

Effect of Yogic Practices on Blood Pressure and Stress Among Middle Aged Women

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Abstract- The purpose of the present study was to find out the effect of yoga practice on blood pressure and stress among middle aged women. For this purpose, thirty middle aged women residing around Periyakulam town, Tamilnadu, were selected as subjects. The age of the subjects were ranged from 40 to 45 years. They were divided into two equal groups, each group consisted of fifteen subjects, in which experimental group - I underwent yoga practice, and group - II acted as control that did not participate in any special activities apart from their regular curricular activities. The training period for the study was six days (Monday to Saturday) in a week for twelve weeks. Prior and after experimental period, the subjects were tested on systolic and diastolic blood pressure and stress. Blood pressure was measured by using sphygmomanometer and stress was assessed by Girdano and Everly Stress Scale. The Analysis of Covariance (ANCOVA) was applied to find out any significant difference between the experimental groups and control group on selected criterion variables. The result of the study shows that the yoga practice group decreased the blood pressure and stress significantly. It was concluded from the results of the study that yoga practice has bring positive changes in systolic and diastolic blood pressure and stress as compare to the control group.

Key Words: yoga practice, systolic and diastolic blood pressure, stress, ANCOVA.

INTRODUCTION

Yoga is an art, a science, and a philosophy that affects all aspect of a person's life, including their physical, mental, and spiritual wellbeing. It is a practical method for giving one's life meaning, value, and virtue.[1] According to this perspective, yoga is a kind of moral and mental development that promotes longevity (chirayu) and good health (arogya), and the whole intrinsic discipline results in pleasant and lasting happiness and calm.[19] It is the world's oldest method

of human growth and includes body, mind, and spirit. It was developed in India many thousands of years ago. A saint named Patanjali compiled, organised, and systematised the 185 brief aphorisms that make up the ancient book "Yoga Sutra" that are found there.[3]

It is a psycho-somatic-spiritual practise that aims to bring our body, mind, and soul into harmony and oneness via a definitive melding of human consciousness with universal awareness.[4] There are a number of physiological changes that occur when a person practises yoga with the yoga attitude (attitude of tolerance, constant practise, overcoming obstacles within himself or herself, i.e., thrashing laziness, anger, illusion, and aspiration to be different or better than others).[5] Yoga encourages breath awareness, which calms the mind and eliminates concerns. Yoga and pranayama help a person's negative thoughts by relieving tension and stress.

Activities that aid with anxiety and stress reduction include yoga, meditation, socialising, and relaxing. Additionally, it has the power to control how the body reacts to stress. This lowers blood pressure and heart rate, which enhances breathing. Numerous research demonstrate that throughout a yoga practise session, hypertensive individuals' blood pressure was lowered.[6,7,8] The autonomic nerve system, which controls the heart rate, digestion, and other essentially unconscious processes, may be responsible for this.[9] Yoga helps people unwind and reduce tension, which lowers their resting heart rate. Yoga poses call for slow, regulated breathing patterns that aid in relaxing all of the muscles, including the heart. Pranayama sharpens the intellect and teaches you how to regulate your breathing.

One of the most important vital indications is blood pressure, which is the force that blood vessels experience as it circulates through them. The blood pressure alternates between a high (systolic) and a low

(diastolic) pressure with each heartbeat.[11] people who practise yoga, along with breathing and relaxation techniques, at least three times a week will experience lower blood pressure than people who are sedentary.[12]

The most prevalent mental ailment in the universe is stress. In the entire world, 350 million individuals experience stress in some way.[13] Depressed or sad mood, quick temper or easily irritated, loss of interest in previously enjoyed hobbies or activities, feeling of worthlessness or guilt, thoughts of death or suicide, difficulty concentrating or making decisions, feeling exhausted or fatigued, restless or slow, changes in appetite such as overeating or loss of appetite, changes in weight such as weight loss or gain, and changes in sleep patterns are symptoms.[14] Yoga has a variety of systems that impact stress levels, thus there are many different ways that yoga may lower your stress levels.[20] According to studies, yoga reduces stress best by boosting your mood (or positive affect), promoting enhanced mindfulness, and fostering greater self-compassion.[21]

