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INFLUENCE OF 8 WEEKS OF SHORT BOUT AEROBIC TRAINING WITH STEP AEROBICSON CARDIO VASCULAR ENDURANCE AND EXPLOSIVE POWER AMONG ADULT MEN

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ABSTRACT

The purpose study was to investigate the influence on cardiovascular endurance and explosive power by practicing short bouts aerobic training with step aerobicson college men for the period of 8 weeks. To achieve this purpose 30 adult men were randomly selected from Health clubs in Coimbatoreas subjects. They were divided into two groups. The group I was considered as experimental group and group II was considered as control group. the experimental group – I was given short bouts aerobic training with step aerobics for five days per week and the control group was not given any exercise. The experimental group was given training for the period of 8 weeks of short bouts aerobic training with step aerobics. The criterion variables were chosen namely cardiovascular endurance and explosive power for this study. All the dependent variables were assessed before and after the training period of 8 weeks. The collected data on selected

parameters due to effect of short bouts aerobic training with step aerobics was analyzed in order to find out the significant improvement if any, 't' test was applied. 0.05 level of confidence was fixed to test the level of significance. The results of the study delivered that the cardiovascular endurance and explosive power were significantly improved due to the influence of short bouts aerobic training with step aerobics for the period of 8 weeks.

INTRODUCTION

Aerobic exercises are endurance-type exercises that increase a person's heart rate and breathing rate over relatively long durations. Anaerobic exercises are exercises that involve short bursts of intense activity. Progressive, home-based, low-impact aerobics improved physical function and fibromyalgia symptoms minimally in participants who completed at least two thirds of the recommended exercise. Fractionation of exercise training provided no advantage in terms of exercise adherence, improvements in fibromyalgia symptoms or physical function. High attrition rates and problems with exercise adherence were experienced in both exercise groups (Candice, et al., 2003).

Short bouts like step aerobics (SA) have been viewed as a usual and popular workout mode among females on account that the 1980s. the short bout aerobics training involves stepping up and down on a single bench in choreographed, group-led moves to cadenced musical arrangements. The fine results of SA coaching on body composition have been shown in young (Kravitz, et al, 1993) and older adults (Chien, 2000). short bouts aerobic training has increased lower body strength in older adults, which can be attributed to the repetitive motion of stepping up and down on a bench (Mori et al,2006)). Step aerobics has increased top body energy as well, due to the fact of its choreographies that involve dynamic actions of the palms (Kravitz, et al, 1993). In addition, improvements in stability and agility have been shown in middle-aged and older adults because of the attribute movements used in SA choreographies (Nnodim, 2006). Improvements in flexibility have been done via the range of movement required to function the actions of SA choreographies and stretching exercises (Nelson, et al 2007). Finally, due to the fact, SA has viewed as a predominantly cardio exercising modality, the majority of investigations have evaluated and shown its really useful effect on cardiorespiratory fitness (CRF).

Aerobics is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines. The goal is to improve all elements of fitness. Step aerobics is a method which allows us to do aerobics exercises for the purpose of getting a cardio-respiratory reaction from the concept of lifting your body weight. While this concept has been around since the 1950s, it was not until the 1980s that step aerobics came into being in an organized fitness setting and, thus, mainstream popularity. An entrepreneurial woman by the name of Gin Miller is credited with bringing aerobic steps to the masses when she finally succeeded in getting Reebok to listen to her idea of innovating step aerobics. Step aerobics is a form of aerobic exercise that uses a 4- to 12-inch platform or step. It is a low-impact form of exercise that is less stressful on the joints than higher impact exercises such as jogging or running. Today, step aerobics is a very

popular training method in many fitness centers around the country, and classes for this exercise method are offered where there is a group exercise program.

However, there have been few reports that have examined the influence of aerobic training on motor fitness parameters of college men. We developed an aerobics training program for college men using a bench stepping exercise. The bench stepping exercise is a cost-effective, user-friendly, and practical exercise mode. We have already confirmed that this exercise program can improve the physical fitness levels and the health outcomes in the players representing various sports and games. It is sample sushisen [13-16] we therefore, hypothesized that this bench stepping exercise program can improve the cardiovascular endurance and explosive power of college men.

METHODOLOGY

To achieve this purpose 30 adult men were randomly selected from fitness clubs at Coimbatore, Tamilnadu as subjects. They were experienced as beginners to the short bouts aerobic training with step aerobics divided into two groups. The group I was considered as an experimental group and group II was considered as a control group. The investigator did not make any attempt to equate the group. The control group was not given any exercise and the experimental group was given short bouts aerobic training for five days per week. The experimental group was given training for a period of 8 weeks of short bouts aerobic training with step aerobics. They understood the purpose of the study, all procedures involved, voluntarily accepted to undergo all the training procedures. The evaluated parameters were cardiovascular endurance (Cooper's 12 min run and walk), and explosive power (standing broad jump). The parameters were measured before and after the short bouts aerobic training with step aerobics program. The effects of the training program were examined.

