



Influence of Selected Asanas and Suryanamaskar on Selected Physiological and Fitness Variables among College Women Players

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Abstract

The purpose of this study was to investigate the influence of selected Asanas and Suryanamaskar on selected physiological and fitness variables among college women players. The age of subject ranged from 18 to 23 years old. Subject were selected by using simple random sampling technique. The subjects participated in 13 weeks yoga training programme, every week had 4 sessions and every session lasted 30 minutes. The session consisted of warming and yogic exercise and concluded by savasan. The data pertaining to criterion were taken before administering the training programme and after end of training programme. The training programme was constructed with the help of yoga expert and selected from reviewing the related research in yoga. Resting heart rate, Flexibility and Hemoglobin were measured before and after a 12 week yogic practices. The Suryanamaskar, Chakrasana and Savasana intervention procedure was adopted as independent variables. The tests and instruments for collection of data was a polar heart monitor and was used to measure the resting heart rate and hemoglobin measured through blood sample and Flexibility measured by sit and reach test. The data was treated by employing a standard statistical procedure and expressed as mean standard deviation and analysis by repeated measure 't' test to compare pre and post-test data. The level of significance was set at 0.05 levels. The result of study showed the yogic exercise intervention has significant effect on physiological variables. In the light of findings, it is concluded that Resting heart rate and hemoglobin and flexibility with the help of yogic practice elasticity of muscle improve and improve range of motion. Muscle stretching consequently develops elastic resistance. This has an effect on the mechanism in the muscles contribution to contractile force. Thus we can conclude that the selected yogic exercise improves the Flexibility, Hemoglobin and decrease resting pulse rate.

Keywords: Asana, Suryanamaskar, Resting Hear Rate, Flexibility, Hemoglobin.

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Introduction

Yogic techniques, which aim at physical and mental self-culture, have convincing scientific bases and produce consistent physiological changes. It has been reported that yogis are capable of achieving remarkable feats of endurance and controlling their autonomic functions. There is evidence that the practice of yoga improves flexibility efficiency and performance quotient. Regular practice of asana maintains the physical body in an optimum condition and promotes health even in an unhealthy body. Through asana practice, the dormant energy potential is released and experienced as increased confidence in all areas of life. Yogasanas have a deeper significant value in the development of the physical, mental and spiritual personality, whereas pure exercises only have a physical effect on the muscles and bones. Physical education concerns with anatomical aspects of the physique with its physiological reactions for a given

activity. The ultimate aim of which is to enjoy a good health and optimum fitness. Yoga is providing a multidimensional development and it has now become an adjunct to physical education.

A benefit of yoga brings down stress and enhances powers of relaxation, boosts physical strength, stamina and flexibility bestows greater powers of concentration and self control which inculcates impulse control, helps in rehabilitation of old and new enhancing mental clarity, boosts functioning of the immune system enhance posture and muscle tone, improves blood circulation result in healthy, glowing skin cleanses and improves overall organ functioning. Suryanamaskar is a series of twelve physical postures. It is one of the ancient ways of exercise and more than that was the lifestyle of the ancient India. This sequence of movement and poses can be practiced on varying level of awareness, ranging from that of physical exercise in various styles. To a complete sadhana which incorporate asana, mantra and chakra meditation. A full round of suryanamaskara is considered to be two sets of the twelve poses with a change in the second set by moving the opposite leg first through the series.

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Methodology

The 30 college women players were randomly selected from various colleges in Madurai Kamaraj University. The age of subjects ranged from 18 to 23 years. Subjects were selected by using simple random sampling technique. All participants and parents were given verbal permission to participate in training. The experimental group participated in 13 week yoga training programme, every week had (4 sessions and every session lasted 30 minutes. The session consisted of warming yogic exercise and concluded by savasan. The data pertaining to criterion were taken before administering the training programme and after end of training programme. The training programme was constructed with the help of yoga expert and selected from reviewing the related research in yoga. Resting heart rate, Flexibility and Hemoglobin were measured before and after a 13 week yogic practices. The Suryanamaskar, Chakrasana and Savasana intervention procedure was adopted as independent variables. A polar heart monitor was used to measure the resting heart rate and hemoglobin measured with the help of expert of

pharmacy and flexibility measured by sit and reach test. The data was treated by employing a standard statistical procedure and express as mean standard deviation and analysis by repeated measure 't' test to compare pre and post-test data. The level of significance was set at 0.05 levels.

Results and Discussion

The training intensity for yogic practice was shown in appendices. Before applying the experiment all the subjects of the yoga practice were attended the pre-test, which was conducted a day prior to the commencement of the training and the data were collected on Resting heart rate, Hemoglobin and Flexibility. After thirteen weeks of training the post-test was conducted one day after the training period to find out any changes in the criterion variables. The 't' test was applied to find out the significance difference between pre-test and post-test means of selected physiological and fitness variables among college women players.

Table I. Summary of Mean, Standard Deviation and Dependent 't' test for the pre and post-test on Hemoglobin on experimental group

SL.NO	SUBJECT	MEAN	STANDARD DEVIATION	SEM	't' ratio
1	Pre-test	11.54	1.63	0.38	6.78*
2	Post-test	12.89	1.59	0.34	

Significant at point .05 level, 't' - value 2.28

Pre-test score was recorded as 11.54, 1.63 and 0.38 respectively whereas in the case of post-test data the

score was recorded as 12.89, 1.59 and 0.34. The 't' ratio (6.78) was found statistically significant at .05 level.

Table II. Summary of Mean, Standard Deviation and Dependent 't' test for the pre and post-test on Flexibility on experimental group

SL.NO	VARIABLES	MEAN	STANDARD DEVIATION	SEM	't' ratio
1	Pre-test	2.08	0.09	0.16	2.59*
2	Post-test	2.53	0.32	0.09	

Significant at point .05 level, 't' - value 2.28

Table-II revealed that mean, standard deviation, standard error of mean value with regard to pre-test on sit and reach test were recorded 2.08, 0.09 and 0.16 respectively whereas in the case of post-test data the

same where recorded as 2.53, 0.32 and 0.9 respectively and 't' ratio (2.59) was found statistically significant at 0.05 level.

Table III. Summary of Mean, Standard Deviation and Dependent 't' test for the pre and post-test on Resting Pulse Rate on experimental group

SL.NO	SUBJECT	MEAN	STANDARD DEVIATION	't' ratio
1	Pre-test	78.2	15.32	5.32*
2	post-test	72.3	23.85	

Significant at point .05 level, 't' - value 2.28

In table-IV reveals that mean, standard deviation, with regard to pre-data on resting heart rate were recorded 78.2, 15.32 respectively whereas in case of post-test data the same were recorded as 72.30, 23.85 respectively and 't' ratio 5.32 was found significant at 0.05 level.

Discussion and Conclusion

The result of study showed the yogic exercise intervention has significant effect on physiological variables. In the light of findings, it is concluded that Resting heart rate and Hemoglobin and flexibility with the help of yogic practice elasticity of muscle improve and improve range of motion. Muscle stretching consequently develops elastic resistance. This is effects is the mechanism in the muscles contribution to contractile force. It is also significant for those activities which voluntary muscle contraction and recoil of skeletal muscle. Thus we can conclude that the selected yogic exercise improves the flexibility and decrease resting pulse rate. The practice of yogic exercise on resting heart rate and amount of hemoglobin need to further research

in blood of college women players.

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