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Influence of Walking, Jogging and Running Programme on Body Fat

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Abstract

The goal of the present study was to find out the influence of walking, jogging and running training programme on percentage of body fat in middle aged men. To achieve this study, forty men staff members are working in various sector at Cuddalore were selected as subjects and their age ranged between 35 to 45 years. They were divided into four groups, each group consisting of 10 subjects, the first group underwent walking programme, the second group underwent jogging programme, the third group underwent running programme and the fourth group acted as control and did not participate any systematic training programme. The training schedule for all experimental groups were 3 days a week for 12 weeks. The selected criterion variable namely percentage of body fat was assessed before and after the training period. The collected data were statistically analyzed by using Analysis of Covariance (ANCOVA). When the F ratio of the adjusted post-test mean was found to be significant, Scheffe's post hoc test was employed to find out the paired mean difference. The level of significance was set at 0.05 level. From the results of the study found that the twelve weeks of walking, jogging and running training programme have significantly decreased the percentage of body fat in all the three experimental groups as compared to the control group. But there was no significant difference in percentage of body fat among the three experimental groups.

Keywords: Walking, Jogging, Running, Training and Percentage of Body Fat.

Introduction

Now a days people facing several health related problems. Some of the health related problems can be cured with latest medicines, machines and techniques. Some of them can be avoided, but may not be cured, especially the commonly known as coronary heart disease. It would appear that walking may simply reflect an overall healthy lifestyle that includes a variety of behaviors that might be associated with good nutrition and an interest in a generally more active pattern of living. Although the effects of walking on reducing the risk of mortality appear to be constant across levels of total caloric intake, the percent of calories from protein, fat, and carbohydrates,

Losing fat can be simple if you are jogging in circles. The idea of exercise is very basic yet the effects are positively outpouring, that is, if exercise is properly performed. There are specific guidelines to carry out for every activity and the same goes for jogging as an effective way to lose fat. It greatly depends on what type of jogging you have and how long you're doing it. Jogging in circles for 30 minutes is more effective than jogging several meters in just 10 minutes. Jogging is one of the best fat burning exercises mostly employed by many dieters. It's not as strenuous as push-ups, boxing or other exercises.

There are many advantages of running. First, say goodbye to tumid body. It is a great idea of many people to keep slim by running, they run just for this reason. Compared with other sports, running burns more calories for each minute. It also prevents our skeleton and muscles from degenerating. Our skeleton and body cooperate with each other. The longer time one sits before the monitors, the weaker the bones get. Skeletons will be in good condition if one do sports often.

Research shows that an inverse relationship exists between exercise and physical disability (Keysor, 2003). In other words, people who exercise more have less disability, compared to people of the same age who don't exercise. In one study, walking as little as 1 mile per week slowed the decline in functionality that occurs with advancing age (Miller et al., 2000). The goal of the present study was to find out the influence of walking, jogging and running training programme on percentage of body fat in middle aged men.

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Methodology

For this purpose forty middle aged men staff member who working in various government and private sector at Cuddalore, Tamil Nadu, India were randomly selected as subjects. Their age ranged from 35 to 45 years. The selected subjects were divided into four

groups of ten each. Group I underwent walking programme, Group II underwent jogging programme, Group III underwent running programme, Group IV considered as control that did not undergo any special training programme. The training prorramme for the experimental groups are given below:

- The walking group was started with 3200 meters brisk walking and ended with 4100 meters brisk walking. The 300 meters load was increased every two weeks for twelve weeks.
- The jogging group was started with 800 meters jogging with three repetition and ended with 1300 meters jogging with three repetition. Every two weeks 100 meters load was increased for twelve weeks and the recovery (relax) period was given as 400 meters relax walking between the repetition.
- The running group was started with 700 meters running with three repetition and ended with 1200 meters running with three repetition. Every two weeks 100 meters load was increased for twelve weeks and the recovery (relax) period was given as 400 meters relax walking between the repetition.

On every day of the training session the training schedule done were approximately from thirty-five to fifty-five minutes, this included warming up and warming down. Group-IV was instructed not to participate in any strenuous physical exercises and requested to do regular work throughout of the study. The effect of training programme was assessed on percentage of body fat by using Inbody Mass Machine. All the subjects were tested on percentage of body fat before and after the commencement of the training programme. To nullify the variation in the pre-test means, analysis of covariance (ANCOVA) was applied and the adjusted post-test means were tested for significance. If the 'F' ratio was significant Scheffe's post-hoc test was applied to find out the significant differences if any, among the paired means. The level of significance was set at 0.05 level.

Results

The data collected during pre and post-tests among walking, jogging, running groups and control group on percentage of body fat have been analysed statistically and the results are shown in table-I.

