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INFLUENCE OF AEROBIC DANCE TRAINING ON SELECTED PHYSICAL FITNESS VARIABLES AMONG COLLEGE LEVEL BADMINTON PLAYERS

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ABSTRACT
This research aims to assess the Influence of Aerobic Dance Training on Selected Physical Fitness Variables Among College Level Badminton Players.Thirty Badminton players aged between 18 and 25 years were selected from colleges affiliated with Bharathiar University, Coimbatore, Tamil Nadu. The subjects were randomly divided into two equal groups of fifteen each. Group I underwent Aerobic Dance Training (ADG), while Group II acted as the control group (CG). The training programme was conducted for six weeks, with three sessions per week. The selected dependent variables included flexibility, balance, agility and aerobic endurance. Flexibility was measured using the sit-and-reach test in centimetres, balance was assessed using the flamingo balance test in score, agility was measured by the Illinois agility test in seconds, and aerobic endurance was evaluated using the cooper 12min run/walk test in meters. Measurements were taken before and after the training period. The collected data were analyzed using the dependent 't' test. The results of the study revealed that there was a significant improvement in flexibility, balance, agility and aerobic endurance among the aerobic dance training group compared to the control group.
KEYWORDS: *Aerobic Dance Training, Badminton, Flexibility, Balance, Agility And Aerobic Endurance.*

INTRODUCTION

Aerobic dance training is a fun and rhythmic form of exercise that combines music with continuous body movements. It is widely used to improve overall physical fitness and health. For college women badminton players, maintaining good physical fitness is very important because badminton is a fast-paced game that requires speed, agility, endurance, strength, and flexibility. Aerobic dance can be an effective training method to support these fitness components in an enjoyable way.

Badminton players often need quick movements, fast reactions, and the ability to sustain energy throughout the match. Regular aerobic dance training helps to improve cardiovascular endurance, which allows players to play longer without getting tired. It also enhances coordination, balance, and agility due to the variety of movements involved. In addition, aerobic dance can improve muscle tone and flexibility, which are essential for preventing injuries and improving performance on the court. For college women, aerobic dance is especially beneficial as it not only improves physical fitness but also reduces stress and increases motivation. Since it is performed with music and in groups, it creates a positive and energetic environment for training. This makes it easier for players to stay consistent with their exercise routine. This study aims to find out the effect of aerobic dance training on selected physical fitness variables among college women badminton players. It helps to understand whether this enjoyable form of exercise can improve their performance and overall fitness level.

STATEMENT OF THE PROBLEM

The purpose of the study was to find out the "Influence of aerobic dance training on selected physical fitness variables among college level badminton players".

METHODS

EXPERMENTAL DESIGN

The study was formulated as pre test and post test randomized groups design from the players initially for the study, based on the voluntary response to participate in thirty intercollegiate women badminton players were selected from Bharathiar University affiliated colleges further process in which thirty badminton players were randomly selected. The age ranged from 18 to 25 years and they were divided into two groups namely aerobic dance training group and control group. The selected subject (N=30) was divided into two groups (n=15) which group I underwent aerobic dance training(ADG) and group II was consider as control group (CG). The aerobic dance training group (GROUP-I) underwent the specific training in the evening session for a period of six weeks. Group II was not treated with any special training had they were doing their regular activity.

TRAINING PROGRAM

The total duration of Aerobic dance training was 6weeks. The load was increased one in two physical fitness training progress and lasted for 60 minutes During the training period the subject were treated with Aerobic dance training for three alternative days (Monday Wednesday Friday) per week.

PHASE I

During the 1 to 2 weeks of Aerobic dance training the subjects were treated with warm up for 10 minutes. Followed by Aerobic dance training namely Basic aerobic steps marching, side steps, step touch, grapevine, knee lifts, front kick, V- Step. low-intensity dance, simple slow rhythmic combinations with music

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(3 sets with 2 repetitions). Further the session ended with warming down for 10minutes

PHASE II

During the 3 to 4 weeks of training, aerobic dance training the subjects were treated with warm up for 10minutes Followed by aerobic dance training namely Moderate aerobic dance, include marching, side steps, step touch, grapevine, knee lifts, front kick, V- Step. coordinated sequences Increase tempo, introduce directional changes (3 sets with 4 repetitions). Further the session ended with warming down for 10minutes.

