

Effect of Selected Yogic Exercises in Reducing Blood Pressure

Abstract

Hypertension became a serious global issue. It is increasing day by day. Females are also not escaped from this problem. Yoga is one of the best alternate to allopathic medication to treat hypertension. In the present study 20 females were selected and were given 45 min. yogic practice for six weeks. Results obtained showed significant decrease in blood pressure readings to normal from higher side.

Keywords: Hypertension, Yoga, Asana, Pranayama.

Introduction

Hypertension is a serious problem covering the whole world. Its control is the major global challenge these days. India is also not escaping from its grip. Latest data says that approximately 30-40 percent Indian population (urban and rural) is suffering from hypertension. Mostly people are on allopathic drugs for the treatment of hypertension, which makes them dependent on these drugs. But, these days emerging trends of hypertension makes people aware of this problem and they want permanent solution for this. Yoga is an Indian tradition of healthy and disease free life-style. Healthy diet and regular yogic practice help people to expel this problem from their life. Keeping in view the benefits of yoga present study has been conducted on females to see effect of yoga on hypertension.

Many studies already has been conducted (Marshal et.al.2013), Sinha in 2002 worked on effect of suryanamaskar on males suffering from hypertension. Results showed positive results in treating hypertension in males. M.M. Gore in 2004 worked on effect of anuloma-viloma pranayamawith or without kumbhak on blood pressure.

Aim of The Study

Present Research Work Has Been Conducted With an aim To Check Effect of Selected Yogic Asanas In Reducing Blood Pressure.

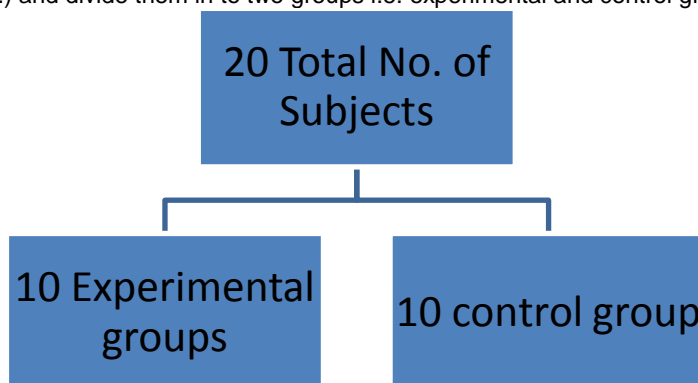
Material and Method

For the present cross sectional study a data of 20 female blood pressure patients of 30 to 60 years of age was collected from Hoshiarpur (Pb.) and divide them in to two groups i.e. experimental and control groups.



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Selected Yogic exercises of 45 minutes duration (daily) were given to the experimental group for six weeks.. No Yogic exercises were given to control group. Blood pressure of the subjects was noted before and after six weeks of performing yogic exercises.

Statistical Techniques

T-test was applied to find out the significant differences in pre and post yogic exercises blood pressure of females.

Results and Discussion

Results of the present study are discussed as follows:

Periodic Research

Table-1
Mean, SD and t –Test Values of Systolic Blood Pressure of Females of Experimental Group before and After Performing Yogic Exercises

Group	Test	N	Mean (mm Hg)	SD	t-value
Experimental Group	Pre –Test	10	173	22.62	2.75 S*
	Post-test	10	144	12.65	

