IMPACT OF PHYSICAL RELAXATION TECHNIQUE ON BLOOD PRESSURE AMONG TEACHER TRAINING COLLEGE STUDENTS

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ABSTRACT

Purpose of the study was to determine the effect of physical relaxation technique on systolic and diastolic blood pressure. A total of sixty B. Ed students (N=60) were selected from the Christ Nagar Training College, Trivandrum. Thirty subjects in each group were randomly assigned in experimental and control group. Age ranged were 22- 30 years. For this study blood pressure (systolic and diastolic blood pressure) was selected as the dependent variables in the study. Six weeks (3days in weeks) physical relaxation was given to the experimental group. Standard procedures were followed by the researcher during pre and post data collection. Data was obtained with the help of Sphygmomanometer. For the analysis purpose dependent't' was employed. Results showed significant difference between pre and post data of experimental group in systolic and diastolic blood pressure, and in case of control groups for both variables insignificant difference were found. Level of significance was set at 0.05.

Key Words: Sphygmomanometer, Relaxation Technique, Systolic and Diastolic Blood Pressure.

INTRODUCTION:

In the modern world people are very busy with their day today activities. Due to this fact they have lot of stress and strains. The students also have lot of stress in their life due to heavy study loads and other extra circular activities. Due to busy schedules they find no time to relax to both physically and mentally. Stressful situations can cause your blood pressure to spike temporarily. However, doing activities to reduce your blood pressure, such as exercising 30 to 60 minutes a day, can reduce your stress level. And if you've been diagnosed with high blood pressure, doing activities that can help you manage your stress and improve your health can make a long-term difference in lowering your blood pressure. Stress is a normal part of life. But too much stress can lead to emotional,

psychological, and even physical problems including heart disease, high blood pressure, chest pains, or irregular heartbeats.

High blood pressure means that there is higher than normal pressure inside the arteries either during systole (when the heart contracts and pumps blood through the body), or during diastole (when the heart relaxes and fills with blood).

If the pressure is high during the pumping phase (systole), then the first number recorded with a blood pressure reading (the systolic pressure) will be high. If the pressure is high during the relaxation phase (diastole), then the second number recorded (the diastolic pressure) will be high. High blood pressure is also called hypertension. Blood pressures vary depending on the age of your child, as well as according to height and weight, and the gender of your child. Generally, blood pressure is low in infancy, and rises slowly as children age. Boys' blood pressures are slightly higher than girls' are, and taller people generally have higher blood pressures than short people do. For example, an infant may have a quite normal blood pressure of 80/45 mm Hg, while that value in an adult is considered low. A teenager may have an acceptable blood pressure of 110/70 mm Hg, but that value would be of concern in a toddler. The National Heart, Lung, and Blood Institute has prepared a series of age and gender-specific blood pressure measurement tables for children ages 3 through 17 years, based on percentiles. A range of blood pressure values is given based on how old and how tall your child is. According to the tables, if your child has a blood pressure that is higher than 90 to 95 percent of other boys or girls his or her age and height, then he or she may have high blood pressure. Again, many factors, including emotions, can affect blood pressure. Readings that are high compared to the values on the table may need to be investigated further by your child's doctor. The prevalence of hypertension and obesity in children age 8 to 17 has increased in all racial and ethnic groups since 2002.

High blood pressure, or hypertension, directly increases the risk of coronary heart disease (heart attack) and stroke (brain attack). With high blood pressure, the arteries may have an increased resistance against the flow of blood, causing the heart to pump harder to circulate the blood.

Inactivity is one of the major risk factors for heart disease. However, exercise helps improve heart health, and can even reverse some heart disease risk factors. Like all muscles, the heart becomes stronger as a result of exercise, so it can pump more blood through the body with every beat and

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continue working at maximum level, if needed, with less strain. The resting heart rate of those who exercise is also slower, because less effort is needed to pump blood.

A person who exercises often and vigorously has the lowest risk for heart disease, but any amount of exercise is beneficial. Studies consistently find that light-to-moderate exercise is even beneficial in people with existing heart disease.

METHODOLOGY:

The subject's age ranged from 22 to 30 years. All sixty B. Ed students (N=60) from the Christ Nagar teachers training college, Trivandrum.Thirty (n=30) subject's were randomly assigned in each experimental and control groups.Blood pressure (systolic blood pressure and diastolic blood pressure) variables were selected as dependent variables in this study. Blood pressure was taken using Sphygmomanometerunder the supervision of expert, during collection of data standard procedure and motivational technique was employed by researcher. Pre data was collected in morning session from both groups. After thatsix weeks (three days in week) physical relaxation training was given to experimental group and post data was taken in same conditions. The training schedule is given in the table below.