PHASE III

During the 5 to 6 weeks of training, Aerobic dance training the subjects were treated with warm up for 10minutes Followed by Aerobic dance training namely marching, side steps, step touch, grapevine, knee lifts, front kick, V- Step. High-intensity aerobic dance, jumps, fast footwork, continuous dance sequences (4 sets with 4 repetitions). Further the session ended with warming down for 10minutes.

STATISTICAL TECHNIQUE

The collected data on flexibility, balance, agility and aerobic endurance due to the effects of Aerobic dance training was analyzed by computing mean and standard deviation. In order to find out the significant improve if any 't' test was applied 0.05 level of confidence was fixed to test the level of significance.

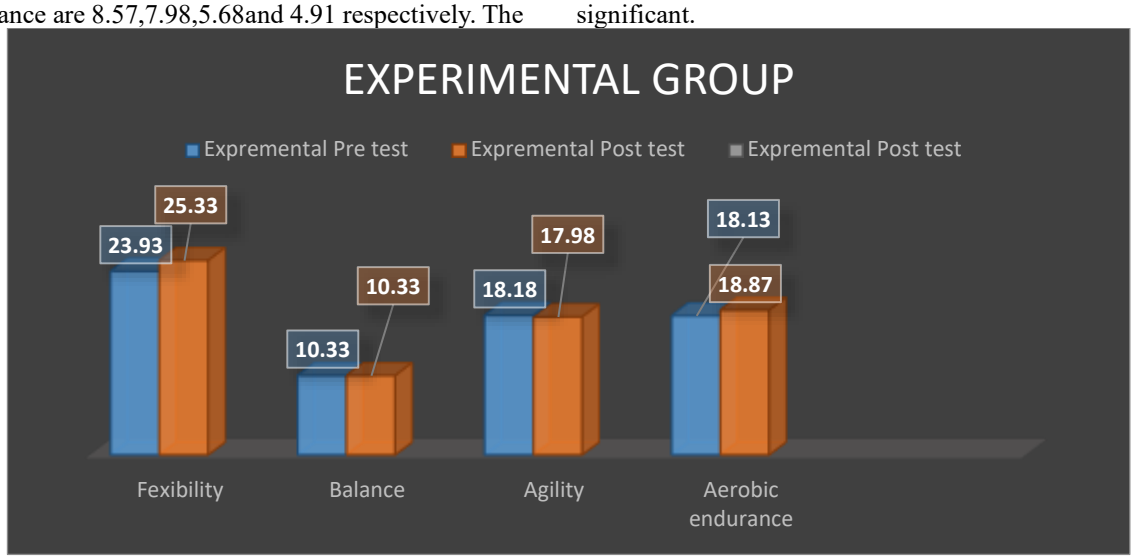
RESULTS

Table: 1 Computation of 't' ratio between pre and post-test means of experimental group

Physical Fitness Variables	Pre/ Post Test	Mean	S.D	Std Error Mean	't' ratio
FLEXIBILITY	PRE TEST	23.93	2.34	0.16	8.57*
	POST TEST	25.33	2.25		
BALANCE	PRE TEST	10.33	1.11	0.28	7.98*
	POST TEST	8.06	1.03		
AGILITY	PRE TEST	18.18	0.28	0.03	5.68*
	POST TEST	17.98	0.31		
AEROBIC ENDURANCE	PRE TEST	1813.33	62.64	11.79	4.91*
	POST TEST	1871.33	77.26		

*Significant at 0.05 level of confidence (2.145), 1 & 14.

Table 1 reveals that the Computation of 't' ratio between pre and post-test means of experimental group on selected physical fitness variables. The 't' ratio on flexibility, balance, agility and aerobic endurance are 8.57,7.98,5.68and 4.91 respectively. The required table value was 2.14 for the degrees of freedom 14 at 0.05 level of significance. Since the obtained 't' ratio values were greater than the table value, it was found statistically significant.



