

Effect of 12 Weeks Jogging and Asanas on Selected Physical Variables of Obese Men

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Abstract

The purpose of this study was to find out the effect of 12 weeks jogging and asana on selected physical variables of obese men. For this study, thirty subjects from Cheyyar Town, Tamil Nadu state was randomly selected and their age ranged from 18-25 years. The subjects were divided into three group's one control and two experimental groups. The two experimental groups were subjected to a training programme for 12 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 physical variables namely muscular endurance and body weight before and after 12 weeks training programme and data was collected and analyzed statistically by Analysis of covariance to find out the significant level.

Key Words: Jogging, Asana, Muscular endurance and body weight.

Introduction

Physical fitness is the basic fitness of all other fitness, physical fitness is not only the most important key to healthy body, but it is also the base for dynamic and creative activity. It is a multi faced one and extends from birth to death. One can keep their body fit by doing physical exercise and regular physical activity is important part of healthy life style.

Jogging is probably the easiest way one can burn their calories and reduce fat deposits and it is also the most ignored. People tend to go for high tech gym workouts but easily forget that a simple running exercise like jogging can help them get far more benefits' Jogging is an excellent means of improving cardiovascular health, bone density, and physical fitness.

A pose or posture designed to stimulate glands, organs or body awareness, and to quiet the mind for meditation. Asana often apply pressure on nerves or acupressure points, reflexing to the brain and body for certain effects.

Asana is defined as a comfortable posture for prolonged sitting

Yoga has both its preventive and therapeutic cures over ailing mind and body. Yoga improves all the problems associated with the body, like increases flexibility in muscles and various muscular joints, strengthens the spinal cord, recovers back aches, improves muscular skeletal conditions, digestion and elimination, stimulates glands and endocrinal system, improves heart condition, proper blood circulation, recovers breathing disorder, boosts immune response, decreases cholesterol, diabetes, maintains blood pressure level, increases the stamina and maintains a balance and grace all over.

Health care providers are concerned not only with how much fat a person has, but also where the fat is located on the body. Women typically collect fat in their hips and buttocks, giving them a "pear" shape. Men usually build up fat around their bellies, giving them more of an "apple" shape. Of course some men are pear-shaped and some women become apple-shaped, especially after menopause. If you carry fat mainly around your waist, you are more likely to develop obesity-related health problems. Women with a waist measurement of more than 35 inches or men with a waist measurement of more than 40 inches have a higher health risk because of their fat distribution.

In scientific terms, obesity occurs when a person consumes more calories than he or she burns. What causes this imbalance between calories in and calories out may differ from one person to another. Genetic, environmental, psychological, and other factors may all play an important role for causes of obesity.

Obesity is an abnormal accumulation of body fat, usually 20 % or more over an individual's ideal. Obesity is associated with increased risk of illness, disability, and death.

Obesity can be very serious and even cause death. One should pay attention especially if the weight is around their waist since it does affect heart and circulatory health to have it located there. Often obese people have high cholesterol and triglycerides, which can lead to strokes and heart attacks. Type II Diabetes and high blood pressure are additional risks. Obesity also affects mobility and ease of movement, which when one gets older, increases the risks of complications and falling.

Purpose

The purpose of this study was to find out the effect of 12 weeks jogging and asana on selected physical variables of obese men.

Need for the study

Obesity is a common problem of our life in modern world. It is the gate pass of other diseases like diabetes, blood pressure, cardio-vascular diseases. The researcher has taken up this study to an make awareness on the health problems due to obesity. So the need for this study is to maintain fitness of the obese subjects by reducing body weight and developing muscular endurance.

Review of the Literature

Ortega et.al.,(2007). This review aims to summarize the latest developments with regard to physical fitness and several health outcomes in young people. The literature reviewed suggests that cardiorespiratory fitness levels are associated with total and abdominal adiposity; both cardiorespiratory and muscular fitness are shown to be associated with established and emerging cardiovascular disease risk factors; improvements in muscular fitness and speed/agility, rather than cardiorespiratory fitness, seem to have a positive effect on skeletal health; both cardiorespiratory and muscular fitness enhancements are recommended in pediatric cancer patients/survivors in order to attenuate fatigue and improve their quality of life; and improvements in cardiorespiratory fitness have positive effects on depression, anxiety, mood status and self-esteem, and seem also to be associated with a higher academic performance. In conclusion, health promotion policies and physical activity programs should be designed to improve cardiorespiratory fitness, but also two other physical fitness components such us muscular fitness and speed/agility. Schools may play an important role by identifying children with low physical fitness and by promoting positive health behaviors such as encouraging children to be active, with special emphasis on the intensity of the activity.