Percentage of Body Fat

Table I. Analysis of covariance for pre- and post-test data on percentage of body fat among walking, jogging, running groups and control group

	Walking group	**Jogging group**	**Running group**	**Control group**	**SOV**	**Sum of squares**	**df**	**Mean square**	**'F' ratio**
Pre-Test									
Mean	22.28	22.55	23.05	23.02	B:	4.21	3	1.41	0.63
SD	1.61	1.58	1.31	1.44	W:	79.77	36	2.22	
Post-Test									
Mean	19.76	20.33	21.49	23.15	B:	67.03	3	22.34	8.98*
SD	1.55	1.70	1.62	1.42	W:	89.53	36	2.49	
Adjusted Post-Test Mean	20.15	20.49	21.20	22.87	B:	43.12	3	14.37	18.05*
					W:	27.87	35	0.80	

** Significant at 0.05 level of confidence.*

df-degrees of freedom; SD-Standard Deviation; S.O.V.-Source of Variance. B-Between; W-Within

The table value required for significance at 0.05 level with df 3 &36, and 3 & 35 are 2.87 and 2.87 respectively.

Table-I also shows the adjusted post-test mean values for walking group is 20.15, jogging group is 20.49, running group is 21.20 and control group is 22.87, which resulted with an 'F' ratio of 18.05 and it is higher than the table value of 2.87 required for df 3 and 35 at 0.05 level of significance. It is found that significant differences exist among the four groups on percentage of body fat after adjusting the initial mean differences on the post-test means. In order to determine which of the paired means have significant differences, Scheffe's test was computed and it is presented in table-II.

Table II. Scheffe's test for the differences between the adjusted post-test paired means of percentage of body fat

Adjusted Post-Test Means				Means Differences
Walking group	Jogging group	Running group	Control group	
20.15			22.87	2.72*
	20.49		22.87	1.38*
		21.20	22.87	1.67*
20.15	20.49			0.34
20.15		21.20		1.05
	20.49	21.20		0.71

** Significant at 0.05 level.*

The confidence interval required for significance at 0.05 level is 1.17.

An examination of the table-II indicates that the adjusted post-test mean difference of percentage of body fat between control group and walking group, control group and jogging group and between control group and running group are 2.72, 1.38 and 1.67 respectively which are higher than the confidence interval value of 1.17, at 0.05 level of significance. It is inferred that the twelve weeks of walking, jogging and running training programme have significantly decreased the percentage of body fat in all the three experimental groups as compared to the control group.

Table-II also shows the mean difference between walking group and jogging group is 0.34, walking group and running group is 1.05 and jogging group and running groups is 0.71 which are lower than the confidence interval value 1.17 at 0.05 level of significance. Based on the result, it may be concluded that no significant difference exists in percentage of body fat among all the three experimental groups.

Discussion on Findings

The walking, jogging and running programmes significantly reduced percentage of body fat as compared to control group. The investigator observed a decrease of approximately 2.13% of body fat for walking group, 2.06% of body fat decrease for jogging group and only 1.85% of body fat decrease for running group.

Hence, the walking, jogging and running programmes are collective methods of training to decrease the percentage of body fat in middle aged men. But there were insignificant reduction in percentage of body fat among walking, jogging and running groups. The following similar studies supported the present study.

The effect of a moderate exercise regimen on body composition in mildly hyperlipidemic women postmenopause was examined. Randomized assignment about walking (n=24) or control (n=16) groups was done. Results are reported for the 25 subjects (15 walkers, 10 controls) who participated in the study weight and fat mass decreased significantly in the walkers compared with the controls ($P< 0.05$), but not to change in aerobic fitness (Ready et al.,1995). A study on body of middle aged men. Sixteen sedentary men 48.9 years of age volunteered to train 40 min, 4 times/week, for 20 weeks. Eight controls of similar qualification were also evaluated. Training progressed from 2.5 miles during week/ to 3.25 miles during weeks16-20. The experimental group showed significant reductions in body composition (body weight (-1.3) and percentage of body fat (-1.1)) (Pollock et al., 1971) and (Slentz et al., 2004). The exercise sessions were carried out twice each week for 12 weeks. Resulted that the paired analyses showed that percentage of body fat decreased significantly in the exercise group. (Grant et al., 2004). Regular exercise such as brisk walking results in reduced body fat among overweight and obese postmenopausal women (Irwin et al., 2003). Three weeks of body mass reduction program in obese subjects (41 females and 19 males. BMR program induced a significant weight loss (Sartorio et al., 2001).

Conclusion

The following conclusions were drawn from the result of the study:

Walking, jogging and running training programme groups showed significant reduction in percentage of body fat as compared to control group. All the training programme groups showed insignificant difference in percentage of body fat indicating that one group is not better than other in bringing out significant changes.

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