



EFFECT OF CORE TRAINING ON SELECTED HEMATOLOGICAL VARIABLES AMONG BASKETBALL PLAYERS

K. Rejinadevi* & Dr. C. Ramesh**

* Ph.D Research Scholar, Department of Physical Education, Madurai Kamaraj University, Madurai, Tamilnadu

** Assistant Professor, Department of Physical Education, Madurai Kamaraj University, Madurai, Tamilnadu

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Abstract:

The purpose of the study was to find out the effect of core training on selected haematological variables among basketball players. For the purpose of the study forty men basketball players were selected as subjects from S.V.N College and Arul Anandar College, Madurai, Tamilnadu at random and their age ranged from 18 to 25 years. The selected subjects are divided in to two groups of twenty subjects each. Group I acted as core training group and Group II acted as control group. The experimental group participated core training programme for twelve weeks duration in addition to their regular professional activities of the college as per the curriculum. The control group was not undergone any training other than their daily routine. The criterion measures HDL and LDL were assessed by blood test. The data was collected before and after twelve weeks of training. The data was analyzed by applying ANCOVA. The level of significance was set at 0.05. The core training had shown significant increase in HDL and significant decrease in LDL among basketball players after undergoing core training for a period of twelve weeks.

Key Words: Core Training, HDL, LDL & Basketball Players.

Introduction:

Basketball which originated from America and has been most popular in that country has now become a game of international repute. It is played nearly everywhere in the world. Basket ball is a game much similar to the one played in ancient times by Mayas of Mexico. Basketball was invented by Dr.James Naismith in 1891. The first tournament was conducted in the year 1892. The first professional league was formed in the United States in 1899. A soccer ball was earlier used. By 1941, it was changed to the present day molded ball. The courts have also undergone many changes. The courts were small and irregular in the beginning. In 1915, the National Joint rules committee was formed to set up single code governing the game (Bhattacharya, 2010).

The word "core" is thrown around in various ways in the fitness world. Some think the core is a sleek six pack, when in fact the abdominals are only a fraction of your core muscles. While core work does help produce toned abdominal muscles, core exercises include a lot more than just crunches. Functional core training is about power, strength and stabilization. Core muscles create a solid base for your body, allowing you to stay upright and stand strong on your two feet. Core work allows you to stabilize your spine, which improves and controls your posture. Challenging your core not only improves balance and functional movement, but it creates that toned look that so many people crave (Willardson, 2007).

Methodology:

The purpose of the study was to find out the effect of core training on selected haematological variables among basketball players. For the purpose of the study forty men basketball players were selected as subjects from S.V.N College and Arul Anandar College, Madurai, Tamilnadu at random and their age ranged from 18 to 25 years. The selected subjects are divided in to two groups of twenty subjects each. Group I acted as core training group and Group II acted as control group. The experimental group participated core training programme for twelve weeks duration in addition to their regular professional activities of the college as per the curriculum. The control group was not undergone any training other than their daily routine. The criterion measures HDL and LDL were assessed by blood test. The data was collected before and after twelve weeks of training. The data was analyzed by applying ANCOVA. The level of significance was set at 0.05.

Results:

Table 1: ANCOVA between Experimental Group and Control Group on HDL of basketball players for Pre, Post and Adjusted Test

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	55.64	56.04	BG	8.42	1	8.42	1.35
			WG	235.63	38	6.20	
Post Test Mean	65.88	56.87	BG	273.73	1	273.73	59.47*
			WG	174.88	38	4.60	
Adjusted Post	65.85	56.86	BG	266.16	1	266.16	56.33*

Mean			WG	174.82	37	4.72	
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* Significant at 0.05 level.

df: 1/37= 4.10

Table1 revealed that the obtained 'F' value of 56.33 was found to be significant at 0.05 level with df 1, 37 as the tabulated value of 4.10 required to be significant at 0.05 level. The same table indicated that there was a significant difference in adjusted means of HDL of basketball players between experimental group and control group. The graphical representation of data has been presented in figure I.

