International Journal of Physical Education, Health and Social Science (IJPEHSS)
www.ijpehss.org
Peer Reviewed, Indexed and UGC Approved Journal (48531)
ISSN: 2278 – 716X
Vol. 8, Issue 1, (2019)
Impact Factor 5.02

EFFECT OF BHASTRIKA AND BHRAMIRI PRANAYAMA ON SELECTED PHYSIOLOGICAL VARIABLES IN FEMALE YOGA SUBJECTS

Ms. Deepti Shukla
Associate Professor
Prayag Mahila Vidyapeeth Degree College
Prayagraj

ABSTRACT
The purpose of the was study was to determine the effect of Bhastrika and Bhamiri's Pranayama on selected physiological variables in female yoga students. The subject for this study was from the students who are pursuing diploma courses in yoga at Kriya Yoga Sansthan, Jhunsi, Allahabad. A total of twenty students was selected for the study. Ten subjects was selected randomly as experimental and ten subjects as control groups. Following variables have been selected for this study. Physiological Variables breathe holding capacity, Resting heart rate, Vital Capacity, Respiratory Rate, Body weight, Blood pressure, Body temperature, Cardiopulmonary index, Dehydration (before and after training), The criterion measures chosen were: Positive breath holding was measured by manual method and the score was recorded in second. Resting heart rate was measured by manual method over a period of one minute. Dry spirometer will measure vital capacity in milliliter. Resting respiratory rate was measured by manual method over a period of one minute. Body temperature was measured by using Digital thermometer placed under the tongue and score was recorded in Farenhite. Body weight was measured by using weighing machine and score was score was recorded in Kilogram. Blood pressure (systolic and diastolic) was measured with a help of sphygmomanometer. The score was recorded in mm Hg. Data was taken at the Kriya Yoga Sansthan, Jhunsi, Allahabad. When they are not busy and have enough time to spare for testing. Necessary instructions was given to the subject the administration of each test. To determine the effect of shitali and sitkari pranayama on selected physiological variables, 't' test, and descriptive statistics was employed at 0.05 level of significance.
Keywords: Bhastrika, Bhramiri, Pranayama and Vital Capacity.

INTRODUCTION
Yoga (Sanskrit Yug, "Union"), one of the six classic systems of Hindu philosophy, distinguished from the others by the marvels of bodily control and the magical powers ascribed to its advanced devotees. Yoga affirms the doctrine that through the practice of certain disciplines one may achieve liberation from the limitations of flesh, the delusions of sense, and the pitfalls of thought and thus attain union with the object of knowledge. Pranayama is more important because it produces deeper effects as far as the physique in concerned. The effect of asanas are superficial in nature whereas the Prayayama is deeper as far as the outcomes are concerned. In simple words it could be said that asanas are more linked with muscular system, whereas the Pranayama is concerned with nervous system of the body. Pranayama is more important because it produces deeper effects as far as the physique is concerned. The effect of asanas are superficial in nature whereas the Pranayama is deeper as far as the outcomes are concerned. In simple words it could be said that asanas are more linked with muscular system, whereas the Pranayama is concerned with nervous system of the body.

METHODOLOGY
The purpose of the was study was the determine the effect of shitali and sitkari pranayama on selected physiological variables in female yoga students. The subject for this study was from the students who are pursuing diploma courses in yoga at Kriya Yoga Sansthan, Jhushi, Allahabad. A total of twenty students was selected for the study. Ten subjects was selected randomly as experimental and ten subjects as control groups.

ISSN: 2278 – 716X
Vol. 8, Issue 1, (2019)
Impact Factor 5.02

Based on literary evidence, correspondence with the expert and the scholar's own understanding the following variables have been selected for this study.

Physiological Variables

Breathe holding capacity.

Resting heart rate

Vital capacity

Respiratory Rate

Body weight

Blood pressure

Body temperature

Cardiopulmonary index

Dehydration (before and after training)

Data was taken at the Kriya Yoga Sansthan, Jhushi, Allahabad. When they are not busy and have enough time to spare for testing. Necessary instructions was given to the subject before the administration of each test.

Training Programme

Training programme was provided during morning hours to diploma courses students in yoga at Kriya Yoga Sansthan, Jhushi, Allahabad. The training Programme was carried out for a duration of four weeks. Pre data was taken before prescribing the pranayama and post data was taken after four weeks of training.

To measure the Negative Breath Holding Capacity, the subjects were instructed to place the nose clip tightly. They were asked to exhale through the mouth to the maximum capacity. As soon as the subjects exhaled and closed the lips, the stopwatch was started. As soon as the subjects opened their lips to inhale, the stopwatch was stopped.

To measure the Positive Breath Holding Capacity, the subjects were instructed to close the nostrils tightly with the nose clip. They were asked to inhale through the mouth to the maximum capacity. As soon as the subjects took a deep breath to the fullest capacity of their lungs and close the lips, the stopwatch was started. As soon as the subjects opened their lips to exhale, the stopwatch was stopped.

To Resting Heart Rate was taken early in the morning. Ten minute before taking the heart rate, the subjects were asked to rest in supine lying position on their beds. The tester used a stopwatch for taking the heart rate.

To object of this test is to measure the largest quantity of air, which a person can exhale from the lungs by a forcible expiration after the deepest possible inspiration.

A Dry Spirometer in liters measured vital capacity. The subject was asked to take a deep breath before the test, then after the fullest possible inhalation the subject exhaled slowly and steadily bending forward over the hose, till all the air within his control was expelled. Care was taken to prevent air from escaping either through the nose or around the edges of the mouthpiece and was also ensured that the subjects did not take a second breath during the test. In case of doubt the test was repeated. Care was taken to lower the can without spilling the water, each time after use.

