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Effect of Aerobics Training on Selected Motor Variables of High School Soccer Players

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Abstract

The purpose of the study was to find out the effect of Aerobics training on selected Motor Variables of High School Soccer's. For this purpose 40 subjects were selected from Govt girls higher secondary school, Nilakottai, Dindugal, age between 13 and 15 years were selected. They were divided into two equal groups namely Aerobics training group (N=20) underwent Aerobics training and control group (N=20) did not participate in any special training. The data were collected on the selected variable before and after the training programme. The training programme was fixed for 8 weeks, 5 days per week and one training session designed for 60 minutes. The't' ratio was used to analyze the data. The result revealed that the Aerobics training significantly improved the selected Motor Variables like cardio respiratory endurance and speed of High School Soccer's.

Keywords: Aerobic Exercise, Agility, Cardio Respiratory Endurance, Soccer.

Introduction

Aerobic exercise, also referred to as cardiovascular exercise, are those exercises that get your heart pumping within your target heart rate zone. As you perform cardio exercises, you are moving your arms and legs with a rhythmic movement that allows your body to pump blood and oxygen to all parts of your body. This strengthens your heart, burns calories and burns fat. There are many different types of aerobics so your workout routine will never get boring. Many activities you may perform daily could be considered cardiovascular exercises such as mowing the lawn, walking the dog or even going up and down the stairs to do laundry. But to really get the benefit from aerobics, you want to try incorporating a structured workout routine that includes activities such as walking, running, swimming, bicycling, dancing or some form of high activity exercises.

Soccer is the most popular sport in the world and is performed by men and women, children and adults with different levels of expertise. Soccer performance depends upon a myriad of factors such as technical/biomechanical, tactical, mental and physiological areas. One of the reasons that soccer is so popular worldwide is that players may not need to have an extraordinary capacity within any of these performance areas, but possess a reasonable level within all areas. However, there are trends towards more systematic training and selection influencing the anthropometric profiles of players who compete at the highest level. As with other activities, soccer is not a science, but science may help improve performance. Efforts to improve soccer performance often focus on technique and tactics at the expense of physical fitness. Women's football in India was administered by the Women's Football Federation of India (WFFI) until early 1990s, when the AIFF took over the administration of women's soccer in the country. Just like the men's game, the women's game had its early pioneers from the state of West Bengal. The women's clubs were started by East Bengal and Mohun Bagan clubs in 2000-01 season. National championships for both senior and junior girls are also held.

Thomas **Reilly (1990)** visits that strength in lower limps of obvious concern in foot ball, quadriceps and hamstrings muscles are most used muscles for jumping, kicking, and tacking. Upper body strength employed in throw in and the strength of the neck flexors is important for heading the ball forcibly.

Obeng (1986) add proved the implication of the positive relation between leg strength and kick performance. The foot ball players must manage both of his body and the ball with his is feet and have to move with varied speed of direction. Agility is highly depend upon inter with speed, strength, balance, and co-ordination

Methodology

For this study forty High School Soccer's were selected as subject at random and their age was between 13 -15 years, the selected subjects were divided into two groups of twenty each. They were divided into two equal

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groups namely Aerobics training group (N=20) underwent Aerobics training and control group (N=20) did not participate in any special training. The data were collected on the selected variable before and after the training programme. The training was fixed for a programme of 8 weeks, 5 days per week and one session of 60 minutes per day. Cardio respiratory endurance was selected as dependent variable and it was measured by 12mins cooper test and speed was measured by 50 yard dash test. All the subjects were tested on selected criterion variables prior to and immediately after the training period. For this training programme the following skills were used namely Power walk, V-step, V-step with clap, High knee, T-step, A –step, Jumping jacks. The total duration of the training programme was fixed for 60mins including warm up and warm down. For every two weeks the mode of exercise will be fixed with two sets of three repetitions.

Results

Table I. Computation of 't' ratio between the pre test and post test means of cardio respiratory endurance and speed of experimental group

VARIABLES	PRE-TEST	POST-TEST	MD	SEM	t-ratio
Cardio respiratory Endurance (in metres)	954.67 ±61.58	1015 ±53.02	60.33	20.89	2.83*
Speed (in seconds)	7.99 ±0.98	6.70 ±0.80	0.98	0.27	3.66*

*Significant at 0.05 level

The Table 1 reveals that the obtained t-ratio between pre and post test values of aerobic exercise training package groups on namely physical components Cardio respiratory Endurance and Speed . The pre-test mean values of Cardio respiratory Endurance and Speed are 954.67 and 7.99 respectively. The post-test mean values of Cardio respiratory Endurance and speed are 1015, 17 and 6.70 respectively. The obtained t-values of Specific Aerobic Exercise training package Group for Cardio respiratory Endurance and Speed are 2.83 and 3.66 respectively. The required table value was 2.14. Since the obtained t-ratios are greater than the required table value at 0.05 level of confidence It was observed that the mean gains and losses statistically significant resulting that eight weeks practice of Specific Aerobic Exercise training package showed positive sign as having the significant improvement in Cardio respiratory Endurance (60.33P<0.05) and Speed (0.98,P<0.05) Hence the investigator's second hypothesis to these variables was accepted.

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Table II. Computation of 't' ratio between the pre test and post test means of cardio respiratory endurance and speed of control group

VARIABLES	PRE-TEST	POST-TEST	MD	SEM	t-ratio
Cardio respiratory Endurance (in metres)	928.87 ±44.56	890.27±68.26	38.60	20.09	1.92
Speed (in seconds)	8.71 ±1.21	9.16 ±0.81	0.44	0.32	1.39

*Significant at 0.05

The Table 2 reveals that the obtained t-ratio between pre and post test values control group on namely physical components Muscular strength and endurance, Cardio respiratory Endurance and Speed. The pre-test mean values of Cardio respiratory endurance and Speed are 928.87 and 8.71 respectively. The post-test mean values of Cardio respiratory endurance and Speed are 890.27 and 9.16 respectively. The obtained t-values of control group for Cardio respiratory endurance and Speed are 1.92 and 1.39 respectively. The required table value was 2.14. Since the obtained t-ratios are lesser than the required table value at 0.05 level of confidence It was observed that the mean gains and losses statistically insignificant resulting that the control group has not produced any significant improvement on Cardio respiratory Endurance (38.60,P<0.05) and Speed (0.44,P<0.05) Hence the investigator's second hypothesis to these variables was not accepted.

Conclusions

Within the limitations of the present study the following conclusions were drawn.

1. It was concluded that eight weeks of Aerobics training has significantly improvement on cardio respiratory endurance of High School Soccer's.
2. It was concluded that eight weeks of Aerobics training has significantly improvement on speed of High School Soccer's.

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