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Effect of physical activity and yogic practices on physical fitness and physiological variables amongs college girls

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Abstract
Physical activity is regarded as an essential element in maintaining and improving the quality of life. Through the research it is proved that the yogic practices and physical exercise were maximal and sub-maximal level bring about the chanes in the various systems in the human body. In this study forty five college girls of Rajive Gandhi College Chandrapur. Were selected as subjects at random with their age being between 18 to 25 years. Then the selected forty five Girls were divided into three groups namely Control Group (Group-I) Physical Activity Group (Group-II) and Yogic Practice Group (Group-III) were given training for six weeks. Analysis of co-variance was appled to find out significant difference. The variables such as Speed, Strength, explosive Power were the Physical fitness variables and Resting Puse rate, Blood Pressure were Physiological variables. I was concluded that the Physical fitness variables and Yogic Practice significantly improved the selected physical and physiological variables among the college girls students.

Keywords: Yoga practice, physical activity, physical fitness and physiological variables

Introduction
In the field of sports when a player has to manifest a qualify performance at global levels, he has to undergo intensive and technologically advanced sports training to match the world standards. Sports have become an integral part of our day today life. Science and technology and sports are two important field that determine th overall status of the nation as a world leader. Physical activities must be understood as a specialized process of all round physical conditioning aimed at the methodical preparation of athletes. Different training methods have been commonly used to improve the physical fitness and the standards of performance of individuals. Yoga is an universal system which brings harmony in body and mind. It has a message for the human body mind and should. Yoga plays an important role by bringing the therapeutic effect in Asthma, diabetes, hypertension and respiratory troubles. Yoga has both preventive as well as curative values. Positive changes in the life style of the people can be brought through yoga. Yoga controls one's sense resulting in an integrated personality. Behavior can also be mounded properly leading to balanced personalities.

Hypothesis
It was hypothesized that there would be significant improvement in the selected physical fitness and physiological variables due to the influence of Physical Activities and yogic practices.

Mehthology of the study
Forty five subjects were selected at random from the Rajive Gandhi College Chandrapur.For the study the average age of the subjects was 18 to 25 years. The selected Girls students were further divided at randomly into three groups namely Control Group (Group-I) Physical Activity Group (Group-II) and Yogic Practice Group (Group-III) were given training for six weeks. The number of subjects in each group was fifteen. The variables such as Speed, Strength, explosive Power were the Physical fitness variables and Resting Puse rate, Blood Pressure were Physiological variables. All the subjects were normal and healthy girls students, the sample was considered as the true representative of population.

Dependent variables
Physical fitness variables: Speed, Strength, Explosive Power.

Physiological variables: Resting Pulse Rate, Blood Pressure.

Physical Activities
Squats Jump, Single leg bounds, double leg bounds fox distance, Bench press, Dumbles press, Cable Rotation, Chin ups, Shoulder Press. Shoulder stretch, Trunk twists, Hamstring Stretch. Calf stretch, Arm circles.

Yogic practices
Sitting posture: Padmasana, Pascimottanasana, Supta-vajrasana, Ardhamatsyendrasana, sasankasana.

Lying posture: Bhujangasana, Sarvangasana, Matsyasana, Halasana, savasana.

Standing Posture: Viksana, Tadasana, Padahastasana, Cakrasana, vira Bhadrasana.

Statistical analysis
Analysis of Covariance was used to find out significant difference between the control and experimental groups of Physical Fitness and Physiological variables and adjusted post test means were used for covariate the statistical analysis.

Table 1: Effect on speed

Test	Control Group	Physical Activity	Yogic Practice	Source of Variance	Sum of Squares	df	Mean Square	F ratio
Pre Test	8.56	8.58	8.58	B	.266	2	.127	.398
				W	13.44	42	.333	
Post Test	8.54	7.82	7.46	B	9.17	2	4.51	21.44*
				W	8.75	42	.211	
Adjusted Mean	8.51	7.77	7.54	B	7.7	2	3.9	122.81
				W	1.24	41	0.04	

*Significant at 0.05 level

The result of the study indicate that there was a statistical significant difference among the adjusted mean of yogic practice and Physical activity and control group on Speed.

