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EFFECT OF PRANAYAMA ON SYSTOLIC BLOOD PRESSURE OF ADOLESCENT MEN

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ABSTRACT

The objective of the study was to find out the effect of pranayama on systolic blood pressure of adolescent. To achieve the objective of the study adolescent men were selected randomly from MCC campus School, Madras Christian College. The subjects age ranges from 14 to 18 years in the year 2021. The selected subjects were divided into two equal groups of each having 15 subjects each namely experimental group and control group. The experimental group underwent pranayama for 6 weeks of program. The control group was not taking part in any training during the course of the study. Systolic blood pressure was taken as criterion variable in this study. The selected subjects were tested on Systolic blood pressure, which was measured using sphygmomanometer. Pre-test was taken before the training period and post- test was measured immediately after the six-week training period. Statistical technique'T`' ratio was used to analyse the means of the pre-test and post test data of experimental group and control group. The results revealed that there was a significant difference found on the criterion variable. The difference was found due to pranayama package given to the experimental group on Systolic blood pressure when compared to control group.

Keywords: Pranayama, Systolic Blood Pressure, Sphygmomanometer 'T' Ratio, Experimental Group, Control Group

INTRODUCTION

Yoga is a way of practice that helps the mind and body align in order to gain tranquillity while maintaining a non-religious perspective **[1]**. Yoga is universally benefiting all people of all ages **[2]**. Yoga is a practical aid and yoga is union for all.

Pranayama is the yogic practice of focusing on breath. In Sanskrit, prana means "vital life force", and Yama means to gain control. It refers as breathing exercises which clears physical and emotional barriers within our body according to unrestricted breath and then the glide of prana - life energy. Previous research has shown that pranayama action auspicious for combating systolic blood pressure **[3]**. The purpose of the present study was to investigate the effect of pranayama package on Systolic blood pressure among middle aged unemployed women **[4]**. Yoga is basically an otherworldly control dependent on an incredibly inconspicuous science **[5]**. Yoga is fundamentally connected with the prosperity of human body **[6]**. Yoga is a conventional and social study of India. Aside from yoga, India has contributed different sciences like Sanskrit language structure, arithmetic, kama sutra, and Ayurveda to the humankind **[7]**. Yoga therapy that includes Aasanas and Pranayama is fast advancing as an effective measure to prevent physical and psychological disorders **[8]**. Yoga has the answer for a healthy life vogue **[9]**. Yoga is a great soul of the Universe. It can promote the social well-being through limps of yoga **[10]**. Yoga is right life, right movement. We live by the union of several elements and principles.

Two numbers are used to calculate blood pressure: The first number, referred to as systolic blood pressure, measures the pressure in your arteries when your heart beats. Second one refers to diastolic blood pressure; it measures the pressure in the arteries when the heart rests between beats. A high systolic blood pressure reading indicates a high risk of heart disease. Heart attacks, heart failure, kidney disease, and overall mortality are all linked to high systolic blood pressure.

MATERIAL AND METHODS

Selection of subjects

The purpose of the study was to find out pranayama practices on systolic blood pressure among adult women. To achieve this purpose of the study, adolescent men were selected randomly from MCC campus School, Madras Christian College. The subjects age ranges from 14 to 18 years.

Selection of variable

Independent variable

- Pranayama Practices

Dependent variable

- Systolic blood pressure

EXPERIMENTAL DESIGN AND IMPLEMENTATION

The selected subjects were divided into two equal groups of fifteen subjects each, such as a pranayama practice group (Experimental Group) and control group. The experimental group underwent pranayama practice for six days per week for six weeks. Control group did not undergo any special training programme apart from their regular activities. The physiological variable namely systolic blood pressure was selected as criterion variable. All the subjects of two groups were tested on selected criterion variable Systolic blood pressure, measured using sphygmomanometer prior to and immediately after the training programme.

Statistical technique

The 't' test was used to analysis the significant differences, if any, difference between the groups respectively.

Level of significance

The level of significance 0.05 which was considered as an appropriate.

Analysis of the Data

The significance difference among the means of the experimental group was found out by pre-test and post-test. The data were analysed and dependent 't' test was used with 0.05 levels as significance.