Figure 1: Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control group and Experimental Group in relation to HDL

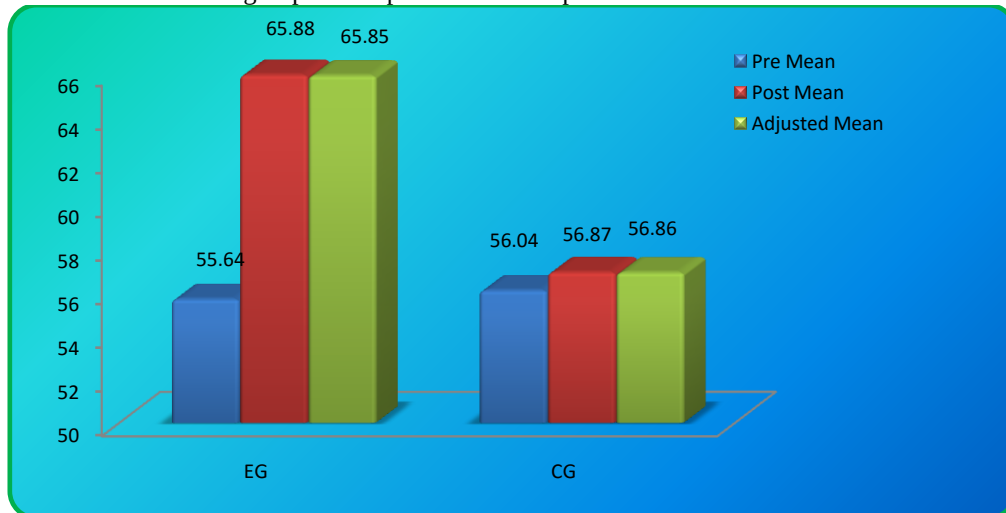


Table 2: ANCOVA between Experimental Group and Control Group on LDL of basketball players for Pre, Post and Adjusted Test

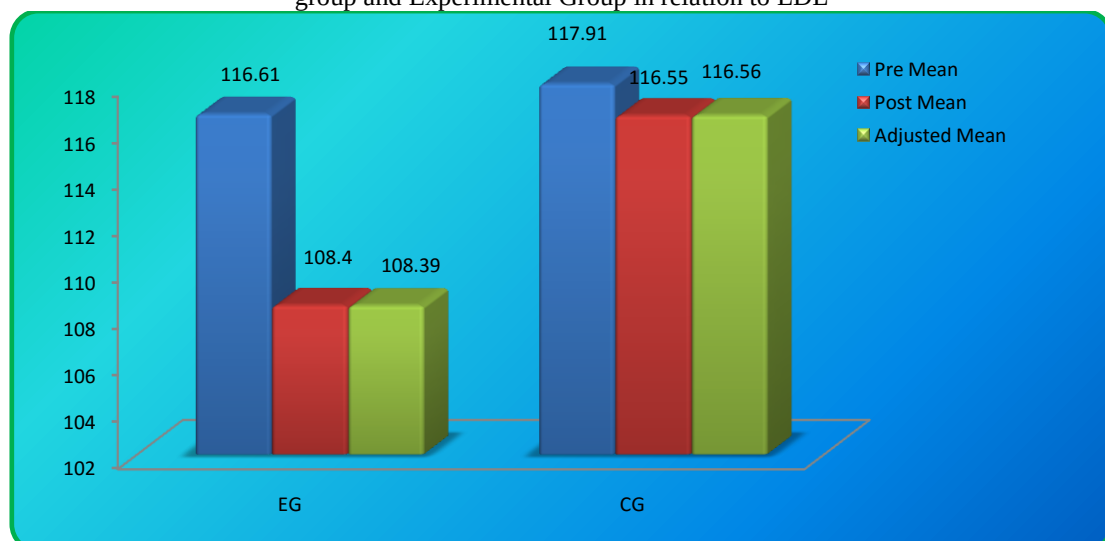
	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	116.61	117.91	BG	7.64	1	7.64	1.54
			WG	187.43	38	4.93	
Post Test Mean	108.40	116.55	BG	376.26	1	376.26	88.76*
			WG	161.07	38	4.23	
Adjusted Post Mean	108.39	116.56	BG	370.14	1	370.14	85.04*
			WG	161.03	37	4.35	

* Significant at 0.05 level.

df: 1/37= 4.10

Table 2 revealed that the obtained 'F' value of 85.04 was found to be significant at 0.05 level with df 1, 37 as the tabulated value of 4.10 required to be significant at 0.05 level. The same table indicated that there was a significant difference in adjusted means of LDL of basketball players between experimental group and control group. The graphical representation of data has been presented in figure II.

Figure 2: Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control group and Experimental Group in relation to LDL



Conclusion:

The core training had shown significant increase in HDL and significant decrease in LDL among basketball players after undergoing core training for a period of twelve weeks.

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