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Effect of Fartlek Training on Selected Bio-Chemical Variables among Women Football Players

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Abstract

The purpose of the study was to investigate the effect of fartlek training on selected bio-chemical variables among football players. It was hypothesized that there would have been a significant effect of fartlek training on selected bio-chemical variables among football players. For the present study 30 women University football players from Thiruvalluvar University, Vellore, Tamilnadu were selected at random and their age ranged from 18 to 21 years. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent fartlek training and Group 'B' underwent no training. The variables such as total cholesterol, LDL and HDL were assessed by enzymatic calorimeter method. The data was collected before and after twelve weeks of training and analyzed by applying Analysis of Co-Variance (ANCOVA). The level of significance was set at 0.05. Significant effect of fartlek training was found on total cholesterol, LDL and HDL.

Keywords: Fartlek, LDL, HDL, Cholesterol, Football.

Introduction

Fartlek means "speed play" in Swedish, is a training method that blends continuous training with interval training. The variable intensity and continuous nature of the exercise places stress on both the aerobic and anaerobic systems. It differs from traditional interval training in that it is unstructured; intensity and/or speed varies, as the athlete wishes. Most fartlek sessions last a minimum of 45 minutes and can vary from aerobic walking to anaerobic sprinting. Fartlek training is generally associated with running, but can include almost any kind of exercise. Swedish coach Gosta Holmer developed fartlek in 1937, and, since then, many physiologists have adopted it. It was designed for the downtrodden Swedish cross country running teams that had been beaten throughout the 1920s by Paavo Nurmi and the Finns. Holmer's plan used a faster-than-race pace and concentrated on both speed and endurance training. The fartlek method of training was introduced to the United States in the 1940s. Fartlek Hill in Quantico, Virginia, on the grounds of United States Marine CorpsOfficer Candidates School, is named after fartlek training. The hill is the central part of the fartlek-type physical training regularly conducted throughout the training cycle. The fartlek training done at Officer Candidate School differs from traditional fartlek training, however, by incorporating a number of calisthenic exercises at various intervals. Fartlek is a form of road running or cross country running in which the runner, usually solo, varies the pace significantly during the run. It is usually regarded as an advanced training technique, for the experienced runner who has been using interval training to develop speed and to raise the anaerobic threshold. However, the 'average' runner can also benefit from a simplified form of Fartlek training, to develop self-awareness and to introduce variety into the training program.

Football is also referred to as soccer in some parts of the world, is a high-energy athletic team sport in this new age. It would be a joy to trace the birth and growth of this popular sport. It said that the number of countries that are FIFA members even outnumber the members of United Nations Organizations – another undeniable proof of the game's popularity. Since 1900, football has also been integral part of the greatest sports extravaganza in the world, the Olympics. The game, as we know it today, has been followed in a feverish fashion in Europe, especially in England, for centuries. In fact, the game has been followed by men and women throughout the world. The first recorded game took place as early as A.D. 217 in the town of Derby in England. This particular game was once part of a grand festival that was celebrated by the local folk after the victory over the invading Romans. The tradition bound English men also conducted annual football events ever since. One of them is the Shrove Tuesday football game being played since 1175 (Morris, 1981).

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Methodology

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Results

The findings pertaining to analysis of co-variance between experimental group and control group on selected bio-chemical variables among women football players for pre-post test respectively have been presented in table I to II.

Table I. Descriptive Analysis and 't' ratio of Selected Bio-Chemical Variables of Fartlek Training Group

Sl.No	Variables	Pre Test Mean	Post Test Mean	Mean Difference	SD (±)	σ DM	't' Ratio
1	Total Cholesterol	200.67	182.51	18.16	6.09	1.57	11.54*
2	LDL	65.10	72.94	7.84	2.17	0.56	13.94*
3	HDL	117.96	107.82	10.14	2.73	0.70	14.35*

The above table documents the pre & post tests means, standard deviations and 't' values of Fartlek training group on selected variables among football players.

Figure I. Comparisons of Pre – Test Means and Post – Test Means for Experimental Group in relation to Bio-chemical Variables

