



RESEARCH ARTICLE

EFFECT OF JOGGING AND ASANA ON SELECTED PHYSICAL VARIABLES OF OBESE MEN

Madhan Kumar, T. and Dr. G. Vasanthi

Department of Physical Education and Sports, Pondicherry University, Puducherry, India

Received 25th March, 2011; Received in Revised form; 17th April, 2011; Accepted 15th June, 2011; Published online 25th January, 2012

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 groups 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 agility and flexibility 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, agility and flexibility.

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. 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. 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.

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 equal groups namely jogging group (n=10), asana group (n=10), and control group (n=10). Agility and flexibility were the physical variables selected for this study. Agility was measured by shuttle run and flexibility was measured by sit and reach test. Jogging and asana group were given training for a period of 12 weeks for 3 days 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. The table 1 reveals that the pre test means in agility of the jogging group, asana group and control group are 18.31, 18.16 and 18.09 respectively. The 'F' ratio is 0.34, 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 17.55, 17.77 and 18.31 respectively and the 'F' ratio of the post test means is 5.69 and the adjusted post test means is 15.82 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. Scheffes post hoc test however

*Corresponding author: tmadhan18@gmail.com

Table 1. Analysis of covariance for the data of shuttle run of jogging group, asana group and control group

Mean	Jogging	Asana	Control	SOV	SS	df	M.Sq	'F' ratio
Pre Test Mean	18.31	18.16	18.09	B	.24	2	1.2	0.34
				W	9.44	27	.35	
Post Test Mean	17.55	17.77	18.31	B	3.06	2	1.53	5.69*
				W	7.26	27	.27	
Adjusted Post Test Mean	17.47	17.78	18.37	B	4.07	2	2.03	15.82*
				W	3.34	26	.13	

*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

Table 2. Scheffes post-hoc test for mean difference between groups for agility

Mean Value			Mean difference	L.S
Control Group	Asana Group	Jogging Group		
18.37	17.78		0.59**	0.01
	17.78	17.47	0.31	N.S
18.37		17.47	0.9	0.01

Scheffes C.I values at 0.05 Level= 0.41 and 0.01 Level= 0.53

Table 3. Analysis of covariance for the data of flexibility of jogging group, asana group and control group

Mean	Jogging	Asana	Control	SOV	ss	df	M.sq	'F' ratio
Pre Test Mean	4.10	4.70	4.80	B	2.87	2	1.43	2.65
				W	14.60	27	.54	
Post Test Mean	6.80	8.90	4.80	B	25.27	2	12.63	15.37*
				W	22.20	27	.82	
Adjusted Post Test Mean	5.97	6.96	4.67	B	26.09	2	13.05	29.50*
				W	11.50	26	.44	

*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

Table 4. Scheffes post-hoc test for mean difference between groups for flexibility

Mean Value			Mean difference	L.S
Asana Group	Jogging Group	Control Group		
6.96	5.97		0.91*	0.05
	5.97	4.67	1.3**	0.01
6.96		4.67	2.29**	0.01

Scheffes C.I values at 0.05 Level=0.78 and 0.01 Level= 0.99

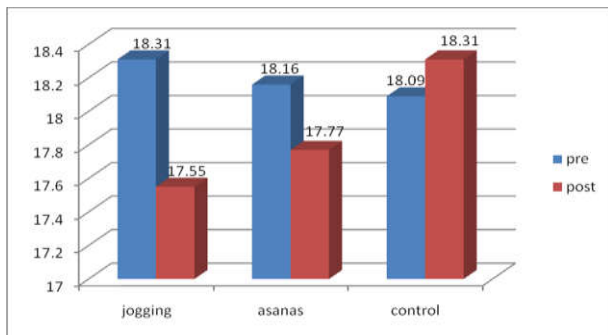


Fig. 1. Graphical Representation on agility of Pre - Test, Post - Test and Adjusted Post -Test Means of Control group and Experimental Groups

