EFFECT OF 6 WEEKS JOGGING AND ASANA ON SELECTED PHYSIOLOGICAL VARIABLES AMONG COLLEGE OBESE STUDENTS

Dr A.G. VENKATESAN[1], P.RAMESH [2].
1. Assistant Professor, Department Of Physical Education and Sports Science
Annamalai University, Annamalai Nagar
2. Research Scholar, Dept of Physical Education and Sports Sciences,
ramesh.p0479@gmail.com,agvenkatlecturer@Ymail.Com

Mobile No: +919025129586.

ABSTRACTS

The purpose of the study is to find out the effect of 6 week jogging on selected physiological variables among Arya P.G. College obese students. To achieve the purpose of the study, 30 men students and age ranged from 17 to 26 years. The randomly selected as subjects from the various departments of Arya P.G.College students, Panipat. The selected subjects were divided into three groups two experimental group and one control group. The two experimental groups were subjected to a training program for 6 weeks. Jogging was administered to group I (n =10) and asana was administered to group II (n = 10) and group III (n = 10) served as a control group. Test was conducted for physiological variables namely resting pulse rate and abdominal fat before and after 6 weeks training program and data was collected and analyzed statistically by Analysis of covariance to find out the significant level.

KEYWORDS: Jogging, Asana, Resting pulse rate and Abdominal fat.

INTRODUCTION

The term fitness is an important aspect to be developed in the minds of all the people irrespective of age and sex. Much attention has to be focused on youth physical fitness. A sound and well organized physical education program in the schools and colleges will be right solution for these problems. (**Bucher, 2002**).Pulse rate which is the number of beats felt exactly one minute. The average rate of the pulse in a healthy adult is 72 beats in each minute. There may be variation of upto five beats per minute within the normal range. The number of beats of a pulse per minute or the number of beats of the heart Obesity is recognized as a major health problem in many parts of the world and the incidents of the condition is escalating at an alarming rate. Obesity is a condition with excess accumulation of body fat in relation to the lean body mass. The center for disease control and prevention defined overweight as between 85th to 95th percentile of BMI for age . European researchers classified overweight as at or above 85th percentile and obesity as at or above 95th percentile of BMI.A pose or posture designed to stimulate glands, organs or body awareness, and quiet the mind for meditation. Asana often apply pressure on nerves or acupressure points, reflexing to the brain and body for certain effects.

METHODOLOGY

The present study consists of thirty obese Arya P.G.College students, Panipat. The subjects were randomly selected and their age ranged from 17 to 26 years. They were divided into three groups namely jogging group (n =10), asana group (n = 10), and control group (n =10). Resting pulse rate and abdominal fat were the physiological variables selected for this study. Resting pulse rate was measured palpating radial artery for one minute and abdominal fat was measured by skin fold caliper. Jogging and asana group were given training for a period of 6 weeks for 3 day per week in the morning session. The training program was administered for thirty minutes per session. Control group did not undergo any training other than their regular schedule. The pre and post- test were taken before and after training program. Analysis of covariance was used to test the level of significance.

RESULTS

TABLE-I

ANALYSIS OF VARIANCE ON RESTING PULSE RATE OF EXPERIMENTAL AND CONTROL GROUP

Mean	Jogging	Asana	Control	SOV	ss	df	M.sq	'F' ratio
Pre-test mean	82.00	80.50	79.10	B	42.07	2	21.03	2.05
				W	277.40	27	10.27	
Post-test mean	75.90	78.30	79.20	B	58.20	2	29.10	3.53*
				W	222.60	27	8.24	
Adjusted post-test mean	74.81	78.33	80.27	B	133.28	2	66.64	25.05*
				W	69.18	26	2.66	

*The required value for df (2,27) at 0.05 level = 3.35
*The required value for df (2,26) at 0.05 level = 3.37

The table I reveals that the pre-test means in resting pulse rate of the jogging group, asana group and control group are 82.00, 80.50 and 79.10 respectively. The 'F' ratio is 2.05. which is found to be insignificant at 0.05 level of confidence for the pre-test mean. the post-test means of the jogging group, asana group and control group are 75.90, 78.30 and 79.20 respectively and the 'F' ratio of the post- test means is 3.53 and the adjusted post-test means is 25.05 which is found to be significant than the required table value 3.35 (2,27 df) and 3.37 (2.26 df). Since there is a significant difference on the 'F' ratio value of the post- test and adjusted post-test among the three groups the hypothesis has been accepted.

