



A STUDY OF PHYSICAL FITNESS AND INFLUENCE OF PHYSICAL EXERCISE, CIRCUIT TRAINING AND YOGIC PRACTICE ON COLLEGE GIRLS IN TAMILNADU STATE

KEYWORDS

physical exercise, circuit training and yogic practice

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ABSTRACT *The purpose of the study was to find out the study of Physical Fitness and Influence of physical exercise, circuit training and yogic practice on college Girls in Tamilnadu State. To achieve this purpose, eighty girl's subjects who were not involved in any vigorous physical training programme at the age ranging from 17 to 21 years were selected from in and around Tirunelveli city. The selected subjects were divided into four groups at random with 20 each. In the experimental groups twenty girls subjects would serve as control group and the remaining Twenty would undergo systematic training This study consisted of three experimental groups, physical exercise (n=20) underwent circuit training (n=20) and yogic practice (n=20) underwent Group CG (n=20) acted as control group. the analysis of covariance (ANCOVA) was used (Broota, 1989). The scheffe's test was used as post-hoc test to determine which of the paired means differed significantly where the differences in adjusted posttest means resided in univariate ANCOVA among three groups.*

INTRODUCTION

The body is the temple of soul and to reach a harmony of the mind, body and spirit, the body must be physically fit (Charles A. Bucher). Throughout the ages, man has had to be physically active in order to procure his daily food to succeed in the battle of survival. For every individual physical activity is essential for harmonious physical and mental development.

In today's society, with computers, televisions and cars most people do not have sufficient physical exercise to maintain adequate health. In fact, many people have become so sedentary; that their life style has become a serious threat to their health and their lack of physical exercise has began to lead to an increased deterioration of the human health and often to a premature illness and death.

Many technological advances are intended to alienate physical exertion from everyday activities. The automobile and television are the contributors to our sedentary life-style.

PURPOSE OF THE STUDY

The purpose of the study was to find out the study of Physical Fitness and Influence of physical exercise, circuit training and yogic practice on college Girls in Tamilnadu State.

methodology

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RESULTS

TABLE I

Summary of Mean Standard Deviation and Dependent 't' Test for the Pre Post and Adjusted Post Tests on Arm Strength of Experimental and control Groups

(Arm Strength scores are expressed in Kilograms)

		Physical Exercise Group	Circuit Training Group	Yogic Practice Group	Control Group
Pre test	Mean	14.967	14.733	14.433	14.867
	SD	0.765	0.980	0.679	0.819
Post test	Mean	16.833	17.167	15.233	15.133
	SD	0.913	0.592	0.679	1.074
't' test		14.000*	18.309*	9.049*	1.547

*Significant at .05 level. The table value required for .05 level of significance with df29 is 1.699.

Table I shows that the pre-test mean values of physical exercise, circuit training, yogic practice and control groups on arm strength are 14.967, 14.733, 14.433 and 14.867 respectively and the post-test mean values on arm strength are 16.833, 17.167, 15.233 and 15.133 respectively. The obtained dependent t-ratio values between the pre and post test means of physical exercise, circuit training, yogic practice and control groups are 14.000, 18.309, 9.049 and 1.547 respectively. The table value required for significant difference with df29 at .05 level is 1.699. Since, the obtained 't' ratio values of experimental groups are greater than the table value, it is understood that physical exer-

cise, circuit training, yogic practice groups had significantly improved the arm strength. However, the control group had not improved significantly. Since the obtained 't' value is less than the table value, as they were not subjected to any specific training.

The analysis of covariance on arm strength of physical exercise, circuit training, yogic practice and control groups has been analysed and presented in Table II.

Table II
Analysis of Covariance for the Data on arm strength among Experimental and Control Groups

Adjusted Post Test Means				Sources of Variance	Sum of Squares	df	Mean Squares	F-Ratio
Physical Exercise Group	Circuit Training Group	Yogic Practice Group	Control Group					
16.700	17.177	15.428	15.062	Between	91.043	3	30.348	67.228*
				Within	51.912	115	0.451	

* Significant at 0.05 level of confidence.

(Arm Strength scores are expressed in Kilograms)

The table value for significance at 0.05 with df3 and 115 is 2.687.

Table II shows that the adjusted post-test means of physical exercise, circuit training, yogic practice and control groups on arm strength are 16.700, 17.177, 15.428 and 15.062 respectively.

The obtained F-ratio value is 67.228, which is higher than the table value 2.687 with df 3 and 115 required for significance at .05 level. Since the value of F-ratio is higher than the table value, it indicates that there exist significant differences among the adjusted post-test means of physical exercise, circuit training, yogic practice and control groups. To find out which of the paired means had a significant difference, the Scheffe's post-hoc test was applied and the results are presented in Table III.

TABLE III
SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN THE ADJUSTED POST TEST PAIRED MEANS OF ARM STRENGTH

Physical Exercise Group	Circuit Training Group	Yogic Practice Group	Control Group	Mean Difference	Confidential Interval
16.700	17.177			0.477	0.493
16.700		15.428		1.273*	0.493
16.700			15.062	1.639*	0.493
	17.177	15.428		1.749*	0.493
	17.177		15.062	2.115*	0.493
		15.428	15.062	0.366	0.493

*Significant at .05 level.

The table III shows that the adjusted post test mean difference on arm strength between physical exercise and yogic practices, physical exercise and control group, circuit training and yogic practice, and circuit training and control groups are 1.273, 1.639, 1.749 and 2.115 respectively which are higher than the confidence interval value of 0.493 at .05 level of confidence. The adjusted post test mean difference between physical exercise and circuit training groups, and yogic practices and control group on arm strength are 0.477 and 0.366 which are less than the confidence interval value 0.493. This shows that there is no significant difference on arm strength between physical exercise and circuit training; and yogic practices and control groups at .05 level of confidence.

FINDINGS AND CONCLUSIONS

The result of this study indicates that, the control group does not show any significant difference on any of the selected dependent variables such as arm strength. The selected dependent variables such as arm strength had shown significant improvement due to training effects of physical exercise, circuit training and yogic practice. The effect of the circuit training was greater than physical exercise and yogic practice on arm strength among the college girls in Tamil Nadu state. The findings of this study were also similar with the results which suggested the existence of effect of circuit training on arm strength.

REFERENCE

[1] Heyman et.al "Analyse of aerobic fitness during an incremental submaximal test"- 2005 | [2] Ishii et.al evaluated the effect of exercise training on serum leptin levels-2001 | [3] LL.I. Katzel, E.R. Bleecker, E.B. Colman, E.M. Rogus, J.D. Sorkin, A.P. Goldberg. "Effects of Weight Loss Vs Aerobic Exercise Training on Risk Factors for Coronary Heart Disease in Healthy, Obese, Middle-Aged and Older Men: A Randomized Controlled Trial", Journal of American Medical Association 274 (1995): 1915-1921. | [4] M.L. Stefanick, P.D. Wood., "Physical Activity, Lipid and Lipoprotein Metabolism, and Lipid Transport", In: C. Bouchard, R.J. Shephard, T. Stephens., Physical Activity, Fitness and Health: International Proceedings and Consensus Statement. Champaign, Ill.: Human Kinetics, (1994) | [5] Morrato EH et al. "A study on the risk of obesity and diabetes and benefit of exercise in disease prevention and management" 2007 |