



EFFECTS OF AEROBIC DANCE WITH AND WITHOUT HAND HELD WEIGHTS ON BODY FAT PERCENTAGE OF UNIVERSITY OF MADRAS MEN PLAYERS

Dr.M. Pari

Director of Physical Education, S.I.V.E.T. College, Gowrivakkam, Chennai -600 03, Tamilnadu, India.

ABSTRACT The Purpose of the study was to find out the effects of Aerobic Dance with and without hand held weights on Body Fat Percentage of University of Madras men Players. The study was conducted on thirty (N=30) men players who were studying various colleges affiliated to University of Madras, Chennai, Tamilnadu, India were selected as subjects. The selected subjects were assigned in to three groups of ten each (n=10), Group I underwent Aerobic Dance with hand held weights, Group II underwent Aerobic Dance without hand held weights, and Group III acted as control. Body Fat Percentage was selected as dependent variable. Body Fat Percentage was assessed by Skinfold caliper. 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. Body Fat Percentage 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, Body Fat Percentage

INTRODUCTION

Traditionally, coaches and trainers have planned conditioning programs for their teams by following regimens used by teams that have successful win loss records. This type of reasoning is not sound because win-loss records alone do not scientifically validate the conditioning programs used by the successful teams. In fact, the successful team might be victorious by virtue of its superior athletes and not its outstanding conditioning program. Without question, the planning of an effective athletic conditioning program can best be achieved by the application of proven physiological training principles. Optimizing training programs for athletes is important because failure to properly condition an athletic team results in a poor performance and often defeat (Birch *et al.*, 2005).

The word aerobic literally means "with oxygen" or "in the presence of oxygen." Aerobic activity trains the heart, lungs and cardiovascular system to process and deliver oxygen more quickly and efficiently to every part of the body. As the heart muscle becomes stronger and more efficient, a larger amount of blood can be pumped with each heartbeat. As a result, a fit individual can work longer, more vigorously and achieve a quicker recovery at the end of the aerobic session.

Over the past decade, aerobic dance classes have become one of the most popular activities at health clubs and community centers throughout the country. For many people, the term "aerobics" has become synonymous with this form of dance and coordinated exercise set to music. A typical aerobic dance class begins with a slow warm-up period, then progresses to a level of activity that should maintain a targeted heart rate for a minimum of 20 minutes. A general cool-down period follows. Cardiovascular conditioning, muscle toning, and stretching are emphasized through coordinated dance steps and body movements. Aerobic dance classes are fun: people jump, kick, and sometimes yell or sing, all to the beat of lively music (Davis *et al.*, 2000).

METHODOLOGY

The study was conducted on thirty (N=30) men players who were studying various colleges affiliated to University of Madras, Chennai, Tamilnadu, India were selected as subjects. The selected subjects were assigned in to three groups of ten each (n=10), Group-I underwent Aerobic Dance with hand held weights, Group-II underwent Aerobic Dance without hand held weights, and Group-III acted as control. Body Fat Percentage was selected as dependent variable. Body Fat Percentage was assessed by Skinfold caliper.

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 Body Fat Percentage 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 Body Fat Percentage

Cert ain Varia bles	Adjusted Post test Means			Sourc e of Varia nce	Sum of Squ ares	df	Mean Squa res	'F' Rat io
	Aerobic Dance with Hand Held Weights Group-(I)	Aerobic Dance without Hand Held Weights Group-(I)	Contr ol Group (III)					
Body Fat Percen tage	3.80	3.98	5.82	Betwe en With in	24.8 7 28.1 0	2 26	12.43 1.08	11.5 0*

*Significant at .05 level of confidence.

(The table value required for significance at .05 level with df 2 and 26 is 3.37)

Table-I shows that the adjusted post test mean values of Body Fat Percentage for Aerobic Dance with hand held weights group, Aerobic Dance with hand held weights group and Control group are 3.80, 3.98 and 5.82 respectively. The obtained F-ratio is 11.50 is more than the table value 3.37 for df 2 and 26 required for significance at 0.05 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 increase in Body fat Percentage.

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)		
Body Fat Percentage	3.80	3.98		0.18	1.19
	3.80		5.82	2.02*	1.19
		3.98	5.82	1.84*	1.19

*Significant at .05 level of confidence

Table-II shows that the adjusted post test mean for differences on Body Fat Percentage between Aerobic dance with hand held weights group and Control group, Aerobic Dance without hand held weights groups and Control groups were 2.02 and 1.84. The values are greater than the confidence interval 1.19, which shows significant differences at 0.05 level of confidence.

Further the Table-II shows that the adjusted post test mean for differences on Body Fat Percentage between Aerobic dance with hand held weights group and Aerobic dance without hand held weights group, was 0.18. The value is less than the confidence interval 1.19, which shows insignificant differences at 0.05 level of confidence.

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 Body Fat Percentage was graphically represented in the figure-I.

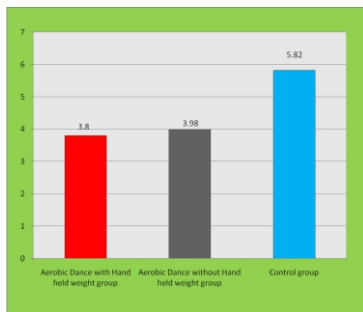


Figure-I: Adjusted Post Test Means Values of Aerobic Dance with Hand Held Weights Group, Aerobic Dance without Hand Held Weights Group and Control Group on Body Fat Percentage

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 Body Fat Percentage.
 2. It was concluded that the aerobic dance with hand held weight group is better than aerobic dance without hand held weight group and Control group in decreasing Body Fat Percentage.

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