Johannsen, Redman and Ravussin (2007). physical activity recommendations call for 30 minutes of moderate-intensity activity on most days of the week, or the equivalent of expending approximately 1000 kcal in activity per week. These recommendations were formulated based on reducing the risk for chronic disease,

but they do not appear adequate for weight loss and maintenance. Data from epidemiologic studies and randomized trials indicate that closer to 60 to 90 minutes of moderate-intensity activity every day is required for maintaining a reduced body weight, equivalent to expending 2500 to 2800 kcal in activity per week. Relevant studies leading to this conclusion are reviewed in this manuscript. However, to make a dent in the prevalence of obesity by targeting physical activity and food intake, it is imperative to address the current "built" environment, which is conducive to a sedentary lifestyle and overconsumption of energy. Only then will rigorous activity recommendations be easier to implement.

Methodology

The sample for the present study consists of thirty obese men from Cheyyar town in Tamil Nadu state. The subjects were randomly selected and their age ranged from 18-25 years. They were divided into three groups namely jogging group (n=10), asana group (n=10), and control group (n=10). Muscular endurance and body weight were the physical variables selected for this study. Muscular endurance was measured by bent knee sit ups and body weight was measured weighing machine. Jogging and asana group were given training for a period of 12 weeks for 3 day per week in the morning session. The training programme was administered for forty five 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 the training programme. Analysis of covariance was used to test the level of significance.

Results

Table-I
Analysis of Covariance for the Data on Muscular Endurance for Jogging Group, Asana Group and Control Group

Mean	Jogging	Asana	Control	SOV	ss	df	M.sq	'F' ratio
Pre Test Mean	5.90	6.00	6.00	B W	0.07 36.90	2 27	0.03 1.37	0.024
Post Test Mean	8.20	7.10	5.50	B W	36.87 55.00	2 27	18.43 2.04	9.05*
Adjusted Post Test Mean	8.23	7.09	5.49	B W	37.88 48.74	2 26	18.94 1.88	10.10*

*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 1 reveals that the pre test means in muscular endurance of the jogging group, asana group and control group are 5.90, 6.00 and 6.00 respectively. The 'F' ratio of 0.024, which was 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 8.20, 7.10 and 5.50 respectively and the 'F' ratio of the post test mean was 9.05 and the adjusted post test mean was 10.10 which is found to be significant than the required table value 3.35 (2,27 df) and 3.37 (2,26 df). Since there was 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
on Muscular Endurance

Mean value			Mean difference	L.S
Jogging group	Asana group	Control group		
8.23	7.09		1.14	N.S
	7.09	5.49	1.6*	0.05
8.23		5.49	2.74**	0.01

Scheffes C.I values at 0.05 Level=1.58 and 0.01 Level=2.02

Scheffes post hoc test however showed that the mean difference between jogging and asanas group are 1.14 which was found to be insignificant. The difference between asana and jogging are 1.6 which was found to be significant at 0.05 level. Finally the difference between jogging group and control group are 2.74 which was also found to be significant at 0.01 level. Both training has influenced the muscular endurance of the obese men. Jogging group has revealed significant changes than the asana group and control group.

Figure-1
Bar Diagram

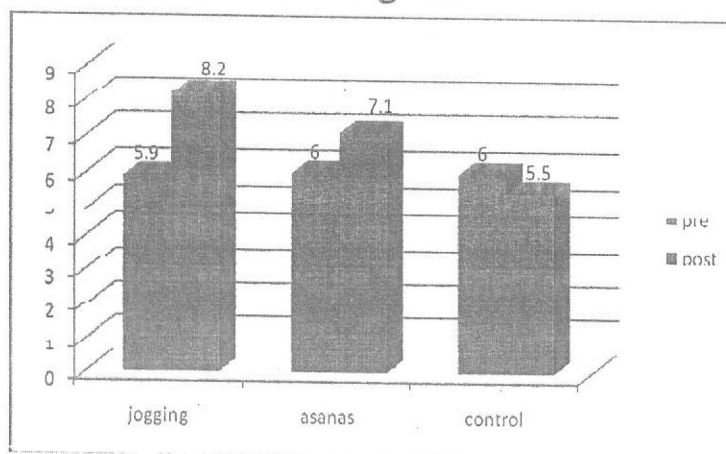


Table-III
Analysis of Covariance for the Data on Body Weight for Jogging Group,
Asana Group and Control Group