Respiratory rate was taken early in the morning. The subjects were asked to ret in supine lying position on their beds. The respiratory rate was felt by placing the hand just below the thoracic cavity that is on diaphragm. The research scholar used stopwatch for taking the respiratory rate. Total number on inhalation or exhalation per minute was recorded for each of the subjects.

The weight of the subjects were taken on a weighing machine with the subjects wearing short and vest only. They stood on the weighing machine and weight was recorded nearest to half a kilogram. The age was recorded to the full chronological year from the Yoga Sadhana Kendra record book during admission.

A sphygmomanometer (dial type) and a stethoscope was used to measure the blood pressure (systolic arid diastolic) of the subjects. Each subject was asked to sit relaxed on a chair. The cuff of the sphygmomanometer was wrapped around the left upper arm of the subject just above the elbow. The cuff was connected to the pressure pump and manometer. After closing the outlet valve of the pressure pump, the pressure in the inflatable runner bag is rapidly

raised to 180 mm Hg by pumping which was sufficient to sheet off the practical artery, which is arrested, and radial pulse disappeared. Keeping the 'chest piece' of the stethoscope over the brachial artery will monitor the sound of palpation and listening to the sound through the earpiece of the stethoscope as the pressure over the artery is being manipulated. The pressure will gradually lowered by opening the valve. As soon as the pressure in the cuff fells just below the systolic pressure, it allowed passing the small amount of blood through the compressed artery into the distal segment. This produced a clear sharp sound and the pressure shown on the dial is noted. This denotes the measure of systolic blood pressure. As this cuff pressure is lowered still further more blood flowed through due to rebound relaxation of the arterial vessel and this will indicated by louder sound. The pressure at which the sound is muffled by manipulation the pressure pump is read on them manometer dial. This denotes the measure of the diastolic blood pressure.

The body temperature was measured by Extra Care Instant Digital Thermometer imported & marketed by : J.V.M. Thermometers Inds, Delhi, Date of Mfg: October, 2008. Batch No. : CO 1.

Wipe the probe with ethyl alcohol for disinfection. Push the on/off button by the LCD. The LCD will show some indication for 2 seconds and one will hear a beep simultaneously. Position the probe in mouth and keep the mouth closed for 5 minute before taking temperature. Once the temperature taking is finished, the degree sign on the LCD will stop flashing (normally within 30 to 60 seconds), and one will hear buzzes for approx. 10 seconds. The reading will not change after the thermometer is removed from the testing position. The tested temperature is shown on LCD. The observed temperature was scored degree Fahrenheit.

Hyman's Index was used to compute the score of cardio pulmonary index. Following variables were used for testing the cardio pulmonary index namely vital capacity, maximum expiratory pressure, maximum inspiratory breath holding capacity age systolic pressure, diastolic pressure and resting pulse rate.

Statistical Techniques

The determine the effect of shitali and sitkari pranayama on selected physiological variables, 'f test, and descriptive statistics was employed at 0.05 level of significance.

FINDINGS AND RESULTS

TABLE-1
SIGNIFICANT DIFFERENCE OF MEAN ON PHYSIOLOGICAL VAEIABLES

		MEAN		MEAN DIFF.	Dm	t-Ratio
		Pre test	Post test			
Blood Pressure	S	112.10	111.00	1.10	1.96803	.559
	D	68.50	69.40	-.90	.60654	-1.484
Resting heart rate		66.65	61.80	4.85	1.76259	2.752*
Vital capacity		3.25	3.79	-.54	.21805	2.476*
PBHC		95.80	104.35	-8.55	4.42152	-1.934
NBHC		71.10	72.70	-1.60	3.09958	-.516
Respiratory rate		16.45	16.30	.15	.87140	.172
Weight		58.35	58.05	.30	.07089	4.162*
Body temperature		97.81	97.41	.40	.41902	.955
Cardio pulmonary index		.66	.69	-.03	.03728	-.644

*Significant at .05 level of significance t0.05(19) 2.093

It is evident from table 3 that there was a significant difference between the mean of pre test and post on the scores of resting heart rate, vital capacity and body weight. Since the obtained value of 't' (2.752), (2.476), 't' (4.162) was higher than the tabulated value of 't' (2.093), which was required to be significant at (19) degree of freedom with 0.05 level of confidence. Therefore, the null hypothesis was not accepted at 0.05 level of significance. However there was no significant difference in case of positive breath holding, negative breath holding capacity, respiratory rate, blood pressure, cardio pulmonary index and body temperature as the obtained value of 't' were less than the tabulated value

ISSN: 2278 – 716X
Vol. 8, Issue 1, (2019)
Impact Factor 5.02

of 't' (2.093) which was required to be significant at (19) degree of freedom with 0.05 level of confidence. Therefore, the null hypothesis was accepted at 0.05 level of significance.

CONCLUSIONS

Within the limitations, of the study the following conclusions may be permitted.
Shitali and shitkari pranayama when prescribed to the yoga students there may be chances of improvement heart rate, vital capacity and to some extent weight.

REFERENCE

Krishna Shri, "Essence of Pranayama" Mumbai: Jolly Offset printing Press, 1985.
Bhole M.V. and Karambelkar P.V., "Effect of Yoga Practices on Vital Capacity", Indian Journal of Chest Diseases XIII: (1974) : 1.4, Bhole M.V. and Karambekar P.V., "Effect of Yogic Treatment in
"Experiment of Pranayama", Yoga Mimansa VI (June; 1956): 9-20.
Santra P., Das S.S., and Bhownick S., "Effect of Selected yoga Practices on Asthma", Abstracts: 3rd International Conference Yoga Research and Tradition (January 1999): 31-32.
Thomas Cummings, Vineet, "The Effect of Edurance Training and Stress", Dissertation Abstracts International 45 (August 1984): 451-A.