Table 2: Effect on muscular strength

Test	Control Group	Physical Activity	Yogic Practice	Source of Variance	Sum of Squares	df	Mean Square	F ratio
Pre Test	32.77	33.68	33.59	B	3.33	2	1.98	0.09
				W	833.44	42	20.31	
Post Test	33.14	36.72	39.66	B	307.17	2	164.42	11.44*
				W	738.75	42	17.42	
Adjusted Mean	33.61	36.78	39.74	B	267.77	2	123.29	71.77
				W	81.22	41	1.84	

The results of the study indicate that thee was a statistically significant difference among the adjusted means of physical activity, yoga practice and control group on muscular strength.

Table 3: Effect on explosive power

Test	Control Group	Physical Activity	Yogic Practice	Source of Variance	Sum of Squares	df	Mean Square	F ratio
Pre Test	51.22	51.20	52.33	B	7.55	2	3.72	0.109
				W	1685.55	42	34.22	
Post Test	51.24	55.66	57.54	B	313.41	2	157.45	4.54*
				W	1588.34	42	37.22	
Adjusted Mean	51.41	65.10	56.96	B	250.89	2	132.50	26.49
				W	44.97	41	1.08	

The results of the study indicates that there was a statistically significant difference among the adjusted means of three group on explosive power.

Table 4: Effect on resting pulse rate

Test	Control Group	Physical Activity	Yogic Practice	Source of Variance	Sum of Squares	df	Mean Square	F ratio
Pre Test	72.66	71.69	71.58	B	60.07	2	31.00	0.39
				W	3436.9	42	84.38	
Post Test	66.76	72.82	72.46	B	247.44	2	120.88	1.84
				W	2714.23	42	64.21	
Adjusted Mean	67.11	73.77	73.54	B	312.11	2	153.09	92.81
				W	65.76	41	1.4	

The result of the study indicate that there was a statistical significant difference among the adjusted mean of yogic practice and Physical activity and control group on resting pulse rate.

Table 5: Effect on systolic blood pressure

Test	Control Group	Physical Activity	Yogic Practice	Source of Variance	Sum of Squares	df	Mean Square	F ratio
Pre Test	1.56	1.58	1.58	B	566.87	2	290.12	3.39
				W	3813.44	42	96.33	
Post Test	1.54	1.82	1.46	B	890.17	2	374.51	4.44*
				W	3854.75	42	86.21	
Adjusted Mean	123.51	125.77	123.54	B	45.79	2	33.9	5.81
				W	177.24	41	4.74	

The result of the study indicate that there was a statistical significant difference among the adjusted mean of yogic practice and Physical activity and control group on Systolic Blood Pressure.

Table 6: Effect on diastolic blood pressure

Test	Control Group	Physical Activity	Yogic Practice	Source of Variance	Sum of Squares	df	Mean Square	F ratio
Pre Test	78.22	72.00	69.41	B	633.37	2	316.56	6.98
				W	1917.98	42		
Post Test	78.66	70.87	68.33	B	973.167	2	435.70	10.56*
				W	1743.43	42	41.67	
Adjusted Mean	73.89	72.07	71.54	B	27.87	2	15.35	7.99
				W	69.78	41	1.8	

The result of the study indicate that there was a statistical significant difference among the adjusted mean of yogic practice and Physical activity and control group on Diastolic Blood Pressure.

Conclusion

In the light of the study undertaken the following conclusions are Speed, Muscular Strength, explosive power, resting pulse rate and blood pressure were significantly improved due to the influence of physical and yogic training among college girls. The Physical fitness and Physiological Variables such as Speed, Muscular Strength, explosive power, resting pulse rate and blood pressure were significantly improved due to the influence of physical and yogic training among college girls.

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