



IMPACT OF AEROBIC DANCE TRAINING ON SELECTED KINANTHROPOMETRIC AND PHYSIOLOGICAL VARIABLES AMONG WOMEN IT PROFESSIONALS

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ABSTRACT

This research aims to assess the impact of Aerobic Dance Training on Selected kinanthropometric and physiological variables among women IT professionals. To achieve the purpose of the study thirty women from IT professional were selected as subjects from surfboard paymeats, Coimbatore, Tamilnadu. The age of the subjects were ranged from 35 to 45 years. The subjects were further classified at random into two equal groups of 15 subjects, Group- I underwent Aerobic Dance Training and group-II acted Control Group (CG). Training period limited with three days in a week for twelve weeks of training. The selected criterion kinanthropometric variables are BMI and Body fat %. Physiological variables are vital capacity and resting heart rate. The collected data were statistically analysed by using independent 't' test. From the results of the study it was found that there was a significant enhancement on selected kinanthropometric and physiological variables among women IT professionals

KEYWORDS : Aerobic Dance Training, kinanthropometric , BMI, Body fat% body, physiological, vital capacity, resting heart rate, IT professional.

INTRODUCTION

Information Technology (IT) has become an important and rapidly developing sector, providing employment opportunities for a large number of professionals. However, the nature of IT work involves prolonged sitting, continuous computer use, long working hours, and limited physical activity. These sedentary occupational conditions may negatively affect physical fitness and overall health. The **World Health Organization (2020)** identified physical inactivity as an important risk factor for obesity, cardiovascular disease, diabetes, and other lifestyle-related disorders. Prolonged sedentary behaviour is also associated with adverse metabolic health outcomes (**Owen et al., 2010**) Women IT professionals experience additional challenges due to the combined demands of professional, family, and household responsibilities. Long working hours, occupational stress, inadequate exercise, and prolonged computer use may contribute to increased body fat, poor posture, reduced flexibility, cardiovascular inefficiency, and decreased physical fitness. Therefore, regular structured exercise is essential for maintaining healthy body composition, physiological function, and physical fitness. Physical fitness includes important components such as cardiovascular endurance, muscular endurance, flexibility, balance, and healthy body composition. Regular physical activity improves these components and contributes to better functional capacity and quality of life. **Warburton (2006) et.al.**, emphasized the importance of regular physical activity for improving physical and cardiovascular health.

Jazzercise is a comprehensive dance-based fitness programme developed by **Judi Sheppard Missett (1969)**. It combines aerobic dance with strength training, Pilates, flexibility, and other conditioning exercises. The **American College of Sports Medicine (2022)** supports combined aerobic, resistance, and flexibility training for improving health-related physical fitness. The aerobic dance component improves cardiovascular endurance, energy expenditure, coordination, and body composition. **Cooper (1968)** established the importance of aerobic exercise for developing cardiovascular endurance and oxygen utilization. Pilates emphasizes core strength, posture, flexibility, balance, controlled movement, and body awareness (**Pilates, 1945**). Partial Jazzercise training focusing on selected components and complete Jazzercise training integrating aerobic dance and Pilates may provide beneficial effects on the health and fitness of women IT professionals. Therefore, the present study was undertaken to investigate the impact of partial and complete Jazzercise training on selected kinanthropometric, physiological variables, and physical fitness components among women IT professionals.

STATEMENT OF THE PROBLEM

The experimental study was to find out the impact of aerobic dance training on selected kinanthropometric and physiological variables among women IT Professionals.

METHODOLOGY

This study was designed to examine the impact of aerobic dance training on selected kinanthropometric and physiological variables among women IT Professionals. For this purpose, 30 participants were initially screened and selected from Surfboard Paymeats, Coimbatore. The selected participants were aged between 35 to 45 years. Using random allocation, the 30 participants



were equally divided into four groups of 15 each. Group-I underwent Aerobic Dance Training. Group II served as the control group and continued with their regular daily activities without any additional training intervention.

The impact of aerobic dance training was assessed on selected kinanthropometric and physiological variables among women IT Professionals. Standardized tests were utilized to measure the following dependent variables.

Kinanthropometric Variables

- BMI was measured by using Height & Weight Measurement and the unit of measurements was in kg/m^2 .
- Body Fat Percentage was measured by using Skinfold Caliper and the unit of measurements was in percentage.

Physiological Variables

- Vital capacity was measured by using Spirometer and the unit of measurements was in liters.
- Resting heart rate was measured by using Heart Rate Monitor and the unit of measurements was in bpm

TRAINING PROGRAM

During the course of the study, the participants engaged in training sessions three days per week, with each session lasting for 60 minutes. The training program was carefully designed to encompass a aerobic dance training including exercises that involved aerobic dance training elements. At the start of each training session, the participants underwent a thorough 10-minute warm-up session. This warm-up aimed to prepare their bodies for the physical demands of the training ahead and reduce the risk of potential injuries. The warm-up likely involved light cardiovascular exercises, dynamic stretches, and mobility exercise.

