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EFFECT OF RESISTANCE TRAINING ON SELECTED CORPOREAL VARIABLES AMONG BASKETBALL PLAYERS

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ABSTRACT The purpose of the study was to find out the effect of resistance training on selected corporeal variables among Basketball players. For the present study 30 Basketball players from Alagappa University College of Physical Education, Alagappa University, Karaikudi, Tamil Nadu, India were selected at random and their age ranged from 18 to 22 years. The subjects were divided into two equal groups of fifteen each. Group-I acted as experimental group (Resistance training group) and Group-II acted as control group. The requirement of the experiment procedure testing as well as training schedule was explained to the subjects so as to get full co-operation of the effort required on their part and before the administration of the study. The study was formulated as a post test only random group design. The duration of the experimental training was eight weeks. After the experimental treatment, all the subjects were tested on corporeal variables namely leg explosive power, cardio vascular endurance and muscular strength. This final test scores formed as post test scores of the subjects. The post test scores were subjected to statistical analysis using "t" ratio test. In all case 0.05 level of confidence was fixed to test hypotheses. The resistance training has been established as an effective means to improve explosive power, cardio vascular endurance and muscular strength among Basketball players after undergoing resistance training for eight weeks.

KEYWORDS : Resistance training, Basketball, Corporeal variables.

1. INTRODUCTION

Resistance training should be an important component of all fitness programmes, more for strength and power to athletes than to individuals who exercise for health benefits. Of course, athlete in sports who require strength and power, such as weight lifting; body building sprinting must emphasize resistance training. However, many other athletes also benefit from strength training, especially those in sports requiring a high level muscular endurance **(Vinod kumar, 2004)**.

The importance of resistance training to sports performance has been supported by studies which have demonstrated that resistance training in the form of weight training and more recently plyometric training has enhanced some competitive performances. Most typically this has been reported as an improvement in vertical jumping ability. Many studies have reported that resistance training has enhanced muscular strength, but failed to induce changes in dynamic sports performance **(Bloomfield, 1994)**.

Resistance training should be an integral part of an adult fitness programmes and of a sufficient intensity to enhance strength, endurance, explosive power and maintain fat free mass resistance training should be progressive in nature, individualized and provide a stimulus to major muscle groups adding resistance training to programme of regular physical activity will help to decrease the risk of chronic diseases while improving quality of life and functionality, allowing people of all ages to improve and maintain their health, fitness and independent life style.

2. METHODOLOGY

2.1. Selection of subjects:

To achieve the aim of present study a total 30 Basketball players were selected randomly from AUCPE, Alagappa University, Karaikudi, Tamil Nadu and treated as subjects. The age of subjects ranged from 18 to 22 years.

The subjects were divided into two equal groups of 15 each. Group-I acted as experimental group (Resistance training group) and group-II acted as control group.

The subject were selected from AUCPE, Alagappa University based on Basketball playing ability.

2.2. Selection of variables and test:

S. No	Variable	Test	Unit
1	Leg explosive power	Standing broad jump	Meters
2	Cardio vascular endurance	12 min run/walk Cooper test	Meters
3	Muscular endurance	Sit-ups	Counts

2.3. Research design:

The study was formulated as a post test only random group design. The duration of experimental period eight weeks. After the experimental treatment, all the subjects were tested on corporeal variables. This final test scores formed as post test scores of the subjects.

2.4. Training period:

The duration of training period for the present study was confined to five days a week with about eight weeks as total period.

2.5. Limitations:

Certain factors such as life style rest period, day to day activities, family factors, food habits and socio-economic background were not taken into consideration.

2.6. STATISTICAL ANALYSIS:

The post test scores of experimental and control group were subjected to statistical analysis using "t" ratio test. In all case 0.05 level of confidence was fixed to test hypotheses.