TRAINING PROGRAMME

The short bouts aerobic training which includes the step aerobics training exercises was lasted for 45 minutes per session in a day, 5 days a week for a period of eight weeks duration. These 45 minutes included 5 minutes warm-up and 5 minutes warm down the remaining 35 minutes allotted for the training program. Every two weeks of training 5% of intensity was increased from 65% to 80% of the workload. The 8th week was maintained with 75% to platen the load for avoiding the overload. The training load was increased from the maximum working capacity of the subjects during the pilot study.

The weekly schedule of short bouts aerobic exercise for the experimental groups the Intensity was fixed based on the maximum heart rate. The intensity was varied from 65% to 80% with the change of 5% in every week.

Weeks	Intensity (MHR)
Week 1	65%
Week 2	65%
Week 3	70%
Week 4	70%
Week 5	75%
Week 6	75%
Week 7	80%
Week 8	75%

Collection Of Data and Statistical Analysis

The collected data on selected fitness parameters due to effect of short bouts aerobic training with step aerobicsg was analyzed by computing mean and standard deviation. In order to find out the significant improvement if any, ‘t’ test was applied. 0.05 level of confidence was fixed to test the level of significance.

Data Analysis and Results of the Study

Table – 2 Summary of mean and ‘t’ test for the pre and post tests on cardiovascular endurance and explosive power of control and experimental groups

Variables	Groups	Test	Mean	Standard deviation	Mean difference	‘t’ RATIO
Cardiovascular Endurance	Control group	Pre	2146.73	64.13	3	0.17
		Post	2143.73	36.07		
	Experimental group	Pre	2143.40	37.89	386.13	22.48*
		Post	2529.53	46.45		
Explosive power	Control group	Pre	2.09	0.033	0.01	0.94
		Post	2.10	0.04		
	Experimental group	Pre	2.10	0.03	0.38	9.87*
		Post	2.48	0.14		

*Significant at 0.05 level of confidence for the degrees of freedom (1, 14), 2.145
 The above table -1 reveals the computation of the ‘t’ ratio between mean of pretest and posttest of control and experimental groups on cardiovascular endurance and explosive power of adult men.

The mean values of pre and posttest of the control group and experimental group on cardiovascular endurance were 2146.73 and 2143.73, 2143.40, and 2529.53 respectively. The mean values of the control group and experimental group on explosive power 2.09 and 2.10, 2.10, and 2.48 respectively. Further, the table revealed that the obtained ‘t’ ratio of the control group was 0.17 (Cardiovascular endurance) and 0.94 (Explosive power) was lesser than the required table value 2.145. It was found statistically not significant for the degree of freedom 1, and 14

at 0.05 level of confidence. It was also inferred that the obtained ‘t’ ratio of the experimental group was 22.4 (Cardiovascular endurance) and 9.87 (Explosive power) were greater than the required table value of 2.145. It was found statistically significant for the degree of freedom 1 and 14 at 0.05 level of confidence.

The results clearly indicated that the cardiovascular endurance and explosive power of the experimental group improved due to the influence of 8 weeks of short bouts aerobic training with step aerobics program. The same was represented as diagrams 1 & 2.

