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IMPACT OF PILATES TRAINING ON SELECTED PHYSICAL FITNESS COMPONENTS AMONG WOMEN IT PROFESSIONALS

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ABSTRACT

This research aims to assess the impact of Pilates Training on Selected physical fitness components 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 was ranged from 35 to 45 years. The subjects were further classified at random into two equal groups of 15 subjects, Group- I underwent Pilates 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 Physical Fitness Components such as cardiovascular endurance, flexibility, balance, muscular endurance and core stability of women IT professionals. 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 Physical Fitness Components of women IT professionals

KEYWORDS*: IT professionals, Physical Fitness Components, Cardiovascular Endurance, Flexibility, Balance, Muscular Endurance and Core Stability.*

INTRODUCTION

In the modern era, rapid technological development has resulted in a substantial increase in sedentary occupations, particularly among Information Technology (IT) professionals. Prolonged sitting, extended screen time, inadequate physical activity, and occupational stress may negatively affect body composition, cardiovascular function, and physical fitness. Women IT professionals are particularly vulnerable to lifestyle-related health problems due to long working hours and limited opportunities for regular exercise. Therefore, structured exercise programmes are essential for maintaining physical health and functional fitness.

Pilates training is a systematic form of exercise that emphasizes core strength, flexibility, muscular endurance, balance, body alignment, breathing, and controlled movement. The method was developed by Joseph Pilates and is designed to improve physical efficiency through precise and coordinated movements. Pilates exercises can be performed with relatively low impact and can be adapted according to individual fitness levels, making them suitable for adults with sedentary lifestyles. Regular Pilates training may contribute to favourable changes in kinanthropometric variables such as Body Mass Index (BMI), body fat percentage, and waist-hip ratio. It may also improve physiological variables, including resting heart rate, blood pressure, and vital capacity, through enhanced muscular efficiency, breathing control, and cardiovascular function. In addition, Pilates may positively influence physical fitness components such as aerobic endurance, flexibility, balance, muscular endurance, and core stability.

The present study was undertaken to investigate the impact of Pilates training on selected physical fitness components among women IT professionals. The findings of the study may provide useful information regarding the effectiveness of Pilates as a structured exercise intervention for improving health and physical fitness among sedentary working women.

STATEMENT OF THE PROBLEM

The impact of Pilates training on selected Physical Fitness Components among women IT professionals**.**

METHODOLOGY

This study was designed to examine the impact of Pilates training on selected Physical Fitness Components 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 Pilates training. Group II served as the control group and continued with their regular daily activities without any additional training intervention.

The impact of Pilates training was assessed on selected Physical Fitness Components among women IT Professionals. Standardized tests were utilized to measure the following dependent variables.

Physical Fitness Components

- Cardiovascular Endurance was measured by using Cooper 12min Run/Walk Test and the unit of measurements was in meters.
- Flexibility was measured by using Sit and reach test and the unit of measurements was in centimeters.
- Balance was measured by using Stork balance test and the unit of measurements was in seconds.
- Muscular endurance was measured by using Sit-ups test and the unit of measurements was in Score (number of rep/min).

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- Core stability was measured by using Plank test and the unit of measurements was in Seconds.

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 Pilates training including exercises that involved Pilates 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 Pilates training on selected physical fitness components. In all cases the criterion for statistical significance was set at 0.05 level of confidents (P<0.05)

RESULTS

TABLE-1

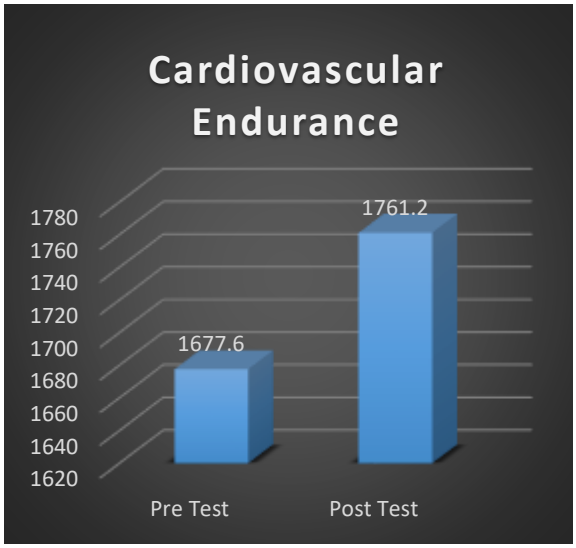
Computation of 't' ratio between pre and post-test means of Experimental group on Selected variables