S*=Significant at 0.05 level=2.26

Figure No. 1

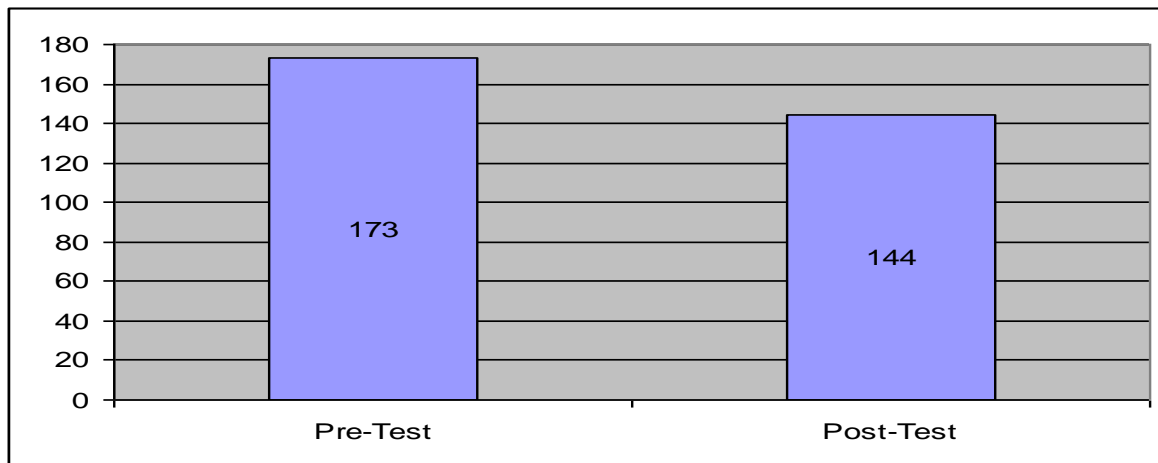


Table No. 1 and Fig. No. 1 has shown the mean S.D. and t-test values of systolic blood pressure of females of experimental group. Pre-Test mean and S.D. value of this group has been calculated as 173 mm Hg ± 22.62 whereas mean and S.D. value of post test were found to be 144 mm Hg ± 12.65 when t-test was applied it has shown the 2.75 value which was significant at 5% level. It showed that after performing the yogic exercises for 45 days there was a remarkable decrease in systolic blood pressure

of females (30 to 60 years) of experimental group. Pre – test and post-test S.D. values of systolic blood pressure has shown that before performing yogic exercises there was a large variation in systolic blood pressure of females. But after performing yogic exercises S.D of systolic blood pressure has also come down. This showed that variation in systolic blood pressure has also decreased after performing the yogic exercises for 45 days.

Table-2
Mean, SD and t –Test Values of Systolic Blood Pressure of Females of Control Group before and after performing The Yogic Exercises

Group	Test	N	Mean (mm Hg)	SD	t-value
Control Group	Pre –Test	10	172	17.12	0.052
	Post-test	10	168	14.29	NS

NS = Non-Significant

Figure No. 2

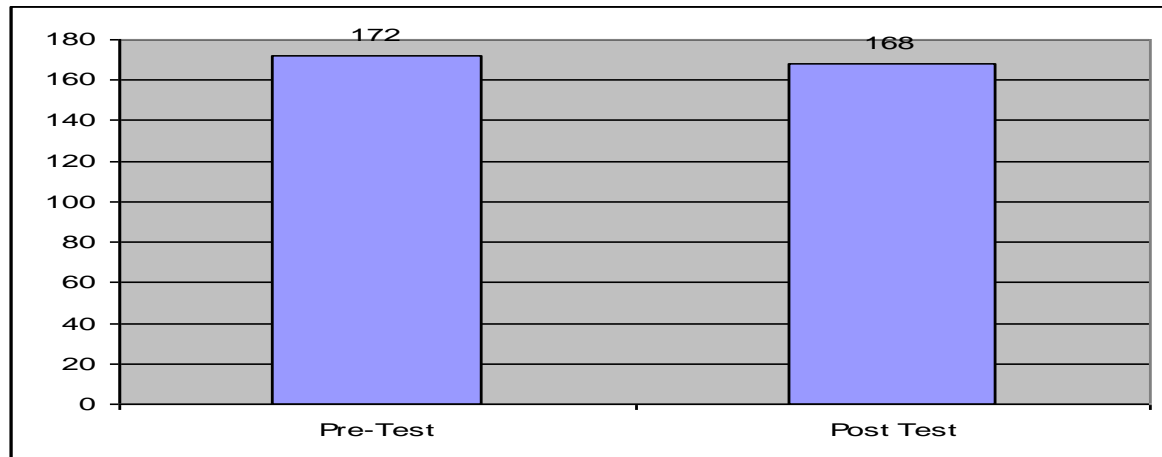


Table No. 2 and Fig. No. 2 has shown that there was no noticeable change in systolic blood pressure females of control group. t-test

has also shown statistically insignificant differences.

Table-3
Mean, SD and t-Test Values of Diastolic Blood Pressure of Females of Experimental Group before and After Performing The Yogic Exercises

Group	Test	N	Mean (mm Hg)	SD	t-value
Experimental Group	Pre -Test	10	100	6.67	2.32 S*
	Post-test	10	85	4.15	

