

Effect of Yogic Training on Selected Strength Variables among College Men Basketball Players



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Abstract

The purpose of the study was to find out the effect of yogic training on selected strength variables among college men basketball players. Thirty subjects were selected from Sourashtra College. The subject's age ranged from 18 to 24 years. The selected subjects were divided into two groups with fifteen subjects in each group selected randomly yogic training group and control group. The training periods of yogic training group were six weeks, five days per week. Control group did not undergo any training programme other than their routine work. To find out the significance difference between the means on the criterion variables correlated 't' ratio was applied. Pertaining to present study it processed with appropriate statistical technique. The obtained 't' values are tested at 0.05 levels.

Keywords: 1. Yogic Training, 2. Leg Strength, 3. Arm Strength and 4. Explosive Strength.

Introduction

Physical training entails exposing the organism to a training load or work stress of sufficient intensity, duration and frequency to produce a noticeable or measurable training effect, that is, to improve the functions for which one is training. To achieve such a training effect, it is necessary to expose the organism to an overload that is larger than the one regularly encountered during everyday life. It is a common conception in training environments that "to build up, one must first break down." Admittedly, exposure to the training stress is associated with some catabolic processes, such as break down of glycogen, followed by an overshoot or anabolic response that causes an increased deposition of the molecules that were mobilized or broken down during training. As to the effect on other cellular components, this is the best an imprecise statement.

Basketball

There, physical educator Luther Gulick asked him to invent a new indoor game, which could be played during the cold winter. He also made it for a physical education class to play. He started work on it in December 1891. He wrote that he took some ideas from other sports: when he was young, he played with his friends a game called "Duck on a Rock." In this game, one boy guarded his "duck" from the stones of the others; and the fun began as the boys gathered their stray shots. It was this game that was later to play such an important part in the origin of basketball. The first game was played on December 29, 1891.

Yoga

Yoga means to “yoke” to “unite” to bind to “link” to connect or to “merge”. As yoke joins two bulls together, the yoga unites body and mind together. The merger of soul with God, and the experience of oneness with him is yoga. It is possible only through the control over sense organs and through continued practice and detachment. According to the great Sage Patanjali’s the withdrawal of sense organs from their worldly objects and their control is yoga.

Methodology

The purpose of the study was to find out the effect of yogic training on selected strength variables among college men basketball players. Thirty players were selected at random as subjects from Sourashtra College, Madurai. The subject’s age ranged from 18 to 24 years. The selected subjects were divided into two groups with fifteen subjects in each group selected randomly yogic training and control group. The training periods of experimental group were six weeks, five days per week. Control group did not undergo any training programme other than their routine work. The pre and post tests were administered for all the groups before and after the experimental treatment.

Selection of Tests

The selected criterion variables were concerned the leg strength, arm strength and explosive strength were tested and measured by 25 meters hopping (in seconds), dip strength (in seconds), vertical jump (in centimeters).

Statistical Technique

To test the significance of ‘t’ values as level of significance 0.05 level was chosen for the required table value for the degrees of freedom. The data collected prior to and after the training period on leg strength, arm strength and explosive strength for the experimental group have been analyzed.

Results

Leg Strength

The results of the dependent ‘t’-test on the data obtained for leg strength of the subjects in the pre-test and post-test of the yogic training group and control group have been analyzed and presented in Table 1.

Table – 1
Summary of mean, standard deviation and dependent’s’ test for the pre and post tests
on leg strength of Yogic training group and control group
(Seconds)

