



Effects of two Different Modes of Aerobic Dance on Selected Bio- Motor Components of University Men Players

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ABSTRACT

Aim of the study was to find out the effects of two different modes of aerobic dance on selected bio- motor components of University men players. The study was conducted on forty five (N=45) men players studying KSR College of Engineering and Technology, Tiruchengode, Tamilnadu, India were selected as subjects. The selected players were assigned in to three groups of fifteen each (n=15), Group I underwent Aerobic Dance with hand held weights, Group II underwent Aerobic Dance without hand held weights, and Group III acted as control. Speed and Explosive power were selected as dependent Bio Motor variables. Speed was assessed by 50 meters run test and Explosive power was assessed by Vertical Jump tests. The training period was limited to 12 weeks duration. All the subjects were tested on selected dependent variables prior to and immediately after the training periods. The data collected data from the three groups prior to and immediately after the training programme on the selected criterion variables were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's post hoc test was followed to determine which of the paired mean differences was significant. In all the cases .05 level of confidence was fixed to test the hypotheses. Speed and Explosive Power showed significant difference among the groups. Aerobic dance with hand held weight group showed better performance than Aerobic dance without hand held weight group and Control group.

KEYWORDS: Aerobic dance with hand held weight, Aerobic dance without hand held weight, Speed.

INTRODUCTION

Over the past three decades the fitness activity known as Aerobics has evolved from its rough and ready beginnings into one of the most popular and widely used forms of exercise in the world. Once taught by anyone with enough enthusiasm and a loud voice, it is now a skilled science taught by specifically trained fitness professionals with high levels of knowledge in the fields of human kinesiology, physiology, anatomy and exercise theory (Bull, 1996).

Since 1970s, the practice of aerobics namely aerobic dance workouts have been growing worldwide. As explained in my previous hub, aerobic dance workouts and exercises help improve cardiovascular capacity by increasing the overall use of oxygen in our body and allowing the heart to work with full efficiency and capacity with less effort. These aerobic workouts that are done for exercise not only provide health benefits but provide improved overall level of consciousness and alertness, decreased stress level, increased cardiopulmonary health, intolerance against disease and infection, etc. Aerobic exercise teachers and physical trainers recommend at least 15 minutes daily of dance aerobics practice with a minimum of three times a week to get full benefits of aerobic dance workouts and to achieve a better level of fitness. Addition of favorite music like jazz, pop, hip hop, and masala bhangra music has attracted millions of people towards this beneficial workout routine. Also, aerobic gymnastics and rhythmic aerobics are famous sports all over the world. (hubpages.com)

Aerobics is fast becoming one of the world's most popular forms of fitness-related activity, and its growth in the UK over the last decade has been phenomenal. In 1988 it was found that, amongst people over the age of 15, Aerobics classes (together with the related activities of Keep Fit and Dance Exercise) were the most popular sporting pastimes after

swimming, and in 1991 more money was spent on clothing, footwear and equipment for Aerobics and Keep Fit than on any other sport apart from golf (Sports Council, 1991).

METHODOLOGY

To purpose of this study was to effects of two different modes of aerobic dance on selected bio- motor components of University men players. The study was conducted on forty five (N=45) men players studying KSR College of Engineering and Technology, Tiruchengode, Tamilnadu, India were selected as subjects. The selected players were assigned in to three groups of fifteen each (n=15), Group I underwent Aerobic Dance with hand held weights, Group II underwent Aerobic Dance without hand held weights, and Group III acted as control. Speed and Explosive power were selected as dependent Bio Motor variables. Speed was assessed by 50 meters run test and Explosive power was assessed by Vertical Jump tests. The training period was limited to 12 weeks duration. All the subjects were tested on selected dependent variables prior to and immediately after the training periods.

RESULTS AND DISCUSSION

The data collected data from the three groups prior to and immediately after the training programme on the selected criterion variables were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's post hoc test was followed to determine which of the paired mean differences was significant. In all the cases .05 level of confidence was fixed to test the hypotheses.

The Analysis of covariance (ANCOVA) on Speed and Explosive power of Aerobic Dance with hand held weights, Aerobic Dance without hand held weights and control group have been analyzed and presented in Table -I.

Table – I

Analysis of Covariance between Aerobic Dance with Hand Held Weights, Aerobic Dance without Hand Held Weights and Control Group on Speed and Explosive Power

Certain Variables	Adjusted Post test Means			Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
	Aerobic Dance with Hand Held Weights Group-(I)	Aerobic Dance without Hand Held Weights Group-(I)	Control Group (III)					
Speed	6.68	7.42	7.59	Between With in	7.03 10.79	2 41	3.51 0.26	13.35*
Explosive Power	1.57	1.55	1.49	Between With in	0.04 0.12	2 41	0.02 0.003	7.04*

*Significant at .05 level of confidence.