TABLE-II
SCHEFFES POST-HOC TEST FOR MEAN DIFFERENCE BETWEEN GROUPS FOR RESTING PULSE RATE

Mean Value			Mean difference	L.S
Control group	Asana group	Jogging group		
80.27	78.33		1.94*	0.05
	78.33	74.81	3.52*	0.01
80.27		74.81	5.46*	0.01

*Scheffes C.I values at 0.01 level = 1.89 and 0.05 level = 2.42

Scheffe's post hoc test however showed that mean difference between control and asana group are 1.94 which is found to be significant at 0.05 levels. The difference between asana and jogging are 3.52 which is found to be significant at 0.01 level. Finally the difference between the control group and the jogging group are 5.46 which is also found to be significant at 0.01 level. Both training has influenced the resting pulse rate of the obese students. Jogging group has revealed significant changes than group and control group.
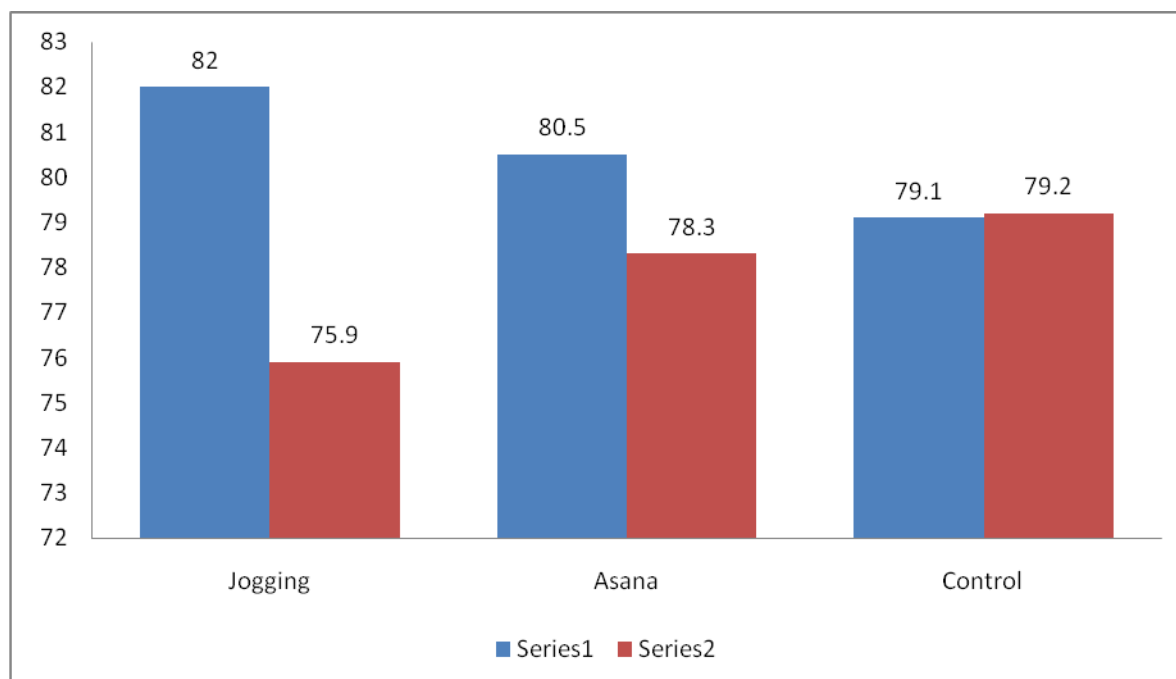

Figure-I

TABLE-III
ANALYSIS OF COVARIANCE ON ABDOMINAL FAT OF JOGGING GROUP, ASANA GROUP AND CONTROL GROUP

Mean	Jogging	Asana	Control	SOV	ss	Df	M.sq	'F' ratio
Pre-test mean	2.37	2.33	2.29	B	.027	2	.01	.146
				W	2.54	27	.09	
Post-test mean	1.97	2.12	2.33	B	.65	2	.33	4.62*
				W	1.91	27	.07	
Adjusted post-test mean	1.93	2.12	2.36	B	.88	2	.44	64.47*
				W	.17	26	.006	

