

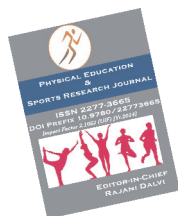
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EFFECT OF AEROBIC EXERCISES ON SELECTED PHYSICAL VARIABLES AMONG PONDICHERRY UNIVERSITY FEMALE STUDENTS



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Abstract :

The aim of this study is to find out the effect of aerobic exercises on selected physical variables in Pondicherry female students. Thirty female students were selected randomly from the Pondicherry University Hostels. For this research, the subjects were divided randomly into two groups namely one control and one experimental group consisting of fifteen girls in each group. The subject's age ranged between 20 to 25 years. Experimental groups were given 8 weeks aerobic exercise training and the control group were not allowed to participate in any of the training programmes. The training

programme was given six days in a week. Pre-test and Post-test was conducted for both the groups on flexibility and their body weight before and immediately after the training. The data pertaining to the variables under the study had been statistically analyzed by using analysis of covariance in order to determine the difference among the control and experimental group in pre and post-tests. The obtained 'F' ratio was tested for significance at 0.05 level of confidence.



KEY WORDS : Aerobic Exercise, Physical Fitness, Flexibility, Body Weight

INTRODUCTION:

Aerobic exercise is any physical activity that makes an individualsweat causes to breathe harder and gets your heart beating faster than at rest. It strengthens our heart and lungs and trains our cardiovascular system to manage and deliver oxygen more quickly and efficiently throughout our body. Any system of sustained exercise designed to increase the amount of oxygen in the blood and strengthen the heart and lungs is called aerobic exercise .Aerobic exercisewas physical exercise that

intends to improve the oxygen system. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy-generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. Aerobic Exercise not only improves fitness; it also has known benefits for both physical and emotional health. It can help prevent or reduce the chance of developing some cancers, diabetes, depression, cardiovascular disease, and osteoporosis. Physical Fitness is the ability to carry out daily tasks with alertness and vigor, without undue fatigue, and with enough energy reserve to meet emergencies or to enjoy leisure time. Flexibility refers to the absolute range of movement in a joint or series of joints that is attainable in a momentary effort with the help of a partner or a piece of equipment. Flexibility in some joints can be increased to a certain degree by stretching. Weight is the heaviness, the measure of a body's tendency to move toward the centre of the earth or other celestial body, determined by multiplying the mass of the body by its gravitational acceleration.

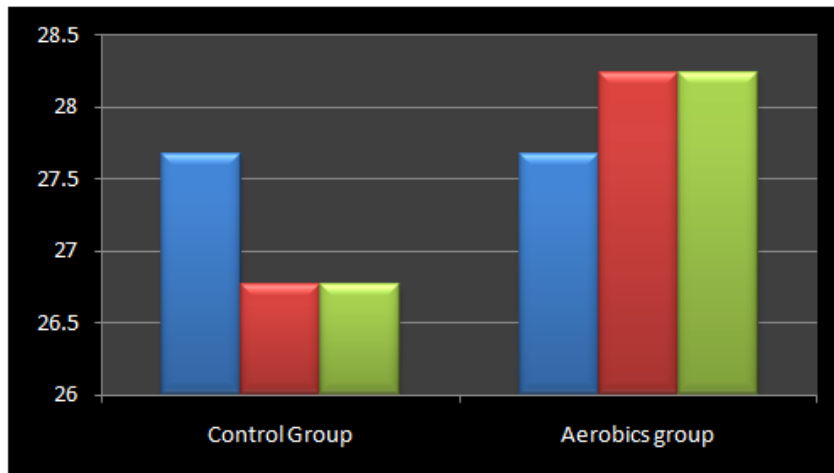
METHODOLOGY

The study was designed to find out the effect of Aerobic Exercise on selected physical variables on flexibility and body weight in Pondicherry University female students. The number of subjects for the study was thirty female students randomly from the hostels of Pondicherry University. They are at the age of 20-25 and the training period was limited to 8 weeks; They were divided into two groups experimental and control and the control group was not involved in any training programme other than their routine work. Sit and Reach test was administrated to find out flexibility and Weighing machine was used to find out Body Weight. The results of pre-test and post-test were compared by using analysis of covariance (ANCOVA).

