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A study on effect of yogic practices on physical fitness

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Abstract
The Purpose of the study was to evaluate the effect of one month yoga practice on selected physical parameters which includes cardiovascular endurance, explosive strength, flexibility, and hemoglobin. Twenty subjects were selected as subjects for the study. Yogic asana training was administered for one month. The results revealed significant effect on flexibility, explosive strength and cardiovascular endurance of yogic practice.

Keywords: cardiovascular endurance, explosive strength, flexibility, yogic practice

Introduction
Yogha is a spiritual technique, a method that has something to offer to everyone, religious or the non-religious faith or crime factors find in yoga a way to healthier, happier and harmonious life.
Patanjali the father of yoga states in his sutras that the harmonious development of the body, mind and soul can be obtained through the eight limbs of yoga. They are yama, niyama, asana, pranayam, pratyahar, dharna, dhyan, and Samadhi.
Yogic asana help in the prevention and cure of many physical diseases, especially those of the digestive tract by regulating the secretion of various duct and ductless gland. Apart from all these yoga is an extremely economic practice.
Fitness has been considered as essential element of everyday life. It involves basic skills like strength, speed, endurance, agility, cardiovascular endurance to remain physically fit. Doctors declare that there is a close link between physical fitness and mental alertness of that a fit person taking regular exercise is better able to face rigorous, emotional and physical stress of day to day life.
Dr. Kalidasan and S. Samsudeen (1998) [2] investigated the impact of game specific yogic training on cricket performance among college level cricketers. The analysis revealed that physical field training combined with game and specific yogic training showed significant improvement on the cricket playing ability among cricketers.
Shanugam (1993) [4] studied the effect of asanas and jogging on selected physiological and hematological variables among school boys. Asanas were found to be more effective than jogging in improving pulse rate, vital capacity, breath holding time and serum cholesterol.

Methodology
Twenty male students of Delhi University age ranging from 18-25 years were randomly selected as the subjects for the study. Yogic asana taining programme was administered for one month five days a week in the morning and evening time for one hour. The data pertaining to the criterion variable were taken before administering the training program of three months in relation to the cardiovascular endurance, explosive strength, reaction time, flexibility and hemoglobin. The standard tests were applied to collect data for the above said variables. After pre-test a three month training schedule of yogic practices was administered and after the completion of training a post-test was taken on all the selected variables.
The following tests were administered for data collection on selected variables:

- **Harward step test**

To measure Cardio Vascular Endurance. In this test exercise is given for five minutes on the box. After exercise pulse is measured for the duration of 1 to 1.5, 2 to 2.5, 3 to 3.5, the pulse of all the three time were recorded and was calculated by applying following formula;

$$\text{Fitness Index} = \frac{\text{Duration of exercise in seconds}}{\text{X Sum of three pulse counts after exercise}} \text{X } 100$$

- **Standing broad jump**

To measure Explosive Strength of legs. The best trial was used as the final score of the test item.

- **Electronic Visual and Auditory Reaction Timer**

To measure audio and visual reaction time. Electronic reaction time measures the reaction time reading accurate up to 0.0001 second. Out of best five trials the minimum time was recorded as score

- **Sit and Reach Test**

To measure flexibility of legs.

- **Bridge-Up test**

To measure the flexibility of spine.

- **Hemoglobin test**

To measure hemoglobin in blood.

The data collected was analyzed with the help of statistical procedure in which Arithmetic Mean, Standard Deviation, Standard Error of Mean and 't' test were used to compare the pre and post-test data.

Results

The 't' test was applied to find out the significance of difference between the pre-test and post-test means of the selected variables. The level of significance was chosen to test the hypothesis was 0.05.

Table 1: Cardiovascular Endurance

Subject	Mean	S.D.	S.E.M	't' Ratio
Pre-test	51.5	9.37	2.09	2.28*
Post-test	60.6	8.43	1.88	

*Significance at .05 level. (df-18); Tabulated 't' value=2.10

The table-1 reveals that mean, standard deviation, standard error of mean with regard to pre data on cardiovascular endurance were recorded 60.60, 9.375 and 2.096 respectively where is in case of post data the same was recorded as 51.50, 8.431, and 1.885 respectively and the 't' ratio (2.285) was found significant at 0.05 level.

Table 2: Hemoglobin

Subject	Mean	S.D.	S.E.M	't' Ratio
Pre-test	10.82	1.48	0.33	0.59
Post-test	11.07	1.41	0.31	

Significance at .05 level. (df-18); Tabulated 't' value=2.10

Table-2 indicated that mean, standard deviation and standard error of mean value with regard to pre data on hemoglobin in blood were recorded 10.825, 1.485 and 0.332 respectively where as in the case of post data the score were recorded as 11.07, 1.410 and 0.315 respectively and were found to be statistically non-significant.

Table 3: Flexibility

Subject	Mean	S.D.	S.E.M	't' Ratio
Pre-test	1.96	0.05	0.12	2.68*
Post-test	2.46	0.25	0.05	

*Significance at .05 level. (df-18); Tabulated 't' value=2.10

An examination of table-3 revealed that mean, standard deviation, standard error of mean value with regard to pre-data on sit and reach test were recorded 1.9695, 0.0566 and 0.1265 respectively where as in the case of post-data the same were recorded as 2.4635, 0.2555 and 0.0571 respectively and 't' ratio (2.689) was found to be statistically significant at 0.05 level.

Table 4: Broad Jump

Subject	Mean	S.D.	S.E.M	't' Ratio
Pre-test	1.69	0.41	0.09	2.93*
Post-test	1.76	0.53	0.11	

*Significance at .05 level. (df-18); Tabulated 't' value=2.10

Table-4 indicates the mean, standard deviation, standard error of mean value with regard to pre-test on broad jump variable were recorded 1.691, 0.413 and 0.092 respectively were as in the case of post-test the same were recorded as 1.763, 0.532 and 0.118 respectively and 't' ratio (2.936) was found statistically significant at 0.05 level.

Conclusion

The results of the study showed that yogic practice have significant effect on flexibility, strength and cardiovascular endurance whereas the variables reaction time and hemoglobin showed no significant difference between pre and post training results. With the help of yogic practice elastic component of muscles can be stretched and consequently develop tension due to its elastic resistance to stretch. This effect is the mechanism in the muscles contribution to contractile force. It is effective in those activities which involve voluntary muscle contraction and elastic recoil (e.g. running, jumping, hopping, agility etc.). The net result of reflex activity is a more vigorous contraction of a given muscle when it is a forcefully stretched (e.g. in the take off leg in long jump).

Thus we can conclude that:

1. The yogic practice improves the mental and physical health of the individual.
2. The practice of yoga increases the flexibility.
3. The muscular strength of individual also improves after the three months of yogic practice.
4. With the practice of yoga one can notice significant improvement in Explosive strength of legs.

References

1. Bharshankar JR. Effect of yoga on cardiovascular system in subjects above 40 years 2003; 47(2):202-6.
2. Kalidasan, Samsudeen S. Specific yogic training and its impact on cricket performance, (Unpublished Masters thesis) Dept. of Physical Education, Bhartidarshan University, 1998, 26.
3. Kochar HC. Influence of yogic practice on mental fatigue, Yoga Mimasa 1996; 18:2-13.
4. Shanmugam. Effect of asana and jogging on selected physiological and hematological variables among school boys, Unpublished PhD Thesis, Alagappa University (India), 1993.
5. Singh V, Madhu A. A study of the effect of yogic practice on certain Psychological parameters, Indian journal of clinical psychology. 1987; 14:80-83.