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Influence of Varied Intensity of Walking on Selected Physiological Variables Among Middle Aged Men

KEYWORDS: VO2 max, Body Fat and Heart rate

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ABSTRACT *The purpose of this study was to find out the influence of varied intensity of walking on selected physiological variables among middle aged men. The subjects were restricted to a minimum number of Sixty subjects consisting of Twenty men subjects would serve as control group and the remaining Forty would undergo systematic walking training and among forty, twenty for Low intensity walking group (LIWG) and remaining twenty for High intensity walking group (HIWG) at The M.D.T Hindu College, Tirunelveli, Tamilnadu under the supervision of researcher. The subjects were selected from Tirunelveli city, Tamilnadu and their age was from 35 to 45 years as per the school records. The study was formulated as a random group design. The score were compared by using (ANCOVA) The level of significant chosen was 0.05 level. It was found that the High intensity walking group (HIWG) showed better result on the variables VO2 max, Body Fat and Heart rate for middle aged men.*

INTRODUCTION

Various works might have been done about walking. Particularly this study expresses about low intensity and high intensity walking so this study is need. In the modern world people have no time to take care about their health that's why the study is need. Many theses have been done only about walking, but my area focuses walking on selected physiological variables among middle aged men. I can state that middle aged men can never do hard exercise. They can do simple exercise like jogging and walking. Middle aged men are affected by some disease like diabetics they being middle aged men, it is difficult to them to undertake hard exercise so the study is need.

PURPOSE OF THE STUDY

Most of the people do not know the need of walking, walking is the simplest exercise. Middle aged men are ready to run fast at the age of 37 even though they are ready to run they don't know the benefits of walking. Without knowing the benefits of walking they run so the study is need.

methodology

The purpose of the study was to find out the influence of varied intensity of walking on selected physiological variables among middle aged men. To achieve this purpose, sixty men subjects who were not involved in any vigorous physical training programme at the age ranging from 35 to 45 years were selected from in and around Tirunelveli city. The selected subjects were divided into three groups at random with 20 each. In the experimental groups twenty men subjects would serve as control group and the remaining Twenty would undergo systematic walking training, under the supervision of researcher. The control group did not undergo any special training programme. The selected subjects were medically examined by a qualified medical person for undergoing the training programme. The training groups underwent 12weeks training programs regularly from 6 a. m to 7 a.m. in the morning session Weekly 6 days

RESULTS

TABLE I

Means, Standard Deviations and Adjusted Means among Experimental and Control Groups on VO2 max, Body Fat and Heart rate

Criterion Variable	High Intensity Walking Group				Low Intensity Walking Group				Control group			
	Pre test	Post test	Adjusted post test means	t test	Pre test	Post test	Adjusted post test means	t test	Pre test	Post test	Adjusted post test means	t test
VO2 max	44.470	48.435	48.447	48.447	44.870	47.000	46.975	46.975	44.460	44.275	44.288	44.288
	0.794	1.617			0.907	0.566			0.898	0.827		
Body Fat	23.630	20.500	20.618	20.618	24.000	22.100	22.053	22.053	24.000	23.600	23.529	23.529
	0.745	0.827			0.725	0.641			0.686	1.465		
Heart rate	81.050	75.300	75.331	75.331	80.950	76.400	76.494	76.494	81.300	80.700	80.574	80.574
	0.826	1.455			0.686	1.095			0.657	1.689		

*Significant at .05 level. The table value required for .05 level of significance with df 19 is 1.729.

The table I show that the obtained dependent t-ratio values between the pre and post test means on VO2 max, Body Fat and Heart rate of High Intensity Walking Group, Low Intensity Walking Group and control groups are 48.447, 20.618and 75.331, 46.975, 22.053and 76.494 44.288, 23.529 and 80.574respectively. The table value required for significant difference with df 19 at .05 level is 1.729. Since, the obtained't' ratio value of experimental groups are greater than the table value, it is understood that training programmes had significantly improved the performance of VO2 max, Body Fat and Heart rate. However, the control group has not improved significantly as the obtained 't' value is less than the table value, because they were not subjected to any specific training.

