

EFFECT OF SHALLOW WATER EXERCISES ON SELECTED PHYSICAL VARIABLES AMONG COLLEGE WOMEN

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Abstract

Background: The purpose of the study was to investigate the effect of Shallow water exercises on selected physical variables among college women. **Method:** For the present study 30 college women from Vellore, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre test – post test randomized group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group ‘A’ and Group ‘B’. Group ‘A’ underwent Shallow water exercises and Group ‘B’ underwent no training. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA) technique to find out the effect of Shallow water training. The level of significance was set at 0.05. **Result:** The findings of the present study have strongly indicates that Shallow water exercises have significant effect on selected physical variables i.e., flexibility, muscular endurance and cardio respiratory endurance of college women. Hence the hypothesis earlier set that Shallow water exercises would have been significant effect on selected physical variables in light of the

same the hypothesis was accepted. **Conclusion:** Significant effect of Shallow water exercises training was found on flexibility, muscular endurance and cardio respiratory endurance.

Key words: Shallow Water Exercises, College Women, Flexibility, Muscular Endurance, Cardio Respiratory Endurance.

Introduction

The purpose of the study was to investigate the effect of Shallow water exercises on selected physical variables among college women. It was hypothesized that there would have been a significant effect of Shallow water exercises on selected physical variables among college women.

Procedure and Methodology

For the present study 30 college women from Vellore, Tamilnadu were selected at random and their age ranged from 18 to 25 years. The subjects were randomly assigned to two equal groups of fifteen each and named as Group ‘A’ and Group ‘B’. Group ‘A’ underwent Shallow water exercises and Group ‘B’ underwent no training. The variables such flexibility was tested by sit and reach, muscular endurance was tested using sit ups and cardio

respiratory endurance was tested using cooper's 12 minutes run. The data was collected before and after twelve weeks of training and analyzed by applying Analysis of Co-Variance (ANCOVA). The level of significance was set at 0.05.

Results and Discussion on Findings

The findings pertaining to analysis of co-variance between experimental group and control group on selected physical variables among college women for pre-post test respectively have been presented in table No.1 to 3.

Table-1. Descriptive Analysis and 't' ratio of Selected Physical variables of Shallow water exercises Group

Sl. No	Variables	Pre Test Mean	SD (±)	Post Test Mean	SD (±)	Adjusted Mean	σ D M	't' Ratio
1	Flexibility	15.86	2.13	21.33	1.34	21.39	072	3.90*
2	Muscular Endurance	14.20	2.73	20.33	2.09	20.18	8.13	6.55*
3	Cardio Respiratory Endurance	95.086	12.879	137.113	97.74	136.288	41.55	331.14*

The above table documents the pre & post tests means, standard deviations adjusted mean and 't' values of Shallow water exercises group on selected variables among college women.

Table-2.

Descriptive Analysis and 't' ratio of Selected Physical Variables of Control Group

Sl. No	Variables	Pre Test Mean	SD (±)	Post Test Mean	SD (±)	Adjusted Mean	σ D M	't' Ratio
1	Flexibility	16.93	1.70	17.00	1.88	16.94	0.46	0.14
2	Muscular Endurance	12.26	2.71	12.46	1.99	12.61	0.60	0.33
3	Cardio Respiratory Endurance	102.333	92.69	107.653	16.098	108.477	55.50	0.95

The above table documents the pre & post tests means, standard deviations adjusted mean and 't' values of control group on selected variables among college women.

Table - 3. Computation of Analysis of Covariance on Both the Groups on Selected Physical Fitness Variables and Bio-Chemical Variables among College women

Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Square	F
1	Flexibility	BG	137.46	1	137.46	50.13*
		WG	74.037	27	2.74	
2	Muscular Endurance	BG	378.30	1	378.30	91.12*
		WG	112.087	27	4.15	
3	Cardio Respiratory Endurance	BG	521784.87	1	521784.87	29.45*
		WG	478327.72	27	17715.84	

* Significant at 0.05 level *F 0.05 (1,27) = 4.21

Table No. 3 revealed that the obtained 'F' value for flexibility, muscular endurance and cardio respiratory endurance were 50.13, 91.12 and 29.45 respectively was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The findings of the present study have strongly indicates that twelve weeks of Shallow water exercises have significant effect on selected physical fitness and bio-chemical variables. Hence the hypothesis earlier set that Shallow water exercises would have been significant effect on selected physical variables in light of the same the hypothesis was accepted.

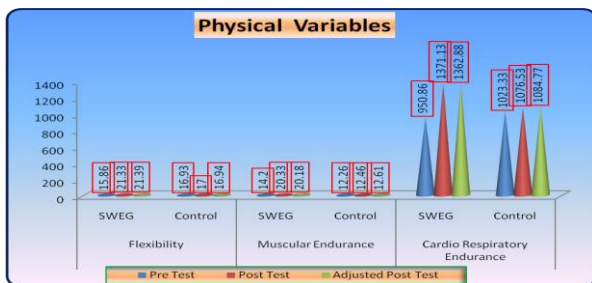
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Figure – 1.
Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control group and Experimental Group in relation to Physical Variables



Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn: Significant effect of Shallow water exercises was found on flexibility, muscular endurance and cardio respiratory endurance.

References