(The table value required for significance at .05 level with df 2 and 41 is 3.23)

Table I shows that the adjusted post test mean values of Speed and Explosive power for Aerobic Dance with hand held weights group, Aerobic Dance with hand held weights group and Control group are 6.68, 7.42, 7.59, 1.57, 1.55 and 1.49 respectively. The obtained F-ratios are 13.35 and 7.04 is more than the table value 3.23 for df 2 and 41 required for significance at .05 level of confidence.

The results of the study indicate that there is a significant difference exists among the adjusted post test means of experimental groups showing the decrease in speed and increase of Explosive power.

To determine which of the paired means had a significant differences, Scheffe's test was applied as Post hoc test and the results are presented in Table II.

Table - II
The Scheffe's test for the Differences between the Adjusted Post Tests Paired Means on Dependent Variables

Certain Variables	Adjusted Post test Means			Mean Difference	Confidence Interval
	Aerobic Dance with Hand Held Weights Group-(I)	Aerobic Dance without Hand Held Weights Group-(I)	Control Group (III)		
Speed	6.68	7.42		0.74*	0.47
	6.68		7.59	0.91*	0.47
		7.42	7.59	0.17	0.47
Explosive Power	1.57	1.55		0.02	0.05
	1.57		1.49	0.08*	0.05
		1.55	1.49	0.06*	0.05

*** Significant at .05 level of confidence**

Table II shows that the adjusted post test mean for differences on speed between Aerobic dance with hand held weights group and Aerobic dance without hand held weights group and Aerobic dance with hand held weights group and Control group are 0.74 and 0.91. The values are greater than the confidence interval 0.47, which shows significant differences at .05 level of confidence. The values between Aerobic dance without hand held weights group and Control group was 0.17. This value is lesser than the confidence interval, so it showed insignificant differences.

Table II further shows that the adjusted post test mean for differences on Explosive Power between Aerobic dance with hand held weights group and Control group, Aerobic dance without hand held weights group and Control group were 0.08 and 0.06. The values are greater than the confidence interval 0.05, which shows significant differences at .05 level of confidence. The values between Aerobic dance with hand held weights group and Aerobic dance without hand held weights group was 0.02. This value is lesser than the confidence interval, so, it showed insignificant differences.

The adjusted post test means values of Aerobic dance with hand held weights group, Aerobic dance without hand held weights group and Control group on Speed and Explosive Power were graphically represented in the figure I and figure II respectively.

SPEED IN SECONDS

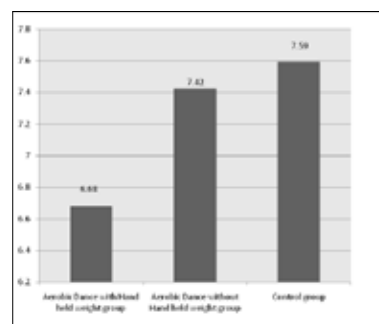


Figure I: Adjusted Post Test Means Values of Aerobic Dance with Hand Held Weights Group, Aerobic Dance without Hand Held Weights Group and Control Group on Speed

EXPLOSIVE POWER IN METERS

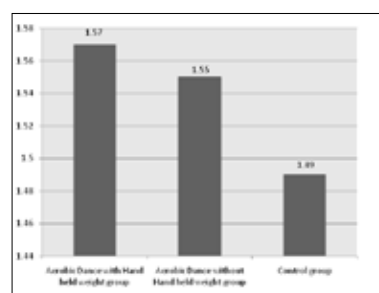


Figure II: Adjusted Post Test Means Values of Aerobic Dance with Hand Held Weights Group, Aerobic Dance without Hand Held Weights Group and Control Group on Explosive Power

DISCUSSION ON FINDINGS

Arslan (2011) suggested to the step aerobic dance programme proved to be a useful exercise modality for weight loss and in terms of body Exercise programme (n=29) and a control group (n=20). The subjects took part in a step-aerobic dance exercise programme for one hour per day, three days a week for eight weeks. The subjects' Body Mass composition. There was a clear response to the eight-week step aerobic dance programme in terms of central obesity in sedentary obese Turkish women. Blessing et al (1987) found a significant improvement in VO2 max was found within the hand-held weight (37.7 to 42.6) and in the non-hand-held weight group (36.5 to 41.9). Complaints from subjects included transient aches and pains in the shoulder area during the first 3 weeks as a result of hand-held weight use. These findings suggest that hand-held weights may be used safely but do not increase the work load sufficiently above that of aerobic dance alone to significantly modify VO2 max or body composition. Kostic et al(2006) found significant positive influence of the aerobic dance trainings on the changes in the cardiovascular endurance and body composition parameters in young adult women.

CONCLUSION

From the analysis of the data, the following conclusions were drawn.

1. The Experimental groups had registered significant improvement on the selected criterion variables namely Speed and Explosive Power.
2. It may be concluded that the aerobic dance with hand held weight group is better than aerobic dance without hand held weight group and Control group in improving Speed and Explosive Power.

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