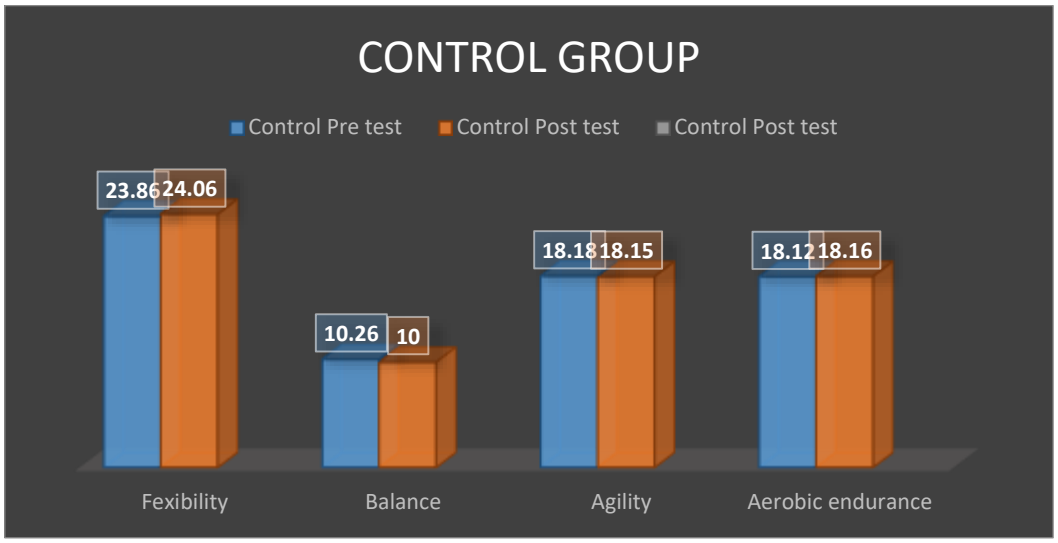
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Table: 2 Computation of 't' ratio between pre and post-test means of Control Group

PHYSICAL FITNESS VARIABLES	PRE/POST TEST	MEAN	S.D	STD ERROR MEAN	t' ratio
FLEXIBILITY	PRE TEST	23.86	2.16	0.10	0.02
	POST TEST	24.06	2.08		
BALANCE	PRE TEST	10.26	1.03	0.20	1.29
	POST TEST	10.00	1.06		
AGILITY	PRE TEST	18.18	0.22	0.02	1.16
	POST TEST	18.15	0.20		
AEROBIC ENDURANCE	PRE TEST	1812.66	59.57	1.86	1.78
	POST TEST	1816.00	58.03		

Significant at 0.05 level of confidence (2.14) 1 & 14

Table 2 reveals that the Computation of 't' ratio between pre and post-test means of Control group on selected physical fitness variables. The 't' ratio on flexibility, balance, muscular strength and core stability are 0.02,1.29,1.16 and 1.78 respectively. The required table valve was 2.14 for the degrees of freedoms 14 at 0.05 level of significance. Since the obtained 't' ratio values were lower than the table value. It was found statistically insignificant.



DISCUSSION OF FINDINGS

The present study was experimented the effects of aerobic dance training programme on selected physical fitness variables among college level women badminton players. The result of this study indicated that the aerobic dance training improved the physical fitness variables such as flexibility, balance, agility and aerobic endurance.

The results of the present study would indicate that the aerobic dance training programme was effective method to improve flexibility, balance, agility and aerobic endurance of college level badminton players.

CONCLUSIONS

Based on the findings and within the limitation of the study, it was noticed that practice of aerobic dance training helped to improved flexibility, balance, agility and aerobic endurance of college level women badminton players. It was also seen that there is progressive improvement in the selected physical fitness variables of aerobic dance training group of college level women badminton players after six weeks. Further, it also helps to improve flexibility, balance, agility and aerobic endurance.

- It was concluded that six weeks of aerobic dance training produced significant improvement in flexibility of college level women badminton players.
- It was concluded that six weeks of aerobic dance training produced significant improvement in balance of college level women badminton players.
- It was concluded that six weeks of aerobic dance training produced significant improvement in agility of college level women badminton players.
- It was concluded that six weeks of aerobic dance training produced significant improvement in aerobic endurance of college level women badminton players.
- It was concluded that individualized effect of control group showed a statistically insignificant over the course of the period on selected physical fitness variables of women badminton players.

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