*The required value for df (2,27) at 0.05 level = 3.35
*The required value for df (2,26) at 0.05 level = 3.37

The table II reveals that the pre-test means in abdominal fat of the jogging group, asana group and control group are 2.37, 2.33 and 2.29 respectively. The 'F' ratio is .146. which is found to be insignificant at 0.05 level of confidence for the pre-test mean. the post-test means of the jogging group, asana group and control group are 1.97, 2.12 and 2.33 respectively and the 'F' ratio of the post- test means is 4.62 and the adjusted post-test means is 25.05 which is found to be significant than the required table value 3.35 (2,27 df) and 3.37 (2.26 df). Since there is a significant difference on the 'F' ratio value of the post- test and adjusted post-test among the three groups the hypothesis has been accepted.

TABLE-IV
SCHEFFES POST-HOC TEST FOR MEAN DIFFERENCE BETWEEN GROUPS FOR ABDOMINAL

| Mean Value			Mean difference	L.S
Control group	**Asana group**	**Jogging group**		
2.36	2.12		0.24*	0.01
	2.12	1.93	0.19*	0.01
2.36		1.93	0.43*	0.01

*Scheffes C.I values at 0.01 level = 0.078 and 0.05 level = 0.099

Scheffes post hoc test however showed that mean difference between control and asana group are 0.24 which is found to be significant at 0.01 levels. The difference between asana and jogging are 0.19 which is found to be significant at 0.01 level. Finally

the difference between the control group and the jogging group are 0.43 which is also found to be significant at 0.01 level. Both training has influenced the abdominal of the obese students. Jogging group has revealed significant changes than group and control group.
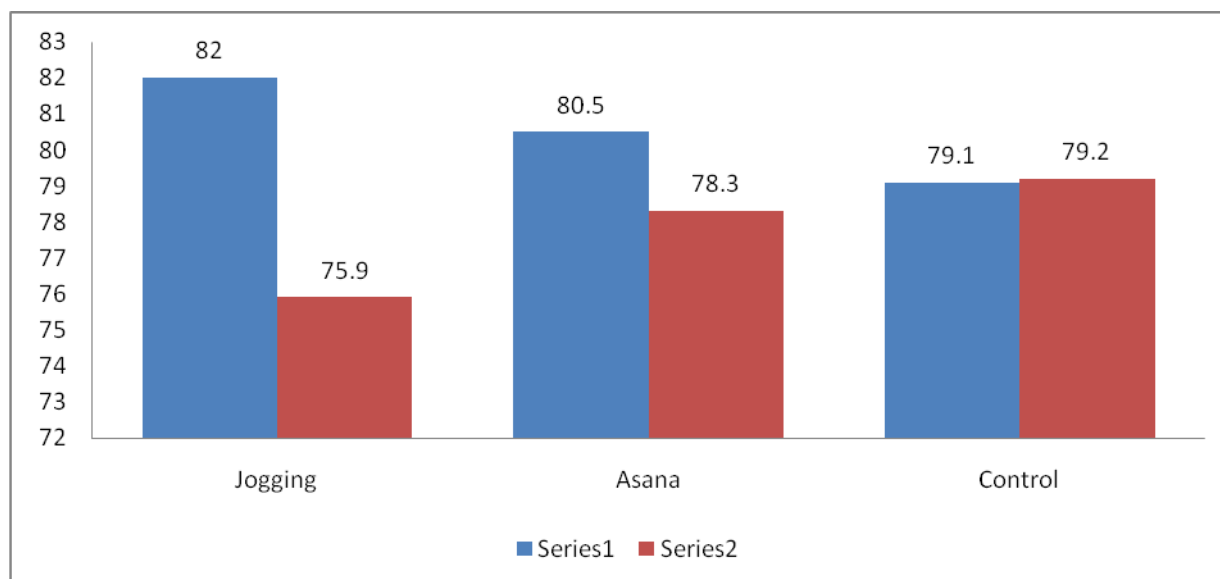
CONCLUSION

Physiological variables namely resting pulse rate and abdominal fat was significantly reduced by effect of jogging and asana training for the experimental group when compared to the control group. Significant differences in favor of jogging group are seen in the selected physiological variables namely resting pulse and abdominal fat.

REFFERENCE

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