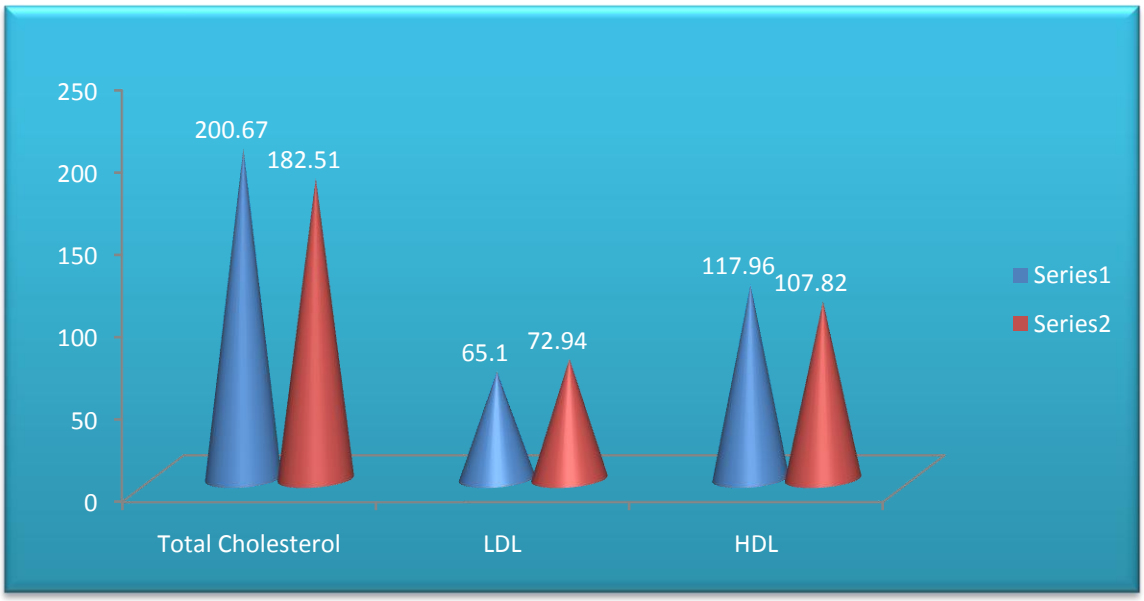
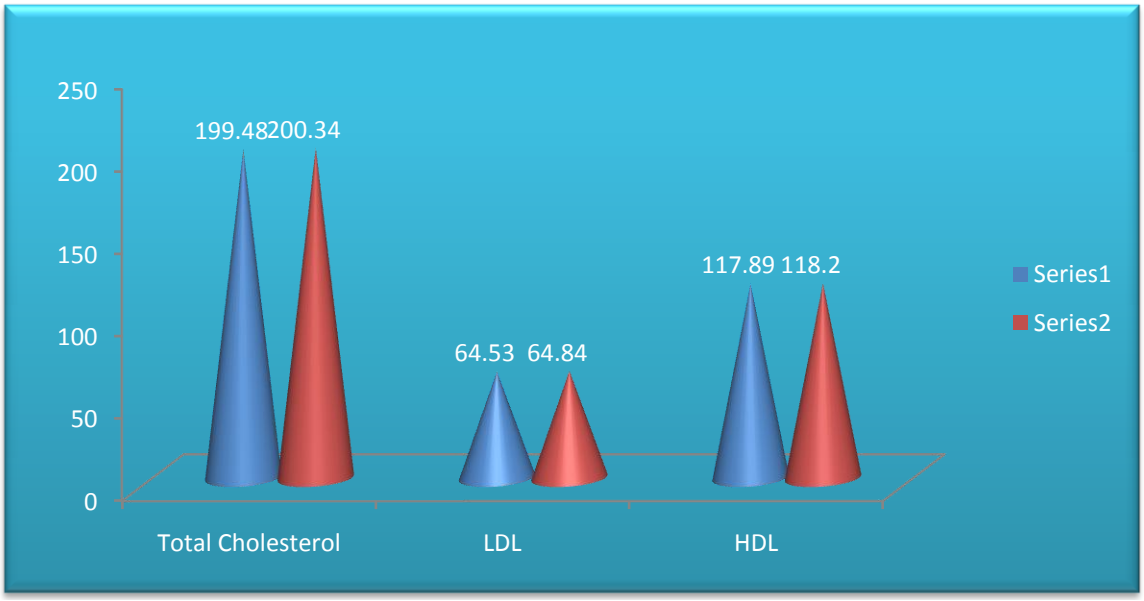


Table II. Descriptive Analysis and 't' ratio of Selected Bio-Chemical Variables of Control Group

Sl.No	Variables	Pre Test Mean	Post Test Mean	Mean Difference	SD (±)	σ DM	't' Ratio
1	Total Cholesterol	199.48	200.34	0.86	8.34	2.15	0.39
2	LDL	64.53	64.84	0.31	3.46	0.89	0.34
3	HDL	117.89	118.20	0.31	2.04	0.52	0.60

The above table documents the pre & post tests means, standard deviations and 't' values of control group on selected variables among football players.

Figure II. Comparisons of Pre – Test Means and Post – Test Means for Control group in relation to Bio-chemical Variables



Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn: Significant effect of fartlek training was found on total cholesterol, LDL and HDL.

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