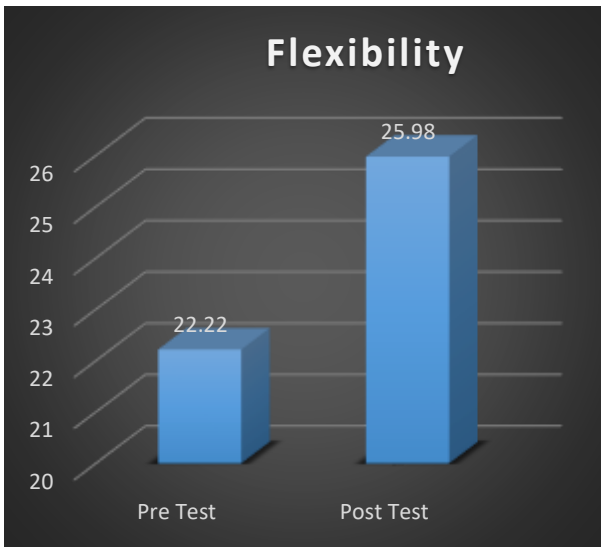
Variables	Pre Test Mean and SD	Post Test Mean and SD	Mean Diff.	SE	't'-ratio
Cardiovascular Endurance	1677.60±92.40	1761.20±84.30	83.60	19.49	4.29*
Flexibility	22.22±4.22	25.98±4.27	3.76	0.27	13.73*
Balance	60.04±5.10	70.04±5.31	10.00	0.62	16.07*
Muscular Endurance	21.35±2.47	25.30±2.44	3.95	0.32	12.29*
Core Stability	36.24±3.86	41.90±4.12	5.66	0.35	16.18*

***Significance at 0.05 level of confidence (2.14)**

Figure- 1

Bar diagram showing the pre and post-test means of Experimental group on Selected variables





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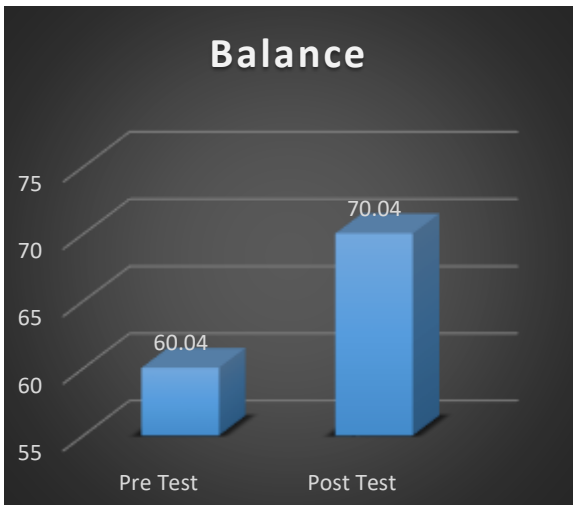

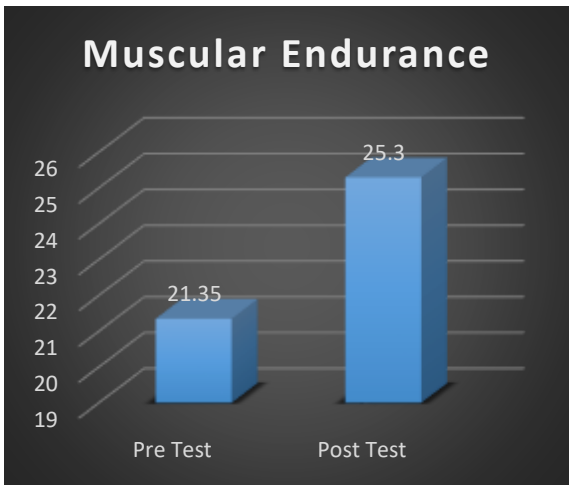

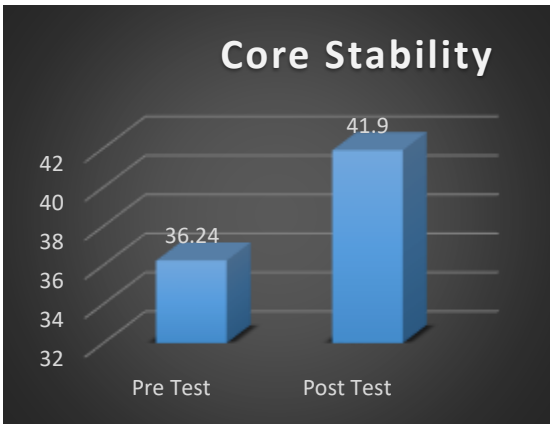

Table 2

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
Cardiovascular Endurance	1680.20±90.40	1683.70±91.80	3.50	5.65	0.62
Flexibility	22.40±4.39	22.62±4.71	0.22	0.18	1.20
Balance	59.04±4.25	59.94±5.22	0.89	0.65	1.39
Muscular Endurance	21.13±3.32	21.21±3.50	0.08	0.21	0.37
Core Stability	33.48±3.79	33.67±5.44	0.19	0.86	0.22

*Significance at 0.05 level of confidence (2.14)