STATISTICAL ANALYSIS

The collected data were systematically processed, assemble around subject to tabulation on completion of analysis results derived from dependent 't' test was used to find out the impact of aerobic dance training on selected kinanthropometric and physiological variables. In all cases the criterion for statistical significance was set at 005 level of confidents ($P < 0.05$)

RESULTS

TABLE-1
Computation of 't' ratio between pre and post-test means of Experimental group on Selected variables:

Variables	Pre Test Mean and SD	Post Test Mean and SD	Mean Diff.	SE	't'-ratio
BMI	26.49±0.93	22.05±0.80	4.43	0.37	9.76*
Body Fat	35.57±4.79	31.03±4.52	4.54	0.29	15.93*
Vital Capacity	2.67±0.24	3.14±0.28	0.47	0.04	13.15*
Resting Heart	95.94±5.04	77.96±4.87	14.02	0.96	11.54*

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

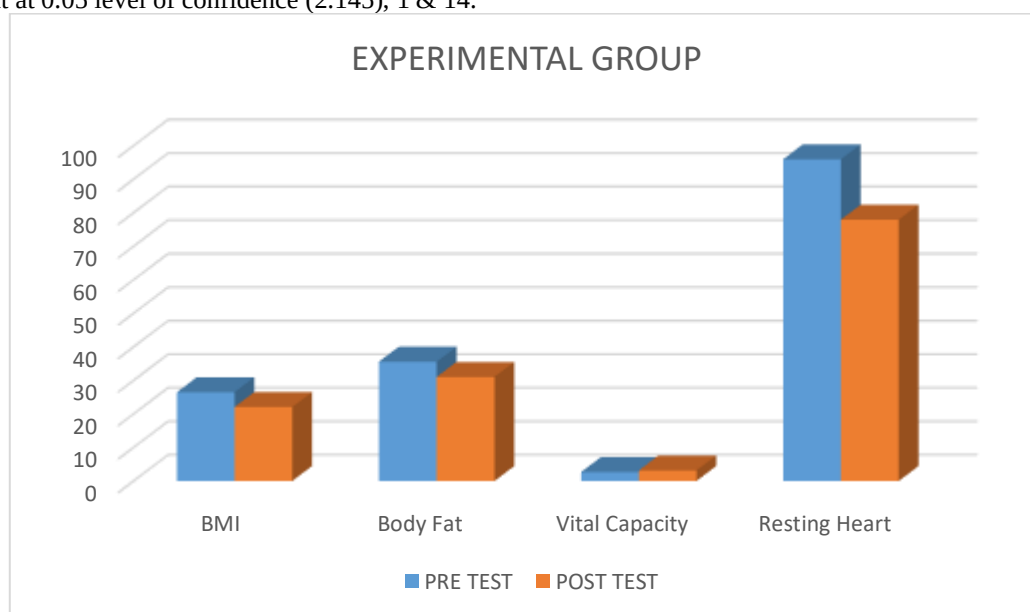


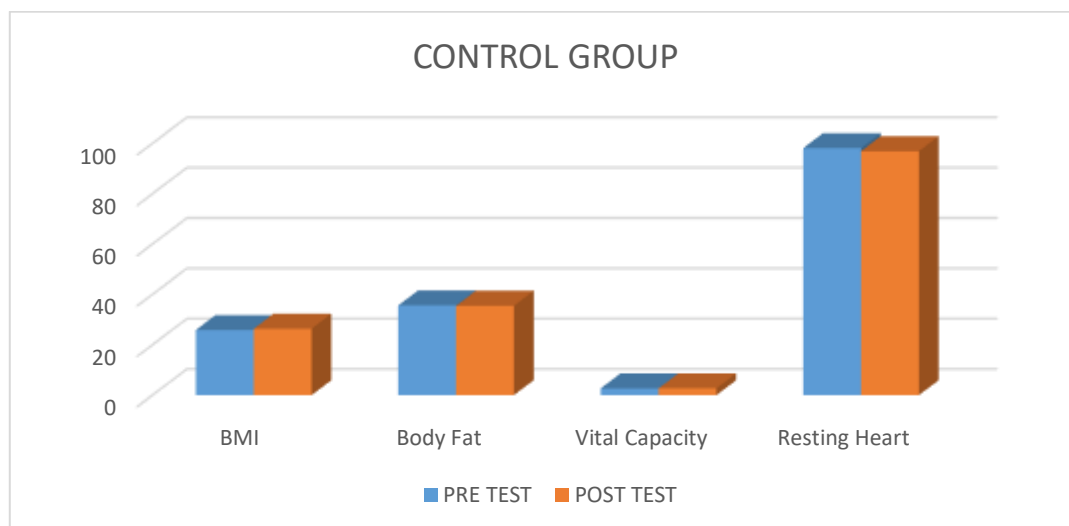


Table 2

Computation of 't' ratio between pre and post-test means of control group on Selected variables:

Variables	Pre Test Mean and SD	Post Test Mean and SD	Mean Diff.	SE	't'-ratio
BMI	25.85±1.74	26.38±2.15	0.53	0.44	1.21
Body Fat	35.68±3.49	35.52±3.31	0.15	0.13	1.16
Vital Capacity	2.71±0.23	2.72±0.25	0.01	0.03	0.35
Resting Heart	98.11±6.02	96.89±7.39	0.31	0.85	0.56

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



FINDINGS OF THE STUDY

Findings of the present study clearly indicated that women IT Professionals were benefited by kinanthropometric and physiological variables

Kinanthropometric Variables

The results of the present study indicate that, twelve weeks of aerobic dance training produced significant changes on BMI and Body fat percentage of women IT Professionals.

Psychological Variables

The results of the present study indicate that, twelve weeks of aerobic dance training produced significant changes on vital capacity and resting heart rate of women IT Professionals.

CONCLUSIONS

From the present study the following conclusions have been made

1. It was concluded that the aerobic dance training has produced a significant improvement on selected Kinanthropometric variables namely BMI and Body fat percentage of women IT Professionals.
2. It was concluded that the aerobic dance training has produced a significant improvement on selected Physiological variables such as vital capacity and resting heart rate of women IT Professionals.
3. It was concluded that the aerobic dance training group was more effective than the control group in improvement on selected variables namely BMI and Body fat percentage, Physiological variables such as vital capacity and resting heart rate of women IT Professionals.

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