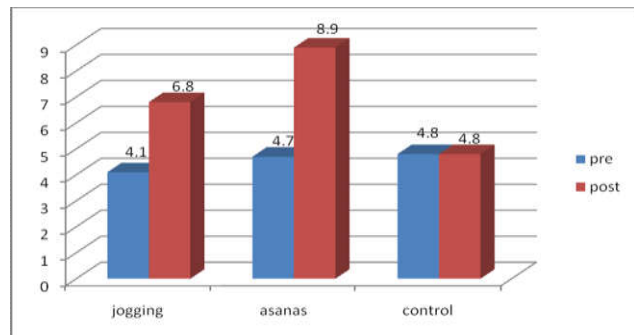


Fig. 2. Graphical Representation on flexibility of Pre - Test, Post - Test and Adjusted Post -Test Means of Control group and Experimental Groups

showed that the mean difference between control and asana group are 0.59 which is found to be significant at 0.01 levels. The difference between asana and jogging are 0.31 which is found to be insignificant. Finally the difference between the control group and the jogging group are 0.9 which is also found to be significant at 0.01 level. Both training has influenced the agility of the obese men. Jogging group has revealed significant changes than the asana group and control group. The above table II reveals that the pre test means in flexibility of the jogging group, asana group and control group are 4.10, 4.70 and 4.80 respectively and the 'F' ratio is

2.65. which is found to be insignificant at 0.05 level of confidence. The post test means of the jogging group, asana group and control group are 6.80, 8.90 and 4.80 respectively and the 'F' ratio of the post test means is 15.37 and the adjusted post test means is 29.50 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. Scheffes post hoc test however showed that the mean difference between asana and jogging group are 0.91 which is found to be

significant at 0.05 level. The difference between jogging and control are 1.3 which is found to be significant at 0.01 level. Finally the difference between asana the control group and the group are 2.29 which is also found to be significant at 0.01 level. Both training has influenced the flexibility of the obese men. Asana group has revealed significant changes than the jogging group and control group.

RESULTS AND DISCUSSION

All the subjects of the experimental groups were administered with 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 agility and flexibility 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. Agility and flexibility are significantly increased due to the jogging and asana training. But the asana group has revealed significant changes than the jogging group and control group. Since the physical variables have been influenced by the jogging and asana training it is found that there is significant difference among the three groups. The study reveals that the experimental groups are significant than the control group. Therefore the hypothesis has been accepted. The results of the study is in consonance with the finding of the following studies namely ¹Barry Jack and Nelson (1998), ²Cowen and Adams (2005) ³bayoumy, Shady and Lotfy (2009), ⁴Kloubec (2010), ⁵Kyrölinen, *et al.*, (2010), ⁶Mazzeo *et al.*, (2010), ⁷Sola, Brekke and Brekke (2010).

Conclusion

Within the limitation of the present study the following conclusions were drawn. Physical variables namely agility and flexibility was significantly improved by effect of jogging and

asana 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 agility and flexibility.

REFERENCES

- www.Physical Fitness Wikipedia,the free encyclopedia.mht.
 Barry L. Jack and K. Nelson, 1988. Practical Measurements for Evaluation in Physical Education, 3rd Edition. Minncapolis; Burgess Publication Company, U.S.A,
 Cowen, V.S., Adams, T.B. 2005. Physical and perceptual benefits of yoga asana practice: Results of a pilot study” *Journal of Bodywork and Movement Therapies*, 9 (3), pp. 211-219 6 .
 El-Bayoumy, I., Shady, I., Lotfy, H. 2009. Prevalence of obesity among adolescents (10 to 14 Years) in Kuwait Asia-Pacific” *Journal of Public Health*, 21 (2), pp. 153-159 3
 Kloubec, J.A.2010.Pilates for improvement of muscle endurance, flexibility, balance, and posture. *Journal of Strength and Conditioning Research*, 24(3), pp661-667 0
 Kyrölinen, H. *et al.*, 2010. “Physical fitness profiles of young men: Associations between physical fitness, obesity and health. *Journal of Sports Medicine*, 40 (11), pp. 907-920.
 Mazzeo, S.E. *et al.*, 2010. Physical activity, fitness and psychosocial functioning of obese adolescents” *Mental Health and Physical Activity*.
 Sola, K., Brekke, N., Brekke, M. 2010. An activity-based intervention for obese and physically inactive children organized in primary care: feasibility and impact on fitness and BMI *Scandinavian. Journal of Primary Health Care*, 28 (4), pp. 199-204.