METHODOLOGY

The purpose of this study was to find out the effect of yoga practices on blood pressure and stress among

Table – II Analysis of Covariance on Systolic and Diastolic Blood Pressure and Stress of Yoga Practice Group and Control Group

Variable Name		Yoga Practice Group	Control Group	'F' Ratio
Systolic Blood Pressure (in mm Hg)	Pre-test Mean ± S.D	124.18 ± 1.89	124.56 ± 1.56	0.86
	Post-test Mean ± S.D.	121.31 ± 1.02	124.16 ± 2.67	8.21*
	Adj. Post-test Mean	121.139	124.979	10.56*
Diastolic Blood Pressure (in mm Hg)	Pre-test Mean ± S.D	83.45 ± 1.08	83.55 ± 1.86	0.55
	Post-test Mean ± S.D.	80.56 ± 1.11	83.76 ± 1.15	9.56*
	Adj. Post-test Mean	80.313	83.189	10.56*
Stress (Points)	Pre-test Mean ± S.D	25.16 ± 1.17	25.59 ± 1.21	0.27
	Post-test Mean ± S.D.	22.25 ± 1.13	25.76 ± 1.25	10.63*
	Adj. Post-test Mean	22.021	25.864	12.53*

*Significant at 0.05 level of confidence.(The table values required for significance at 0.05 level of confidence for 1 and 28 & 1 and 27 are 4.20 and 4.21 respectively).

RESULTS

Table – I shows that pre test means 'f ratio of yoga practice group and control group on systolic blood pressure was 0.86 which was insignificant at 0.05 level of confidence. The post and adjusted post test means 'f' ratio value of experimental group and control group was 8.21 and 10.56, which was significant at 0.05 level of confidence. The pre test means 'f ratio of brisk yoga practice group and control group on diastolic blood

pressure was 0.55, which was insignificant at 0.05 level of confidence. The post and adjusted post-test mean 'f' ratio value of experimental group and control group was 9.56 and 10.56, which was significant at 0.05 level of confidence. The pre test means 'f' ratio of yoga practice group and control group on stress was 0.27 which was insignificant at 0.05 level of confidence. The post and adjusted post test mean 'f' ratio value of experimental groups and control group

middle aged women. To achieve the purpose of the present study, 30 middle aged women residing around Periyakulam town, Tamilnadu, were randomly selected as subjects. The age of the subjects were ranged from 40 to 45 years (mean age = 42.3 ± 0.5 years). All the subjects were residing at their home, so, the food habits were not same and could not be measured. The selected subjects were divided into two equal groups of fifteen subjects each. Group - I considered as experimental group who underwent yoga practices for sixteen weeks, six days (Monday to Friday) per week on selected yoga exercises (appendix – I) and the same were taught by yoga teachers from Pathanjali Yoga Center, Periyakulam. Group - II considered as control that did not undergo any training programme or physical activity (either strenuous or recreational) throughout the experimental period. The data were collected on selected criterion variables such as blood pressure was assessed by using sphygmomanometers and stress was assessed by administering Girdano and Everly Stress Scale, before and after the sixteen weeks of yoga practices as pre and post test. Analysis of covariance (ANCOVA) was applied to find out the significant difference if any between the experimental and control groups.

pressure was 0.55, which was insignificant at 0.05 level of confidence. The post and adjusted post-test mean 'f' ratio value of experimental group and control group was 9.56 and 10.56, which was significant at 0.05 level of confidence. The pre test means 'f' ratio of yoga practice group and control group on stress was 0.27 which was insignificant at 0.05 level of confidence. The post and adjusted post test mean 'f' ratio value of experimental groups and control group

was 10.63 and 12.53, which was significant at 0.05 level of confidence.

CONCLUSION

Systolic and diastolic blood pressure decreased for yoga practice group[15,16,17] has also decreased for both the experimental groups, such as yoga practice group, when compared with the control group. The stress was also decreased significantly after the yoga practice.[18,21] The overall study indicates that the yoga practice is a better tool to improve the physiological and psychological fitness.

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