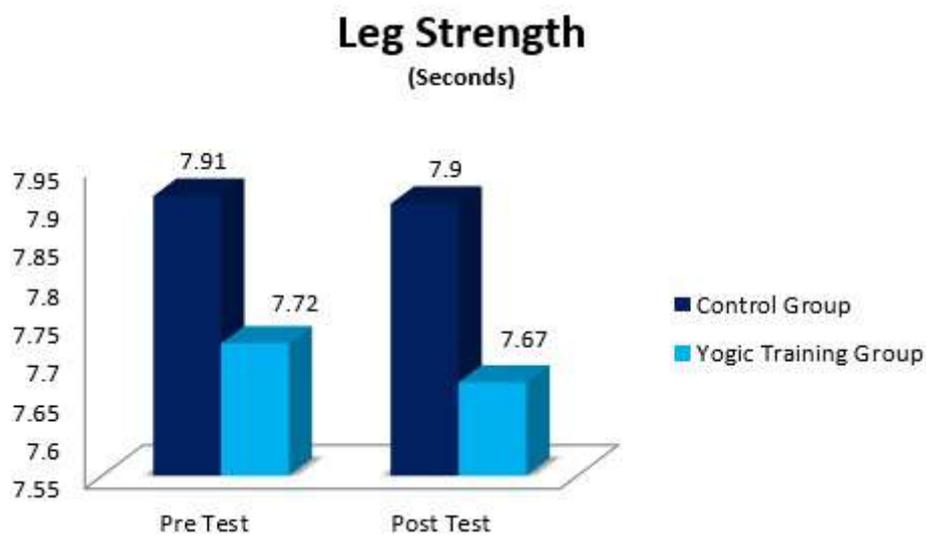
Variable	Groups	Mean		SD		Sd Error	df	‘t’ Ratio
		Pre	Post	Pre	Post			
Leg Strength	Control Group	7.91	7.90	0.45	0.45	0.009	14	0.36
	Yogic Training Group	7.72	7.67	0.60	0.60	0.005		8.19*

*Significance at 0.05 level of confidence.

SD-Standard Deviation, SD Error- Standard Deviation Error, df- Degrees of Freedom

The Table - 1 shows that the mean values of pre-test and post-test of control group on leg strength were 7.91 and 7.90 respectively. The obtained 't' ratio was 0.36, since the obtained 't' ratio was less than the required table value of 2.15 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of experimental groups on leg strength were 7.72 and 7.67 respectively. The obtained 't' ratio was 8.19 since the obtained 't' ratio was greater than the required table value of 2.15 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in leg strength. It may be concluded from the result of the study that experimental group improved in leg strength due to six weeks of yogic training.

Figure - 1
Bar diagram shows the pre and post test mean values of Control group and yogic training group on leg strength



Arm Strength

The results of the dependent 't'-test on the data obtained for arm strength of the subjects in the pre-test and post-test of the yogic training group and control group have been analyzed and presented in Table 2.

Table – 2
Summary of mean, standard deviation and dependent's' test for the pre and post tests on arm strength of yogic training group and control group (Seconds)

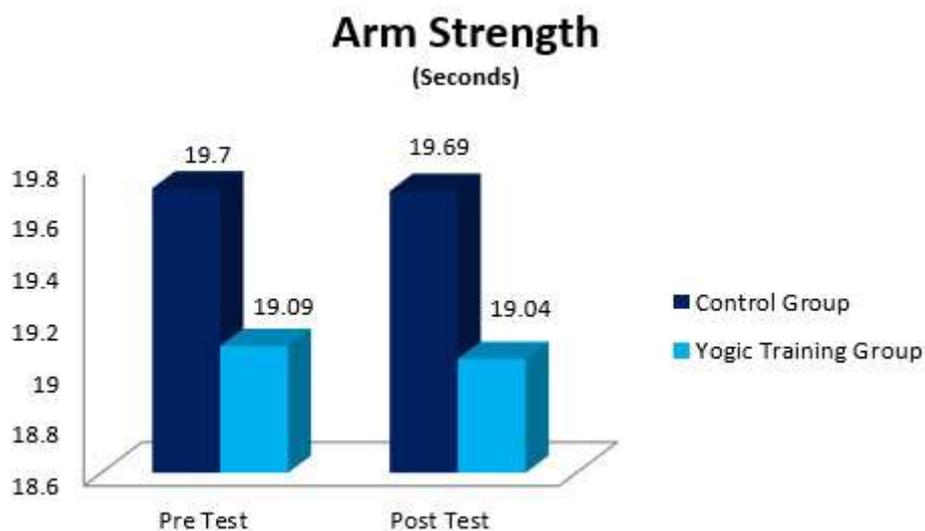
Variable	Groups	Mean		SD		Sd Error	df	't' Ratio
		Pre	Post	Pre	Post			
Arm Strength	Control Group	19.70	19.69	1.68	1.68	0.002	14	1.87
	Yogic Training Group	19.09	19.04	1.24	1.23	0.005		9.24*