S*=Significant at 0.05 level=2.26

Figure No. 3

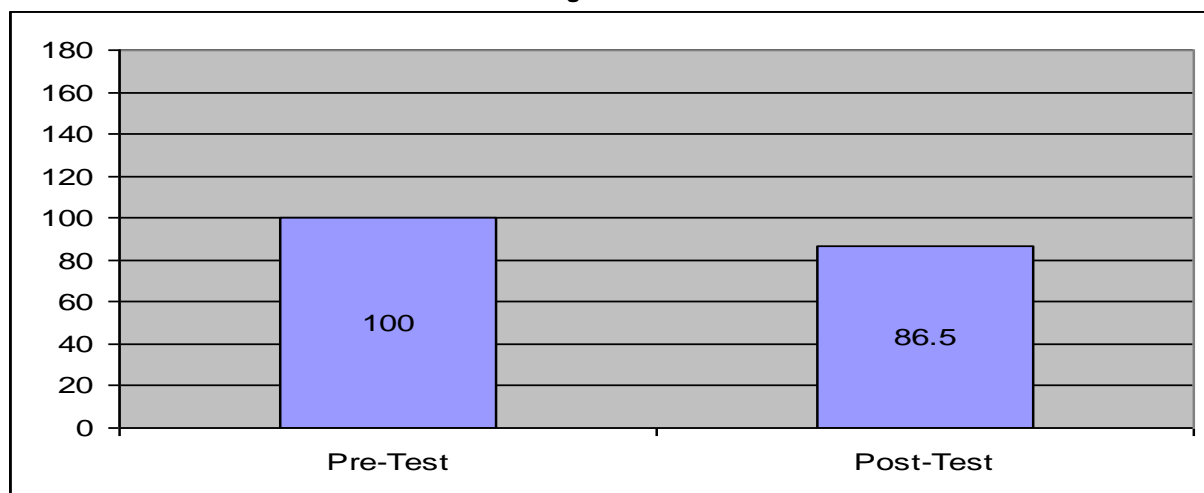


Table 3 and Fig. 3 have shown the mean S.D. and t-test values of diastolic blood pressure of females of experimental group. Pre-Test mean and S.D. value of this group has been recorded as 100 mm Hg ± 6.67 whereas mean and S.D. value of post test was found to be 86.5 mm Hg ±

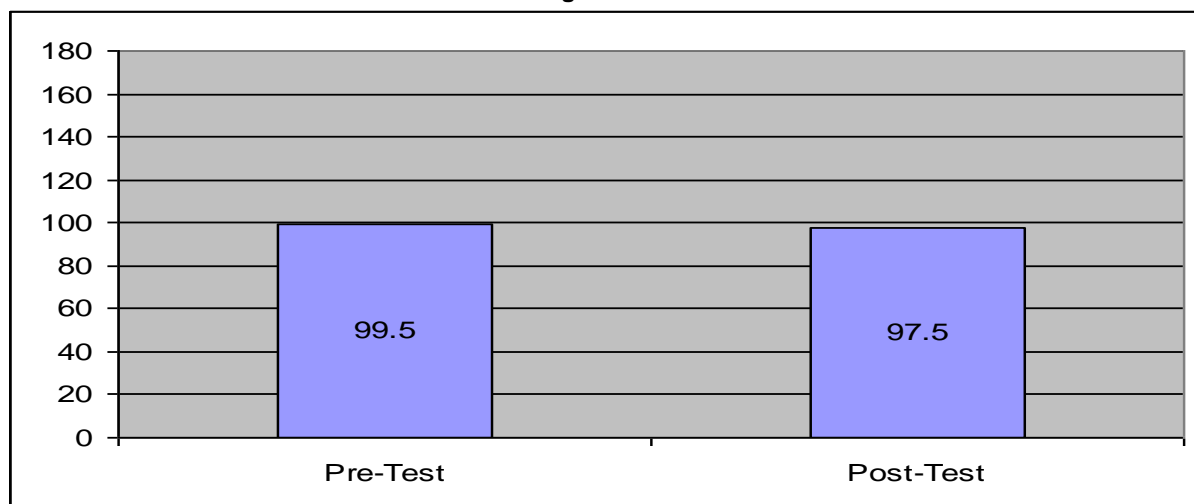
4.15 when t-test was applied it has shown the 2.32 value which was significant at 5% level. These results revealed that after performing the yogic exercises for 45 days diastolic blood pressure of females of experimental group has also lowered down by approx. 15 mmHg.

Table-4
Mean, SD and t -Test Values of Diastolic Blood Pressure of Females of Control Group Before and After Performing The Yogic Exercises

Group	Test	N	Mean (mm Hg)	SD	t-value
Control Group	Pre -Test	10	99.5	6.95	0.083 NS
	Post-test	10	97.5	4.96	

NS=Non-Significant

Figure No. 4



From the above result has been observed that there was no observable change in the diastolic blood pressure of control group. Through there was the difference in pre-test and post –test mean value of diastolic blood pressure. But this difference in diastolic blood pressure of females of control group was non-significant

Summary

The present research work title “Effect of Selected Yogic Exercises On Reducing Blood Pressure” was conducted on 20 females of 30 to 60 years of age to check the effect of yogic exercises on their blood pressure. These females were of rural background and are of middle socio economic status. The whole data was divided into two groups

(i) Experimental Group

(ii) Control Group

Each group having 10 subjects. The yogic exercises were given for 45 days to the experimental group. The result obtained for the above study showed that there is noticeable change in the mean values of blood pressure of experimental group. Whereas no significant difference were observed in the mean value of Blood pressure of control group. This indicates that yogic exercises do effect the Blood Pressure of females of 30 to 60.

