

EFFECT OF DEEP WATER EXERCISES ON SELECTED BIO-CHEMICAL VARIABLES AMONG COLLEGE WOMEN

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Abstract

Background: The purpose of the study was to investigate the effect of deep water exercises on selected bio-chemical 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 Deep 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 Deep water training. The level of significance was set at 0.05. Result: The findings of the present study have strongly indicates that Deep water exercises have significant effect on selected bio-chemical variables i.e., RBC, WBC and platelets of college women. Hence the hypothesis earlier set that deep water exercises would have been significant effect on selected bio-chemical variables in light of the same the hypothesis was accepted. Conclusion: Significant effect of deep water exercises

training was found on RBC, WBC and platelets.

Key words:

1. Introduction

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

2. 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 Deep water exercises and Group ‘B’ underwent no training. The variables such as RBC, WBC and platelets were assessed using blood test. 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.

3. Results and Discussion on Findings

The findings pertaining to analysis of co-variance between experimental group and control group on selected bio-chemical 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 Bio-chemical variables of Deep water exercises Group

Sl. No	Variables	Pre Test Mean	SD (±)	Post Test Mean	SD (±)	Adjusted Mean	σ D M	't' Ratio
1	RBC	4.63	0.32	5.12	0.09	5.14	0.08	5.85*
2	WBC	6476.66	729.20	7893.33	571.29	7970.20	245.22	5.77*
3	Platelets	2.82	0.51	3.59	0.08	3.61	0.13	5.83*

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

Table-2. Descriptive Analysis and 't' ratio of Selected Bio-chemical Variables of Control Group

Sl. No	Variables	Pre Test Mean	SD (±)	Post Test Mean	SD (±)	Adjusted Mean	σ D M	't' Ratio
1	RBC	4.68	0.40	4.70	0.43	4.68	0.03	0.56
2	WBC	6820.00	620.71	6860	709.25	6783.13	39.31	1.01
3	Platelets	2.96	0.68	2.98	0.43	2.95	0.09	0.21

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 Bio-chemical Fitness Variables and Bio-Chemical Variables among College women

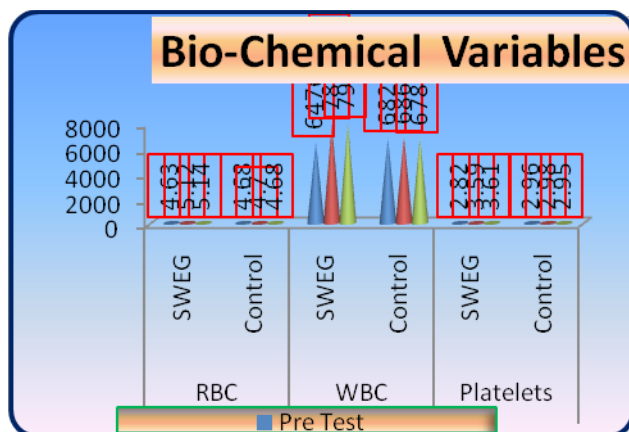
Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Square	F
1	RBC	BG	1.54	1	1.54	33.68*
		WG	1.23	27	0.04	
2	WBC	BG	9887606.80	1	9887606.80	29.53*
		WG	9037832.19	27	334734.52	
3	Platelets	BG	3.26	1	3.262	62.33*
		WG	1.41	27	0.052	

* Significant at 0.05 level

$$*F_{0.05(1,27)} = 4.21$$

Table No. 3 revealed that the obtained 'F' value for RBC, WBC and platelets were 33.68, 29.53 and 62.33 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 deep water exercises have significant effect on selected bio-chemical fitness and bio-chemical variables. Hence the hypothesis earlier set that Deep water exercises would have been significant effect on selected bio-chemical variables in light of the same the hypothesis was accepted.

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



4. Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn: Significant effect of deep water exercises was found on RBC, WBC and platelets.

5. References

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