



Effect of walking and running on muscular endurance

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Abstract

The primitive man by the very nature of his daily life activities built a strong physique superior to that of a civilized man. In ancient times people lived in the natural environment which forced them to work hard for their live-hood. They had to struggle and fight for their existence. General Physical fitness is the capacity of the body to perform work, to resist disease and infections and to resist physical stresses imposed by such things as heat, cold, atmospheric pressure, changes at high altitude or under water and the force of jolts and vibrations. The purpose of this study was to find out the effect of walking and running on muscular endurance. The subjects were sixty middle aged men from in and around Tirunelveli city were selected as subjects at random and their age was between 35 and 45 years. The subjects were divided into three groups namely walking training group, running training group and control group. Each group consisted of 20 subjects. The duration of the training was twelve weeks in Sankar Polytechnic College, Tirunelveli under the supervision of researcher. The subjects were selected from Tirunelveli city, the study was formulated as a random group design. The score were compared by using (ANCOVA) The level of significant chosen was 0.01level and 0.05 level.

Keywords: walking, running, civilized man, heat, cold, atmospheric pressure

Introduction

Physical fitness is defined as "a set of attributes that people have or achieve that relates to the ability to perform physical activity". In other words, it is more than being able to run a long distance or lift a lot of weight at the gym. Being fit is not defined only by what kind of activity you do, how long you do it, or at what level of intensity. While these are important measures of fitness, they only address single areas.

Physical fitness is the functioning of the heart, blood vessels, lungs, and muscles to function at optimum efficiency. In previous years, fitness was defined as the capacity to carry out the day's activities without undue fatigue. Automation increased leisure time, and changes in lifestyles following the industrial revolution meant this criterion was no longer sufficient. Optimum efficiency is the key. Physical fitness is now defined as the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypo kinetic diseases, and to meet emergency situations. Fitness can also be divided into five categories: aerobic fitness, muscular strength, muscular endurance, flexibility, and body composition.

"Walking is convenient, it needs no special equipment, is self-regulating and inherently safe. Walking is as natural as breathing".

Walking should be an aerobic exercise. Aerobic means that exercise is carried out at a comfortable pace to ensure that the muscles have sufficient oxygen available. If you are gasping for breath, you are doing anaerobic exercise. Regular aerobic exercise done three times a week for 30 minutes or more will result in increased levels of fitness and aerobic capacity.

Methodology

The purpose of the study was to find out the effects of walking

training and running training on muscular endurance variable. To achieve this purpose, sixty men who were not involved in any vigorous physical training programme, age ranging from 35 to 45, were selected from in and around, Tirunelveli city. The selected subjects were divided into three groups at random with 20 each. Twenty men would serve as control group and the remaining forty would undergo systematic walking training group and running training group in Sankar Polytechnic College, Tirunelveli 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. During the training period, the experimental groups underwent walking training group and running training group. The subjects of the experimental groups underwent their respective training programme for six weeks. The timing for the running training was 6.00 am to 7.00 a.m. and the walking training was morning 6.00 a.m. to 7.00 a.m.

Analysis of Data and Results of the Study

Table 1: The Summary of Mean and Standard Deviation for the Pre and Post Tests on Pull Ups of Walking Traiing Group, Running Training Group and Control Group

Group	Pre test		Post test	
	Mean	S D	Mean	S D
W T G	5.6	1.57	7.1	2.13
R T G	5.4	2.01	6.15	1.95
C G	5.2	1.94	5.1	1.71

From the above table the mean and standard deviations of the pretest for walking training group was 5.6 and 1.57 for

running training group 5.4 and 2.01 and for control group 5.2 and 1.94 respectively. The mean and standard deviations of the post test for walking training group was 7.1 and 2.13 for running training group 6.15 and 1.95 and for control group 5.1 and 1.71 respectively. The analysis co variance was calculated and presented in the Table I.

Table 2: Analysis of Covariance on Pull Ups of Walking Training Group Running Training Group and Control Group

Adjusted Post test mean			Source	SS	df	MS	F
WTG	RTG	CG					
6.92	6.15	5.28	Between	26.45	2	13.23	15.02
			Within	49.3	56	0.88	

Significant at .05 level of confidence. The table value is 3.16 The Table II shows that the adjusted post test mean for walking training group is 6.92 and the adjusted post test mean for running training group is 6.15 and the adjusted post test mean for control group is 5.28. The obtained F ratio was 15.02 and this value was greater than the table value of 3.16 at 0.05 level of confidence. Since the F ratio was significant then the scheffes test for the differences of the adjusted Post test paired means of pull ups was conducted and presented in the Table III

Table 3: Scheffes Test for the Differences of the Adjusted Post Test Paired Means of Pull Ups

Adjusted post test means			Mean Differences	Confidence Interval Value
WTG	RTG	CG		
6.92	6.15		0.77	0.75
6.92		5.28	0.87	
	6.15	5.28	1.64	

The table III shows that the adjusted post test mean difference in pull ups between Walking Training Group and Running Training Group was 0.77, Walking Training Group and Control Group was 0.87 and Running Training Group and Control Group was 1.64 and the confidence interval value was 0.75. Mean difference value was greater than the confidence interval value.

Conclusions

The result of the study seems to be permitting the following conclusions.

Analysis of data using ANACOVA showed that there were significant difference between experimental groups and control group on selected variable like muscular endurance. The significant improvement in the above said variable highlights the effect of running training and walking training design for this study, its systematic progressive loading pattern and appropriate recovery phase between sessions during the training period. The control group did not participate any kind of training programme specifically for improving the selected variable level. so the walking training group was better when compare with running training group and both walking training group and running training group were higher value than the control group and both the groups were better when compare with the control group.

Reference

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