Mean	Jogging	Asana	Control	SOV	ss	df	M.sq	'F' ratio
Pre Test Mean	86.20	80.40	85.80	B	209.87	2	104.93	1.69
				W	1681.60	27	62.28	
Post Test Mean	80.20	77.20	86.40	B	440.27	2	220.13	3.49*
				W	1703.60	27	63.09	
Adjusted Post Test Mean	78.14	80.91	84.74	B	219.51	2	109.75	71.43**
				W	39.95	26	1.54	

*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 above table II reveals that the pre test means in body weight of the jogging group, asana group and control group are 86.20, 80.40 and 85.80 respectively and the 'F' ratio of 1.69 which was found to be insignificant at 0.05 level of confidence. The post test means of the jogging group, asana group and control group are 80.20, 77.20 and 86.40 respectively and the 'F' ratio of the post test means was 3.49 and the adjusted post test means was 71.43 which were found to be significant than the required table value 3.35 (2,27 df) and 3.37 (2,26 df). Since there was 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.

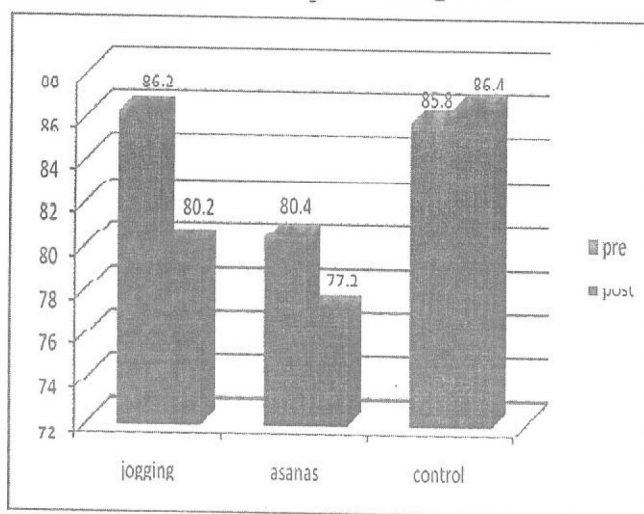
Table-IV
Scheffes Post-HOC Test for Mean Difference between Groups
on Body Weight

Mean Value			Mean difference	L.S
Control group	Asana group	Jogging group		
84.74	80.91		3.83**	0.01
	80.91	78.14	2.77**	0.01
84.74		78.14	6.6**	0.01

Scheffes C.I values at 0.05 Level= 1.42 and 0.01 Level=1.82

Scheffes post hoc test however showed that the mean difference between control and asana group are 3.83 which was found to be significant at 0.01 levels. The difference between asana and jogging are 2.77 which was found to be significant at 0.01 level. Finally the difference between the control group and the jogging group are 6.6 which was also found to be significant at 0.01 level. Both training has influenced the body weight of the obese men. Jogging group has revealed significant changes than the asana group and control group.

Figure-2
Bar Diagram



Discussion and Findings

All the subjects of the experimental groups were under going regular jogging and asana training which were assigned to them. From the analysis it is evident that in the case of selected physical variables such as muscular endurance and body weight significant changes were noticed after 12 weeks of different training programme. But the control group did not show any changes in the selected physical variables.

Muscular endurance has significantly increased due to the jogging and asana training. But body weight has significantly reduced due to the jogging and asana training.

Since the physical variables have been influenced by the jogging and asana training it was found that there was a significant difference among the three groups. The study reveals that the experimental groups were significant than the control group. Therefore the hypothesis has been accepted.

Conclusions

Within the limitation of the present study the following conclusions were drawn.

Physical variables namely muscular endurance has significantly increased by the effect of jogging and asana training for the experimental group when compared to the control group. But body weight has significantly reduced by the above mentioned training for the experimental group when compared to the control group.

Significant differences in favour of jogging group are seen in the selected physical variables namely muscular endurance and body weight. The result of the study is in consonance with the finding of the following studies such as ¹Ortega, et.al., (2008), ²Christopher. et. al., ³(2000), Steven Blair (1993), ⁴Epstein, et. al, (20001), ⁵Smith, et. al., (2005), ⁶Kay (2006) and ⁷Holly (2006).

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