3. RESULTS AND DISCUSSION

Table-1 Analysis Of "t" Ratio Pre And Post Test For Experimental And Control Groups On Leg Explosive Power, Cardio Vascular Endurance And Muscular Strength

S. No	Variable	Groups	Mean		Sd		Sd Error	df	T Ratio
			Pre	Post	Pre	Post			
1	Leg explosive power	Experimental	1.67	1.69	0.074	0.075	0.02	14	**11.06***
		Control	1.67	1.66	0.054	0.056	0.01		1.03
2	Cadio vascular endurance	Experimental	2239.66	2312.20	176.1	217.8	19.6	14	**8.88***
		Control	2231	2234.73	125.7	116.6	13.9		0.267
3	Muscular Strength	Experimental	22	24.06	1.51	1.48	0.2	14	**9.05***
		Control	21.93	22.02	1.79	2.65	0.4		0.67

*Significant at 0.05 level of confidence

The above table results shows the Corporeal variables viz Leg explosive power, Cardio vascular endurance and Strength endurance for the Experimental group "t" ratio values are 11.06*, 8.88* and 9.05* respectively. Since these values are greater than the required table value 2.15. Hence, Experimental group was statistically significant at 0.05 level of confidence. While as "t" ratio values for control group are 1.03, 0.267 and 0.67 respectively. Since these values are lesser than the required table value 2.15. Hence, the Control group was statistically insignificant at 0.05 level of confidence.

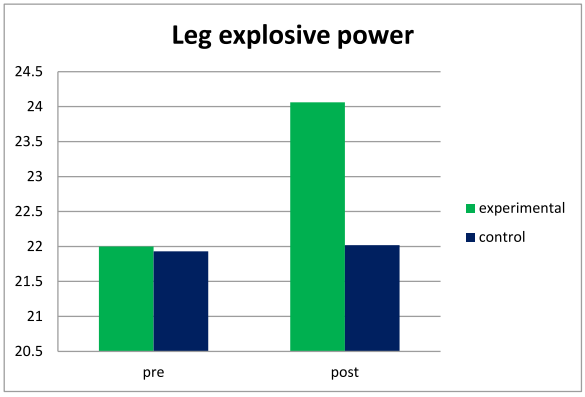

Figure-I Bar Diagram Showing Pre And Post Test Mean Values Of Experimental And Control Groups On Leg Explosive Power

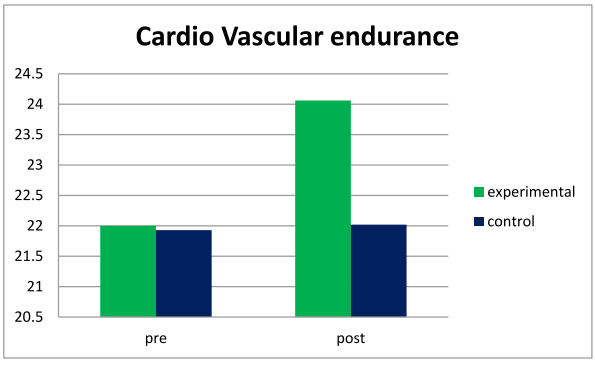

Figure-II Bar Diagram Showing Pre And Post Test Mean Values Of Experimental And Control Groups On Cardio Vascular Endurance

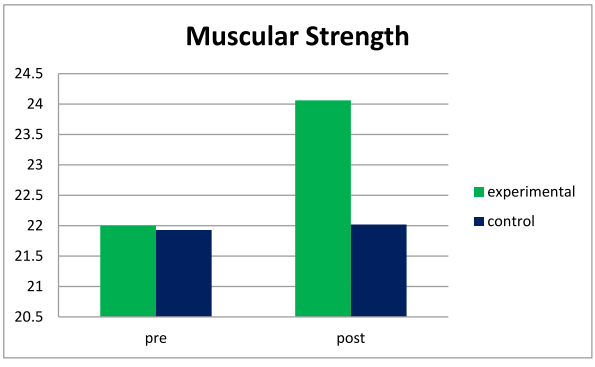

Figure-III Bar Diagram Showing Pre And Post Test Mean Values Of Experimental And Control Groups On Muscular Strength

4. CONCLUSION

a. The resistance training had shown significant improvement in corporeal variable Explosive power among basketball players after underwent training for a period of eight weeks.
b. The resistance training had shown significant improvement in corporeal variable cardio vascular endurance among basketball players after underwent training for a period of eight weeks.
c. The resistance training had shown significant improvement in corporeal variable Muscular strength among basketball players after underwent training for a period of eight weeks.

5. REFERENCES

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