**TABLE I
ANALYSIS OF COVARIANCE FOR PRE TEST AND POST TEST DATA ON FLEXIBILITY OF CONTROL AND EXPERIMENTAL GROUP**

	Control Group	Aerobicsgroup	Source of Variance	Sum of Squares	Df	Mean Square	'F' Ratio	Sig
Pre-test	27.67	27.67	B	0.000	1	0.000	0.000	1.000
Mean								
S.D.	2.616	3.574	W	274.667	28	9.810		
Post-test	26.77	28.23	B	16.133	1	16.133	1.940	0.175
Mean								
S.D.	1.954	3.580	W	232.867	28	8.317		
Adjusted			B	16.133	1	16.133	9.126*	0.005
Post-test	26.767	28.233						
Mean			W	47.732	27	1.768		

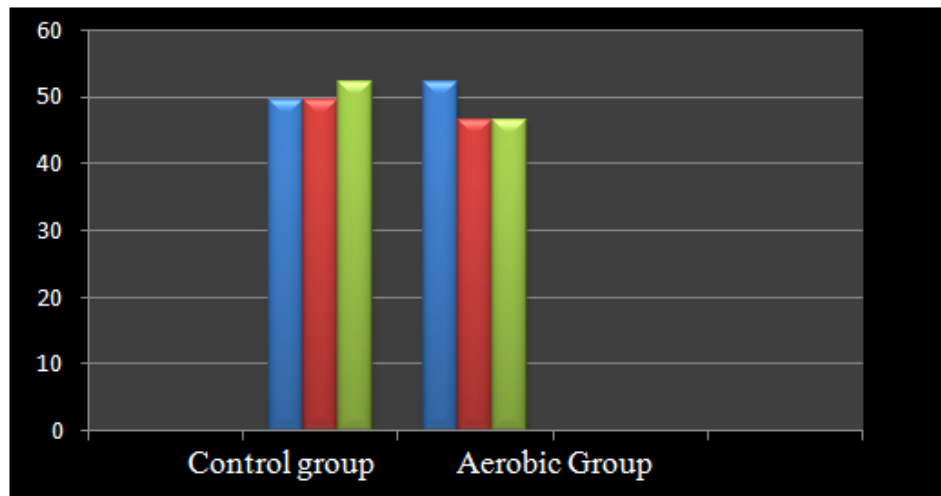
GRAPHICAL REPRESENTATION ON PRE-TEST, POST-TEST AND ADJUSTED POST-TEST MEANS ON FLEXIBILITY



**TABLE II
ANALYSIS OF COVARIANCE FOR PRE TEST AND POST TEST
DATA ON BODY WEIGHT OF CONTROL AND EXPERIMENTAL GROUP**

	Control Group	Aerobics group	Source of Variance	Sum of Squares	Df	Mean Square	'F' Ratio	Sig.
Pre-test Mean	49.47	49.53	B	0.033	1	0.033	0.002	0.968
<i>S.D.</i>	3.889	4.955	W	555.467	28	19.838		
Post-test Mean	52.20	46.53	B	240.833	1	240.833	11.27*	0.002
<i>S.D.</i>	3.821	5.303	W	598.133	28	21.362		
Adjusted Post-test Mean	52.224	46.509	B	244.961	1	244.961	21.77*	0.000
			W	303.812	27	11.252		

GRAPHICAL REPRESENTATION ON PRE-TEST, POST-TEST AND ADJUSTED POST-TEST MEANS ON FLEXIBILITY



CONCLUSION

On the basis of findings and within the limitations of the study the following conclusions were drawn:

- Aerobics programme for the experimental group was proved to be superior to the control group in bringing the change in flexibility performance.
- Aerobics programme for the experimental group was proved to be superior to the control group in bringing the change in body weight.

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