*Significance at 0.05 level of confidence

SD-Standard Deviation, SD Error- Standard Deviation Error, df- Degrees of Freedom

The Table - 2 shows that the mean values of pre-test and post-test of control group on arm strength were 19.70 and 19.69 respectively. The obtained 't' ratio was 1.87, since the obtained 't' ratio was less than the required table value of 2.15 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of yogic training group on arm strength were 19.09 and 19.04 respectively. The obtained 't' ratio was 9.24 since the obtained 't' ratio was greater than the required table value of 2.15 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in arm strength. It may be concluded from the result of the study that experimental group improved in arm strength due to six weeks of yogic training

Figure - 2
Bar diagram shows the pre and post test mean values of Control group and yogic training group on arm strength



Explosive Strength

The results of the dependent 't'-test on the data obtained for explosive strength of the subjects in the pre-test and post-test of the yogic training group and control group have been analyzed and presented in Table 3.

Table – 3
Summary of mean, standard deviation and dependent 't' test for the pre and post tests on explosive strength of yogic training group and control group (Centimeters)

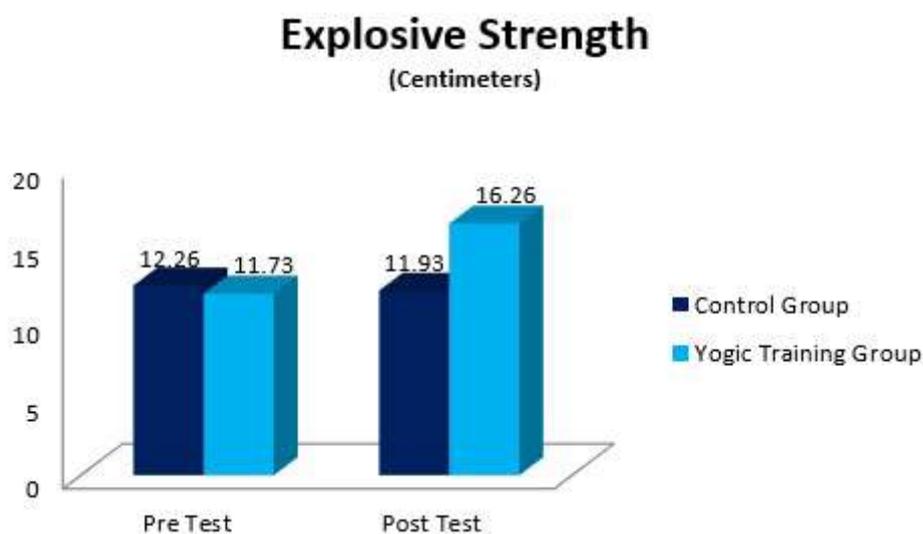
Variable	Groups	Mean		SD		Sd Error	df	't' Ratio
		Pre	Post	Pre	Post			
Explosive Strength	Control Group	12.26	11.93	1.79	1.43	0.23	14	1.43
	Yogic Training Group	11.73	16.26	1.62	1.27			0.36

*Significance at 0.05 level of confidence

SD-Standard Deviation, SD Error- Standard Deviation Error, df- Degrees of Freedom

The Table - 3 shows that the mean values of pre-test and post-test of control group on explosive strength were 12.26 and 11.93 respectively. The obtained 't' ratio was 1.43, since the obtained 't' ratio was less than the required table value of 2.15 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of yogic training group on explosive strength were 11.73 and 16.26 respectively. The obtained 't' ratio was 12.47 since the obtained 't' ratio was greater than the required table value of 2.15 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in explosive strength. It may be concluded from the result of the study that experimental group improved in explosive strength due to six weeks of yogic training.

