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EFFECT OF BHASTRIKA PRANAYAMA ON CARDIOVASCULAR ENDURANCE

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ABSTRACT:

The purpose of the study was to find out the effect of bhastrika pranayama training on cardiovascular endurance. To achieve this purpose of the study, fifty (50) male students were studying in Govt. Degree College Jalalabad, Shahjahanpur (U.P.) for the year 2018-19, were selected as subjects at random for the present study. The ages of these subjects ranged between 19 to 23 years. Random group design was applied for this study. The selected subjects were divided into two equal groups. Group "A" acted as experimental group and Group "B" acted as control group. Both groups consist of 25 subjects each. The bhastrika pranayama training was given to Experimental group for three days i.e. Monday, Wednesday, Friday for ten weeks. The cardiovascular endurance was selected as criterion variable and it was measured by using cooper 12 minutes run/walk test, Ancova was used to find out the significant differences if any between the experimental group and control group. The level of significance was set at 0.05 level. The results of the study showed that there was a significance difference. A significance improvement in cardiovascular endurance due to the bhastrika pranayama training.



KEYWORDS : Bhastrika Pranayama, Training, Cardiovascular Endurance.

INTRODUCTION:

As a Physical Educationist and a Lover of Yoga' the research Scholar wanted to verify and to establish the facts regarding yogic principles that claims to have beneficial effect on the physiological parameters, especially on vital capacity, Hemoglobin and Respiratory Endurance. First the research scholar wants to clarify and nullify the misconceptions that cloud the Indian minds. Yoga has an eight-fold path for perfection, namely, yama, niyama, asana, pranayama, prathihara, dharana, dhyana and samadhi.. Most of the people think that Yogic practice such as Pranayama is for only those who have secluded themselves from worldly activities. Such a misconception is spread either by those who practiced pranayama or Meditation with halfmind or those who were not benefited or by those who were pessimistic about them. There is an irrational belief that one who likes to practice Pranayama must first fulfill certain strict rules and regulation. These rules and regulations cannot be followed by one who is a householder. So people believe that Pranayama is not for a house-holder. With the help of a good guide, anybody can easily follow the simple rules and regulations of Pranayama. An individual, who travels in a train or an air-craft and who always thinks about the train accidents and crash of air-crafts, cannot reach this destination peacefully. Similarly,

people think always about the dangers that are involved in practicing Pranayama. The dangers are due to wrong understanding and misapplication of these Yogic systems. A good teacher in Pranayama can help his disciple to learn and practice properly. Patanjali divided the Yoga system into eight path namely, yama, niyama, asana, pranayama, prathihara, dharana, dhyana and samadhi on the basis of the intellectual grasping power of individuals [1]. People wrongly think that they are arranged step by step, namely, one must first master yama, to practice niyama, or one must master niyama to practice asana and so on. The reality behind it is that one who follows either yama or niyama or asana or any one of the eight-fold paths can attain the ultimate goal of self-realization. For example one who follows yama only sincerely and earnestly cannot only attain the final goal but also derive the benefits of the other sevenfold paths. People believe that Pranayama gives super-natural powers. Practitioners of Pranayama attain super physical strength such as stopping a moving motor vehicle or eating glass pieces, nails or thorns, or drinking poison etc. But in reality such super-natural powers are not the real aims of yogic systems. These extra-ordinary feats belong to black magicians. But scientific experiments are carried out to clear this misconception. People wrongly believe that the practitioners of Pranayama can feel warm or cold, whenever he wants to feel so. But actually what happens is that one who practices Pranayama may adjust himself to the outside temperature and thereby can escape from the adverse effects of such environmental changes. Yoga practices such as Pranayama can keep an individual hale and healthy. The purpose of Pranayama is to purify the nerves and thereby to strengthen the nervous system. It is as easy to do as it is useful. Increase its duration gradually after attaining the concentration of mind. It is the origin of movement, gravity, magnetism, physical action, the nerve currents and the force of the thought. Without prana there can be no life, for it is the soul of all force and energy. It is found in the air, water and food. Prana is the vital force inside each living being, and thought is the highest and most refined action of prana. As we breathe, the movement of the lungs in haling air is the expression of prana. Pranayama is not simply the breathing but the control of the muscular force activating the lungs.

MATERIALS AND METHODS

The purpose of the study is to analyze and investigate the effect of bhastrika pranayama on cardiovascular endurance variables. To achieve this purpose of the study 50 male students were studying in Govt. Degree College Jalalabad, Shahjahanpur (U.P.) for the years 2018-19 was selected randomly, on the basis of their interest in yoga and willingness to participate in the ten weeks training

Program. In this study the selected subjects were divided into two equal groups of 25 subjects each such as experimental group and control group. The bhastrika pranayama training was given to Experimental group for three days i.e. Monday, Wednesday, and Friday for ten weeks and no training was imparted to the control group. Cardiovascular endurance was selected as criterion variable and it was tested by using cooper 12 minutes run/walk test. Analysis of Co-variance was used to find out the significant differences if any between the experimental group and control group. The level of significance was set at 0.05 level.

Training Programme

For experimental group, training was given for three alternate days in a week for ten weeks. Training was given for one session in the morning only. The researcher prepared a suitable training programme for the subjects. During experimental period. The control group did not participate in any special programme apart from their regular activities.

Schedule for Experimental group

Phase	Name of Pranayama	Repetition	Set
First Week	Bhastrika	30	5
Second Week	Bhastrika	30	5
Third Week	Bhastrika	30	6
Fourth Week	Bhastrika	30	6
Fifth Week	Bhastrika	30	7
Sixth Week	Bhastrika	30	7

Seventh Week	Bhastrika	30	8
Eighth Week	Bhastrika	30	8
Ninth Week	Bhastrika	30	9
Tenth Week	Bhastrika	30	9

RESULTS AND DISCUSSION

Table – 1
ANALYSIS OF COVARIANCE OF THE MEANS OF THE EXPERIMENTAL AND CONTROL GROUP FOR
CARDIOVASCULAR ENDURANCE

Test	Experimental Group	Control Group	SS	MSS	F Ratio
Pre Test Means	1824	1810	2140 286400	2140 7201.52	0.300
Post Test Means	1860	1768.40	51451.4 323264	51451.4 8688.23	5.862*
Adjusted Post Test Means	1855.18	1800.10	41021.15 255627.85	41021.15 7108.15	5.720*

*Significant at .05 level F .05(1,38) 4.10 (1,37) 4.10

The Table 1 shows that the pre test means of bhastrika pranayama group and control group on cardiovascular endurance were 1824 and 1810 respectively. The obtained F-ratio of .300 for pre test is less than the table value of 4.10 for df 1 and 38 required for significant at .05 level of confidence. The post-test means of bhastrika pranayama group and control group were 1860 and 1768.40 respectively. The obtained F-ratio of 5.862* for post-test is greater than the table value of 4.10 for df 1 and 38 required for significant at .05 level of confidence. The adjusted post-test means of bhastrika pranayama group and control group were 1855.18 and 1800.10 respectively. The obtained F-ratio of 5.720* for adjusted post-test is greater than the table value of 4.10 for df 1 and 37 required for significant at .05 level of significance. On the basis of above discussion, it is concluded that the cardiovascular endurance was significantly improved due to the training of bhastrika pranayama.

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