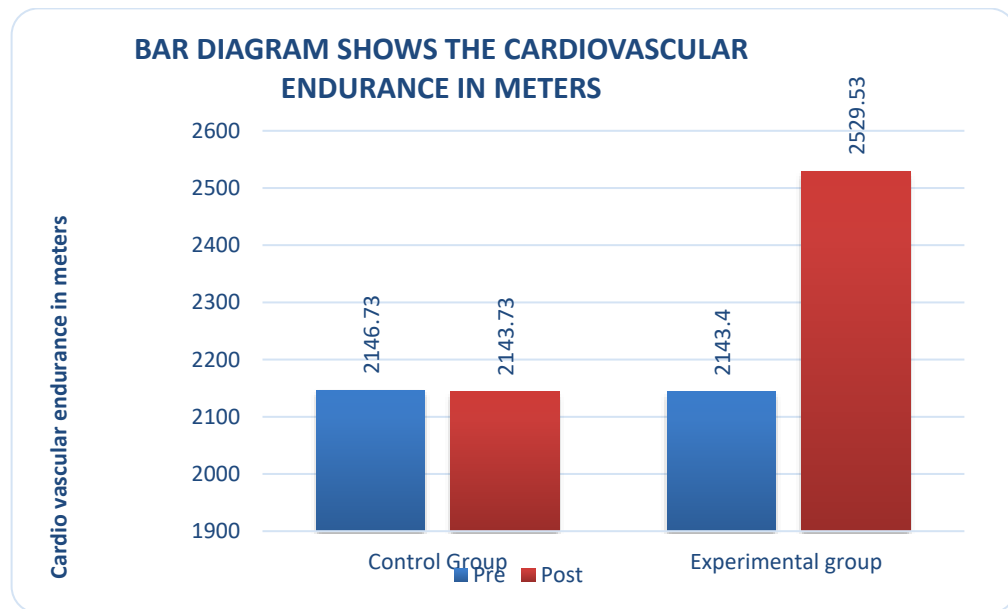


Diagram – 1

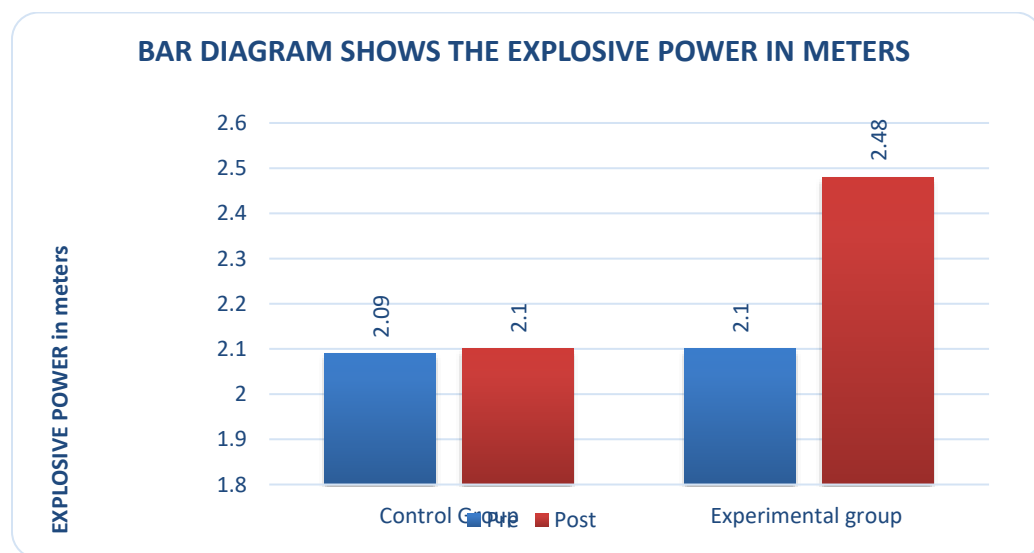


Diagram – 2

DISCUSSIONS ON FINDINGS

The present study experimented with the effect of short bouts aerobic training with step aerobic on cardiovascular endurance and explosive power of adult men. The result of this study indicated that short bouts aerobic training improved cardiovascular endurance and explosive power.

The findings of the present study the short bouts aerobic training with step aerobics improved cardiorespiratory endurance by 18% from the baseline to the post-test. It means that the 12 weeks of short bouts aerobic training had similarities with the findings of the investigations referred to in this study. Kostic, et.al, (2005) indicated that cardiovascular fitness was improved by a short bouts aerobic training program. Further, they suggested that if aerobic dance practiced over a longer period of time with training sessions three times a week for a shorter period of time on condition that the intensity of the exercise remains the same.

Further, the finding of the present study the 12 weeks of short bouts aerobic training with step aerobics training resulted in the improvement of 18% on leg explosive power of adult men. The result of the above was accepted with the research findings of Peschar, et.al, (1991) gives that individual can improve their muscular strength through the aerobic dance program. Arslan (2011) reported that the short bouts aerobic training proved to be a useful exercise modality for weight loss and in terms of body composition (Saravanan E, 2018). Williams, et.al, (1986) reported that the 12 weeks aerobic dance program was successful in promptly beneficial changes in cardiorespiratory fitness and body composition. The results of the present study indicated that the short bouts aerobic training program is an effective method to improve cardiovascular endurance and explosive power of young adult men.

CONCLUSIONS

Based on the results and finding of the study and the limits of the intermediate level men sample and the framework of statistical treatments used, the following conclusions were made. It was concluded that eight weeks of short bouts aerobic training with step aerobics program produced significant improvement in the cardiovascular endurance of men. The eight weeks of short bouts aerobic training with step aerobics program produced significant improvement in the explosive power of young adult men.

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