Figure - 3
Bar diagram shows the pre and post test mean values of Control group and yogic training group on arm strength



Discussion on Findings

The investigator had a through and vision that yoga practices on selected strength variables among college men basketball players. The statistical values presented in table proved that there was significant improvement in selected strength variables among college men basketball players due to yogic practices. Obtained 't' value of leg strength is 8.19, arm strength is 9.24 and explosive strength is 12.47 respectively which is greater than the required 't' value to be significant. For the degrees of freedom 2.15 at 0.05 level of confidence. Thus the hypothesis of the study that would be significant improvement due to the yogic training.

Conclusions

Based on the results of the present study the following conclusions.

1. The results of the study showed that there were significant improvements in selected strength variable after six weeks yogic practices among college men basketball players.
2. The nature of the leg strength was significant improvement in yogic training group than the control group.
3. The nature of the arm strength was significant improvement in yogic training group than the control group.

4. The nature of the explosive strength was significant improvement in yogic training group than the control group.

Reference

- Agus Mulyawan, (2019). The Effect of learning using mini size balls on basketball dribble skills. *Journal of Physical Education and Sport Science*,1(1), 38-47.
- Hermassi, S., Chelly, M. S., Fieseler, G., Bartels, T., Schulze, S., Delank, K. S., & Schwesig, R. (2017). Effects of in-season explosive strength training on maximal leg strength, jumping, sprinting, and intermittent aerobic performance in male handball athletes. *Sportverletzung Sportschaden*, 31(03), 167-173.
- Kim, S. D. (2018). Effects of yogic exercise on nonspecific neck pain in university students. *Complementary therapies in clinical practice*, 31, 338-342.
- Latorre Roman, P.A., Arevalo Arevalo, J.M, & Garcia Pinillos, F. (2016). Association between leg strength and muscle cross-sectional area of the quadriceps femoris with the physical activity level in octogenarians. *Biomedical*, 36 (2), 258-264.
- Momcilovic, V., Momcilovic, Z., & Cenic, S. (2019). Effects of experimental model of explosive strength in regular physical education classes. *Facta Universitatis, Series: Physical Education and Sport*, 16 (3), 569-576.
- Proessl, F., Ketelhut, N. B., & Rudroff, T. (2018). Association of leg strength asymmetry with walking ability, fatigability, and fatigue in multiple sclerosis. *International Journal of Rehabilitation Research*, 41(3), 267-269.
- Rusmana, R., Tangkudung, J., & Dlis, F. (2019). Learning media of ladder and snake in basic dribbling skills basket ball. *JUARA: Jurnal Olahraga*, 4(2), 152-159.
- Samuel Jesudos J. (2019). Effect of yogic exercise on selected physiological variables of college men students. *International Journal of Yogic, Human Movement and Sports Sciences*, 4(1): 1302-1303.
- Santos, E. J., & Janeira, M. A. (2009). Effects of reduced training and detraining on upper and lower body explosive strength in adolescent male basketball players. *The Journal of Strength & Conditioning Research*, 23(6), 1737-1744.
- Santos, E. J., & Janeira, M. A. (2008). Effects of complex training on explosive strength in adolescent male basketball players. *The Journal of Strength & Conditioning Research*, 22(3), 903-909.
- Slawinski, J., Louis, J., Poli, J., Tiollier, E., Khazoom, C., & Dinu, D. (2018). The effects of repeated sprints on the kinematics of 3-point shooting in basketball. *Journal of human kinetics*, 62(1), 5-14.