RESULT

The **Table 1** shows that the mean values of pre-test and post-test of the control group on systolic blood pressure were 123.33 and 122.86 respectively. The obtained 't' ratio was 1.15, since the obtained 't' ratio was less than the required table value of 2.145 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of the experimental group on systolic blood pressure were 124.06 and 121.66 respectively. The obtained 't' ratio was 11.22* since the obtained 't' ratio was greater than the required table value of 2.145 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in systolic blood pressure. It may be concluded from the result of the study that experimental group improved in systolic blood pressure due to six weeks of pranayama practices.

Table 1: Analysis of t-ratio for the pre and post-tests of experimental and control group on systolic blood pressure (Scores in mmHg)

Variables	Group	Mean		SD		SE		df	't' ratio
		Pre	Post	Pre	Post	pre	post		
Systolic blood pressure	Control	123.33	122.86	2.19	2.26	0.56	0.58	14	1.15
	Experimental	124.06	121.66	1.94	1.98	0.50	0.51		11.22*

***Significance at 0.05level of confidence. Table value 2.145**

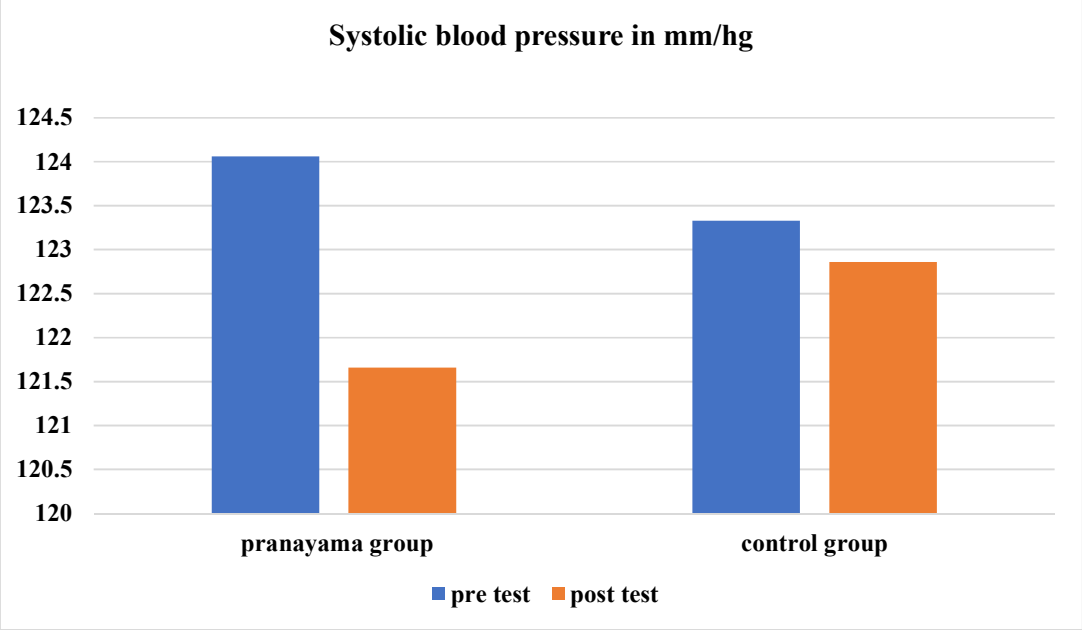

Figure 1: Bar Diagram Showing the Pre and Post Mean Values of Experimental and Control Group on Systolic blood pressure

DISCUSSIONS ON FINDINGS

The result of the study indicates that the experimental group, namely pranayama practices group had significantly improved on the selected dependent variable, namely systolic blood pressure, when compared to the control group. It is also found that the improvement caused by pranayama practices when compared to the control group.

CONCLUSION

On the basis of the results obtained the following conclusions are drawn,

1. There was a significant difference between experimental and control group on systolic blood pressure after the training period.
2. There was a significant improvement in systolic blood pressure. However, the improvement was in favour of experimental group due to six weeks of pranayama practice.

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CONFLICT OF INTEREST

Nil

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