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TABLE II
Analysis of Covariance of High Intensity Walking Group, Low Intensity Walking Group and control groups on VO2 max, Body Fat and Heart rate

Criterion Variable		Sources of Variance	Sum of Squares	df	Mean Squares	F-Ratio
VO2 max	Pre test	Between	2.188	2	1.094	1.452
		Within	42.952	57	0.754	
	Post test	Between	178.603	2	89.301	74.047*
		Within	68.743	57	1.206	
	Adjusted Post test	Between	177.601	2	88.801	72.724*
		Within	68.380	56	1.221	
Body Fat	Pre test	Between	1.900	2	0.950	1.836
		Within	29.500	57	0.518	
	Post test	Between	96.133	2	48.067	44.477*
		Within	61.600	57	1.081	
	Adjusted Post test	Between	80.487	2	40.243	40.937*
		Within	55.051	56	0.983	
Heart rate	Pre test	Between	1.300	2	0.650	1.231
		Within	30.100	57	0.528	
	Post test	Between	325.733	2	162.867	79.210*
		Within	117.200	57	2.056	
	Adjusted Post test	Between	293.529	2	146.765	78.027*
		Within	105.333	56	1.881	

*significant at .05 level of confidence. (the table value required for significance at .05 level with df 2 and 57 and 2 and 56 are 3.162 and 3.166, 3.162 and 3.166, 3.162 and 3.166respectively

From the table II, the obtained F-ratio for pre test is 2.769, 1.836, 0.690which is greater than the table value of 3.162 and 3.166 with df 1 and 56 required for significance at 0.05 level of confidence. The result of the study indicates that there was significant difference among the pre test means of HIWG, LIWG and control groups on VO2 max, Body Fat and Heart rate. Table II also shows that the obtained F-ratio value is 72.724*, 40.937*, 78.027*which is higher than the table value 3.162 and 3.166 with df 2 and 56 required for significance at .05 level. Since the value of F-ratio is higher than the table value, it indicates that there is significant difference among the adjusted post-test means of HIWG, LIWG and control groups. To find out which of the three paired means had a significant difference, the Scheffe's post-hoc test was applied and the results are presented in Table III.

TABLE III
Scheffe's Test for the Differences between the Adjusted Post Test Paired Means of VO2 max, Body Fat and Heart rate

Adjusted Post Test Mean						
Criterion Variable	High Intensity Walking Group	Low Intensity Walking Group	Control Group	Mean Differences	C.I. Value	Result at 5% Level
VO2 max	48.447	46.975		1.472	0.879	Sig
	48.447		44.288	4.159	0.879	Sig
		46.975	44.288	2.687	0.879	Sig
Body Fat	20.618	22.053		1.435	0.789	Sig
	20.618		23.529	2.912	0.789	Sig
		22.053	23.529	1.476	0.789	Sig
Heart rate	75.331	76.494		1.163	1.091	Sig
	75.331		80.574	5.243	1.091	Sig
		123.751	126.299	2.548	1.091	Sig

*Significant at .05 level.

Table III shows that the adjusted post test mean differences on VO2 maxbetween the high intensity walking group, low intensity walking group; high intensity walking group and control group; low intensity walking group and control group were 4.159, 2.687and1.472.respectively. The values are greater than the confidence interval value 0.879, which shows significant difference at .05 level of confidence. body fat between the high intensity walking group, low intensity walking group; high intensity walking group and control group; low intensity walking group and control group were 2.912, 1.476and 1.435respectively. the values are not greater than the confidence interval value 0.789, the value between high intensity walking group, low intensity walking group and control group is only significant difference at .05 level of confidence. Heart Rate it was noted the mean difference between the HIWG and control group, LIWG and control group and the HIWG and the LIWG were 5.243, 2.548and 1.163respectively and these values are greater than the C.I value of 1.091. It was clear that both the group showed improvement on Heart rate when compare with control group when compare the no improvement between the HIWG and the LIWG.

Discussion
It was clear that both the groups showed improvement on Vo2 max, body fat and heart ratewhen compare with control group when compare the improvement between the HIWG and the LIWG, the HIWG showed better improvement than the LIWG.

CONCLUSIONS
1. It was found that the High intensity walking group (HIWG) showed better result on the variables Body fat, Heart rate and VO2 max for middle aged men.

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