation is the limiting factor for performance enhancement. During such activity, accumulation of lactic acid disturbs the excitation-contraction coupling and cross-bridge formation, (Wikipedia 2016) . Puberty to adulthood may be roughly divided into three stages: early adolescence, generally ages eleven to fourteen; middle adolescence, ages fifteen to seventeen; and late adolescence, ages eighteen to twenty one. The physiological development and adaptation through training can be perfectly acclimatized in this stage. Recovery is main factor to determine ability to perform frequent sprinting without losing much of the peak performance. Nutrition plays a vital role in recovery. Family income and expenditure towards food have been much difference in rural and urban areas. Hence the purpose of the study was to compare speed endurance among urban and rural footballers.

### OBJECTIVE OF THE STUDY

The research question was raised on speed endurance which essential for soccer players that lacks in urban footballers. The common myth of the new ideology is urban players are less fit than compare to rural players. Therefore the objective of the present study was intent to compare and find out speed endurance performance between rural and urban football players.

### METHODOLOGY

To achieve the purpose of the study forty footballers (15-17 years) purposively selected from Jaffna, Sri Lanka. The selected subjects were divided in two group of twenty each. Group I (urban, n=20, practice football 120 min/day/3days/week/ over the period of minimum 7 years) and Group II (n= rural 20, practice football 120 min/day/3days/week/ over the period of minimum 7 years). The Data were collected on speed endurance by using sprint fatigue test and collected data were statistically analyzed by using independent-samples 'T' test.

### RESULTS

#### COMPARISON OF SPEED ENDURANCE BETWEEN URBAN AND RURAL FOOTBALL PLAYERS

Variable	Group	Mean	SD	SE	"t"
Speed Endurance	Urban	6.61	0.40	0.09	3.89*
	Rural	7.03	0.28	0.06	

\*Significant at .01 level of confidence. with df (1, 38) is 2.71

The result shows that urban footballers were better than rural footballers on Speed Endurance. Hence it was concluded that, urban footballers have better Speed endurance average value than rural football players.

### DISCUSSION

Football is a most precious game in the world and the physiological demands of soccer are complex. The need to include a number of components of fitness into the training programmes of soccer players would indicate that the exercise prescription should be multi-dimensional. This complexity is partly a consequence of the nature of the exercise pattern. The requirement for frequent changes in both the speed of movement (e.g., walking, jogging, high intensity running, and (sprinting) and direction, makes the activity profile intermittent (Morgans, R et al 2014). Performance enhancement is depends on the science based training and nutrition. In Jaffna Sri Lanka most of the soccer playing schools and clubs are located in seaside and the peoples are naturally fit to undergo various training method. The selection of subjects to



this present study were underwent soccer training in good reputed schools and the school society offered balanced nutrition to the players. This may influence of performance enhancement on speed endurance through good training regimen and balanced nutrition.

Technical/tactical sessions are frequently the priority in the training plan and will therefore often take priority over all other training activities. However, it remains unclear which peculiar features of a training stimulus are required to induce optimal adaptations in targeted areas. A potential key element for determining the adaptive response is the duration of the recovery intervals, or the exercise: recovery ratio (Buchheit, M., Laursen, P. B. 2013, and Bishop D et al 2011).

### CONCLUSION

Hence it was concluded that, urban footballers have better Speed endurance average value than rural football players.

### RECOMMENDATION

From the results of this study and better understanding of the different genres, science base training and good nutrition leads to good training adaptation. Thus enrich the tempo and beauty of the soccer match.

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