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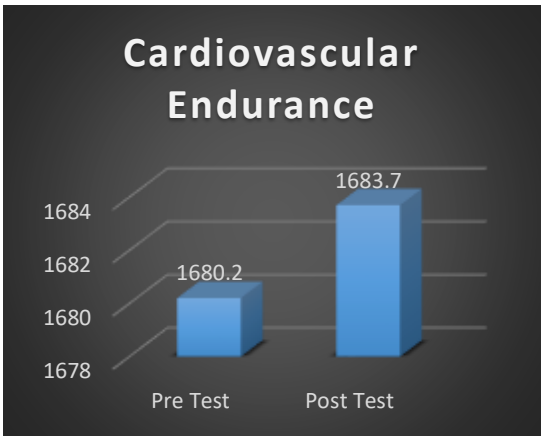
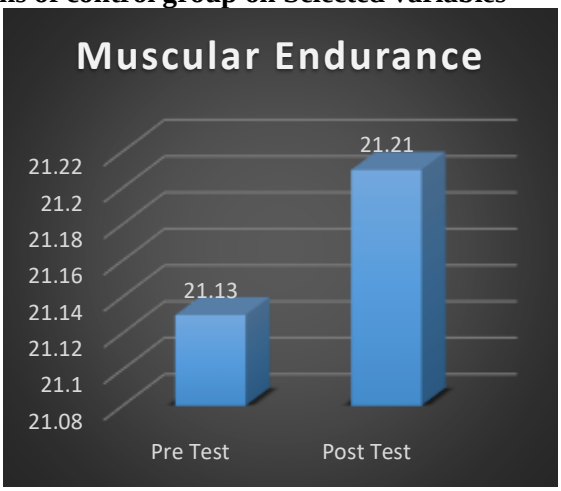
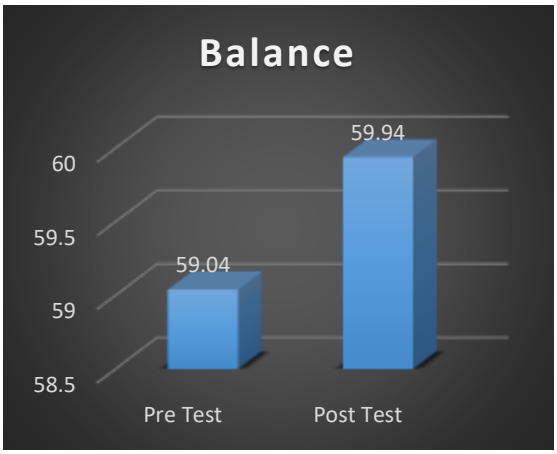
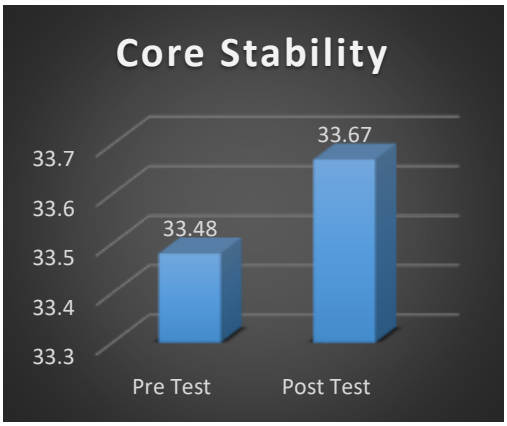
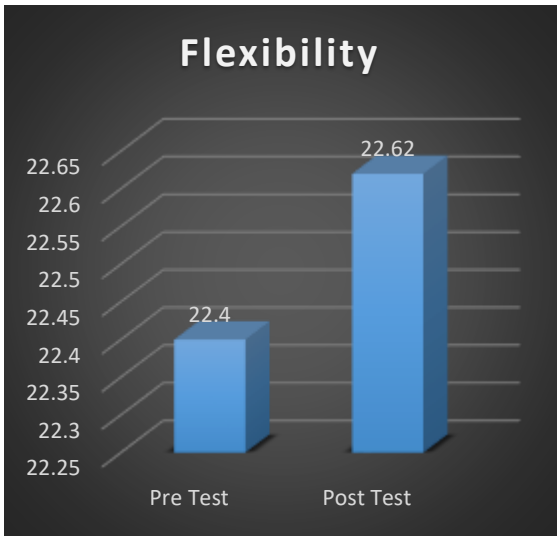
Figure- 2
Bar diagram showing the pre and post-test means of control group on Selected variables











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FINDINGS OF THE STUDY

Findings of the present study clearly indicated that women IT Professionals were benefited by physical fitness components**.**

Physical Fitness Components

The results of the present study indicate that, twelve weeks of Pilates Training produced significant changes in cardiovascular endurance, flexibility, balance, muscular endurance and core stability of women IT Professionals.

CONCLUSIONS

From the present study the following conclusions have been made

1. It was concluded that the Pilates Training has produced a significant improvement on selected Physical Fitness Components such as cardiovascular endurance, flexibility, balance, muscular endurance and core stability of women IT Professionals.
2. It was concluded that the Pilates Training was more effective than the control group in improvement on selected Physical Fitness Components such as cardiovascular endurance, flexibility, balance, muscular endurance and core stability of women IT Professionals.

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