



Effect of Selected Yogic Exercises and Pranayama on Physical and Psychological Variables among College Students

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Abstract: The purpose of the study was to study the effect of selected yogic exercises and pranayama on physical and psychological variables among college students. The subjects for the present study consisted of twenty five in experimental group and same number in control group who were given training of pranayama six months and data was collected in pre and post test form. Flexibility and anxiety were measured for this study.

Keywords: *Yogic exercise, Pranayama, Flexibility, Variable*

Introduction:

The science of yoga works on physical, mental emotional, psychic and spiritual aspects of a person. When imbalance is experienced at this level, the organs, muscles and nerves no longer functions in harmony, rather they act in opposition to each other. Therefore, yo ga aims at bringing the different bodily functions into perfect co- ordination so that they work for the good at the whole body. Yoga is also blissful contact with the supreme element, higher than the highest of the known elements, through the process of absorption or dissolution, the process called Laya. It is establishing ecstatic oneness between the finite and the infinite, between the microcosm and the macrocosm, between the inner being and the Supreme Being. Yoga plays an important role by brining the therapeutic effect in Asthmas, diabetes, hypertension and respiratory troubles. Some yoga has both preventive as well as curative values. Positive charges in the life style of the people can brought through Yoga. During the period of education, Yoga can make them aware of their bodies and further make them realize the need of emotional and physical well being. "Flexibility is defined as the range of movement of specific Joint. Or groups of Joints influenced by the associated bones

and bony structures and the physiological characteristics of the muscles, tendons, ligaments and the various other tissues surrounding the Joint. Pranayama is an important, yet little known part of yoga. Students of yoga in remote ashrams have practiced its techniques for centuries and now it is practiced in our all universities. Yoga took an important place in our life. Pranayama is an exact science. Breathing external manifestation of Prana, the vital force. By exercising control over this breathing you can control the subtle Prana inside. Control of Prana means control of mind. The process, by which the Prana is controlled by regulation of external breath, is termed Pranayama. If you can completely control all the forces of the Universe, mental and physical. Pranayama is the science of breath control. It consists of series of exercises especially intended to meet the body's needs and kept in vibrant health. Mandan Mohan et. al. (2003) It was reported that yoga training (asans and pranayams) for six months improved lung function, respiratory muscle strength, skeletal muscle strength and endurance in 12-15 years old Indian. William and Terry (2002) they conducted a study to determine if specifically training the respiratory muscles using a power lung resistance device could change pulmonary function or exercise performance and the results showed positive changes in pulmonary function.

Objective of the Study:

The purpose of the study was found the effect of selected yogic exercises and pranayama on physical, physiological and psychological variables among college students.

Hypothesis:

It was hypothesized that pranayama increases the level of physical and psychological parameters.

Methodology Selection of Subjects:

The purpose of this study was to find out the effect of selected yogic exercises and pranayama on physical, physiological and psychological variables among college students. The subjects were selected from Alagappa University college of physical Education students. The age group of the subjects was between 18-24 years. Fifty subjects were selected at random and subjects were divided into two equal groups designed one experimental group and the other Control Group. Thus each group consisted of 25 subjects. Each subject was oriented in the procedure to the administration of the test. the experimental group is yogic exercises and pranayama and control is no any other training.

Pranayama Exercises:

The following suitable pranayama training were selected and given to all the, subjects for the period of six weeks.

1. Ujjayi pranayama
2. Bhastrika pranayama

Yogic Exercises:

Surya Namaskar, Padmasana, Bhujangasana, Shalabhasana, Matsyasana, Pashchimottanasana, Vajrasana, Ardhamatsyendrasana, Dhanurasana , Chakrasana, Pawan Muktasana, Garudasana, Sarvangasana, Vrikasana (Tree Pose), Halasana, Trikonasana, Shavasana. Yoga exercises for half an hour daily practice.

Selection of Variables

- **Physical:** Flexibility
- **Psychological:** Anxiety.

Experimental Design:

The subjects were formed a random group design consisting of experimental group and control group, Totally 50 subjects of 25 subjects each. The control group was not permitted to participate in the experimental training programme. The experimental group 25 was allowed to take part in the regular training programme. The subjects were informed about the purpose of this study in order to secure their full co-operation all the subjects. The experimental group only practiced yogic exercises and pranayama . All the subjects were prior to and after experimentation strand-Astrand Nomogram, The IPAT anxiety scale was used to assess of subjects.

Statistical Techniques:

The subjects of two groups were tested on selected criterion variables. i.e. Flexibility and anxiety prior to and after training period. The analysis of covariance (ANCOVA) was applied to find out the variance in each criterion variable. The level of significance to test and „F’ ratio, obtained by the analysis of co-variance was fixed at 0.05 level of confidence.

Analysis of Data:

Table:-1
Analysis of Covariance for the Data on Criterion Variables of Control and Experimental Groups

| | Control group | | | Experimental group | | | F-ratio |
|-------------|--------------------|---------------------|--------------------|--------------------|---------------------|--------------------|---------|
| | Pre-test mean & SD | Post test mean & SD | Adj post test mean | Pre-test mean & SD | Post test mean & SD | Adj post test mean | |
| Flexibility | 28.50 ≠ 7.15 | 28.98 ≠6.93 | 28.61 | 27.76 ≠4.99 | 28.84 ≠ 5.26 | 29.20 | 11.99* |
| Anxiety | 40.88 ≠ 8.49 | 40.16 ≠ 9.18 | 39.10 | 38.80 ≠ 9.27 | 36.40 ≠ 9.38 | 37.46 | 9.81* |

*significant at 0.05 level of confidence

The above table shows that the pre test means of flexibility and anxiety of control group were $28.5 \neq 7.15$ and $40.88 \neq 8.49$ and experimental group were $27.76 \neq 4.99$ and $38.80 \neq 9.27$ and respectively. The post test means of flexibility and anxiety of control group were $28.98 \neq 6.93$ and $40.16 \neq 9.18$ and experimental group of post test were $28.84 \neq 5.26$ and $36.40 \neq 9.38$ and respectively. The adjusted post test means of flexibility, Vo2 max and anxiety of control group were 28.61 and 39.10 and post test means of experimental group were 29.20 and 37.46 respectively. The obtained „F’ ratio of flexibility and anxiety was 11.99 and 9.81 and these values were higher than the tabulated „F” ratio. It was concluded that there was a significant improvement after the experimental period on flexibility and anxiety.

Discussion of Findings:

The result of study revealed that the training has lowered the heart rate and reduce the oxygen consumption as compared to the control group. The result also revealed that the pranayama produced a significantly greater increase in perception and physical energy. This result is in line with study of earlier conducted by wood has reported that pranayama produced a significantly greater increase in perception of mental and physical energy and feeling of alertness and enthusiasms.

Conclusions:

1. Yogic exercises and pranayama training showed a significant improvement in flexibility.
2. Yogic exercises and pranayama training showed decreases in anxiety.

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