Conclusions

Conclusions are essential in investigation. They provide a finishing touch and review to the whole of the critical work. This part plays an important role in any research work.

Results of research show acceptance or rejection of the hypothesis.

1. Significant difference was observed on the variable blood pressure as a result of Asana treatment.
2. Treatment of asana provide significantly better on variable stress as compared to control group.
3. Insignificant difference between pre and post test of control group was observed.

Suggestions for Further Research

In the light of finding of this study the following implication can be drawn. The Importance of yogic exercise has been well recognized by several researchers.

The present research has tried to find out effect of selected yogic exercise on reducing Blood pressure.

1. The similar study can be conducted on male subjects.
2. The scope of present study can be extended to the remaining psychological and physiological variable also.
3. The size and age of sample can be further increased.
4. The study also can be done on Hypertension, diabetic patients.

References

Altman (2001) *A Brief therapy Model of Reduce Stress by Relaxation Program at Wellness Community Thousand Oaks, California. Ma Dissertation, California state university, long Beach (2080) AAC 1401265 Request – Dissertation Abstracts.*

Bhole And Karmbelkar (2003) *Pattern of Breathing and Ventilatory Response to CO₂ in Subjects Practicing Hatha-Yoga. Journal of Applied Physiology. 84, 33-48.*

De Armond, David Lee (1996) *Effect of Transcendental Meditation Program on Psychological, Physiological, Behavioral and Organizational consequences of Stress in Managers and Executives PhD Thesis Maharishi University of Management (0947) Abstracts AAC9633808 Proquest Dissertation Abstracts.*

Ettenger Jim (1999) *The benefits of Meditation for outdoor Education Research paper ERIC#ed438137.*

Gore M.M (2004) *Immediate effect of Anulom Vilom Pranayama with and without Kumbhaka, ratio and Bandhas on Blood pressure and Pulse Rate in beginners. Yoga mimamsa 141-151.*

Gharote M.1 (2008) *effect of 10 Minutes Kapalabhati on Some Physiological functions. Yoga mimamasa 1 2, 87 to 94.*

Indirani, L. (1993) *effect of yogic practice on selected physical, physiological and psychological variables among school boys: unpublished master of philosophy Thesis, Phy. Edu. Department, Alagappa University, India*

Johnson (1999) *Meditation as a relaxation technique and its effect on mean blood pressure Ma dissertation,, California state University, long Beach (6080 AAC 1392585 proquest – Dissertation Abstracts.*

Joshi and Gokhale (1992) *Effect of short term Pranayama practice on breathing rate and ventilator functions of lung. Journal of post graduate medicine 44 105-113.*

Kritzell, Lisa Ann (2001) *Meditation with cancer patient in stress reduction Ma Dissertation University of Victoria (Canada) 0024 AAC54785 proquest – Dissertation Abstract.*

Kesari (2006) *Effect of Yogasanas and Pranayama on Urea clearance and creatinine clearance yoga. Mimamsa, 38 no 1 and 2, 38 to 42.*

Marshall,H., Rebecca,S., Terry,S. and Kim,I. (2013) *Effectiveness of yoga for hypertension: Systematic review and meta analysis. Evid.Based Complement Alternat. Med. 649836*

Mundewadi (2007) *Effect of Pranayama training on Parasympathetic functions on healthy volunteers. Yoga mimamsa, 1 and 2, 8 to 11.*

Pool (1996) *Cognitive Restructing and Meditation Training as Stress Reduction Management Interventions in post cardiac adjustment, PhD thesis Leigh University (0105) AAC proquest – Disseration Abstract.*

Sahai Ajit (2004) *Investigated the Modulation of Cardiovascular Re3sponse to Exercise by Yoga Training. Indian J Pharmacol; (4) 461-465*

Sharma s (2001) *effect of yoga exercise on Mental health and Anxiety B.ED level, M.ED Dissertation (Edu) P.U. Chandigarh.*

- Sohoni Dr. Jayant (1995) Effect of yogic exercise reducing Blood pressure and blood cholesterol. Research paper by yoga dham kaivalya, Nashik.*
- Sagula David Alexander (2000). Varying Treatment duration in a Mindfulness Meditation Stress reduction programme for chronic pain patients, Phd thesis, Michigan state university (0128), AAC9963403 proquest – Dissertation Abstract.*
- Sultana.D (2007) Effect of 12 weeks Cycling and Pranayama on selected respiratory variables Yoga Mimamsa, 1 and 2, 12 to 25.*
- Shanmugam (1993) Effect of Asana and Jogging of selected Physiological and Hematological variables among school boys.un published master of philosophy thesis department of physical education alagappa university, India.*
- Sinha B (2002) Examined the Role of Surya Namaskar (SN) on Male Volunteer Of Indian Army. Indian j Physiol Pharmacol, .48(2): 184-190*