Table 1
A Training Schedule of Relaxation Technique

WEEK	DAY	TIME	RELAXATION TECHNIQUE
Istweek	Monday	3:30 -4:30 PM	Progressive Muscle relaxation
	Wednesday		A tense- release script
	Friday		Stretching's
IIndweek	Monday	3:30 -4:30 PM	Progressive Muscle relaxation
	Wednesday		A tense- release script
	Friday		Breathing

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III[rd]week	Monday	3:30 -4:30 PM	The Mitchell method
	Wednesday		The Alexander technique
	Friday		Stretching's
IV[th]week	Monday	3:30 -4:30 PM	The Mitchell method
	Wednesday		The Alexander technique
	Friday		Breathing
V[th]week	Monday	3:30 -4:30 PM	Progressive Muscular relaxation
	Wednesday		The Mitchell method
	Friday		Breathing
VI[th]week	Monday	3:30 -4:30 PM	A tense- release script
	Wednesday		The Alexander technique
	Friday		Stretching's

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RESULTS AND DISCUSSION:

The purpose of the study was to find out the effects of 6 weeks of physical relaxation training on B. Ed teacher training students of Christ Nagar Teachers Training College, Trivandrum. The pre and post data pertaining to respective physical variable were collected by employing standard test and instrument used on both the experimental and control group. The mean difference in blood pressure (systolic blood pressure and diastolic blood pressure) scores between the pre and post data of experimental and control groups were compared by using dependent't' test.

Table 2
Mean difference on Systolic Blood Pressure of
Experimental and Control group

Systolic B.P		N	Mean	*s.d*	*df*	*T*
Experimental group	Pre	30	124.833	5.072	29	4.034*
	Post	30	123.733	4.242		
Control group	Pre	30	122.200	2.987	29	0.740
	Post	30	122.033	2.442		

*Significant at 0.05 level, $t_{0.05}$ (29) =2.045.

Table 2 indicates that, there was a significant difference between the pre and post data on systolic blood pressure of experimental group, since the calculated‘t’ value (4.034)was higher than tabulated value(2.045) at 0.05 level of significance with 29df. In case of control group insignificant difference was found in systolic blood pressure.

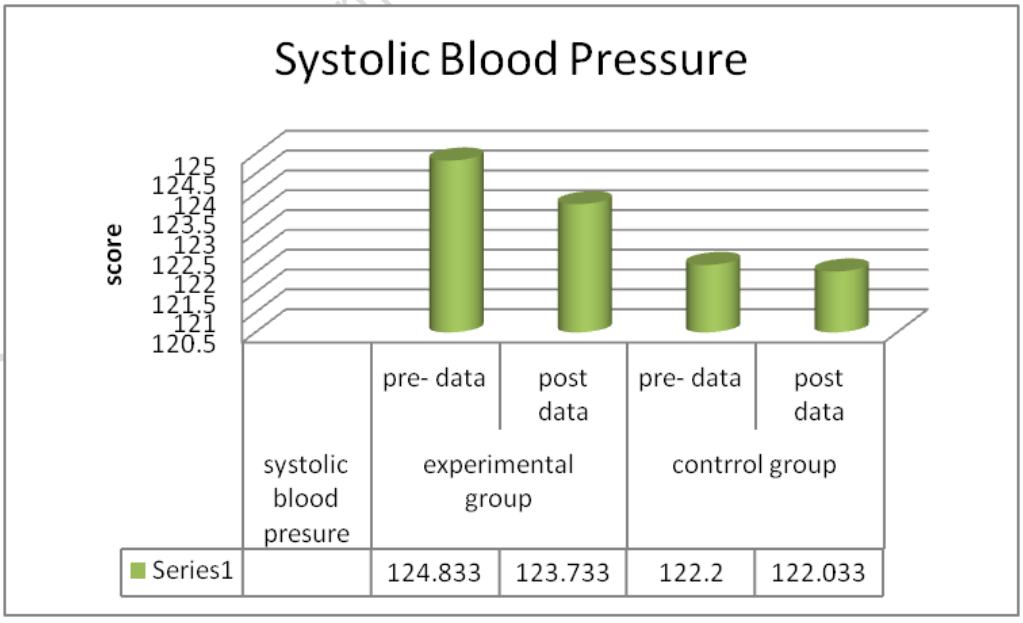

Figure 1 for systolic blood pressure

Table 3
Mean difference on Diastolic Blood Pressure of
Experimental and Control group

Diastolic B.P		N	Mean	*s.d*	*df*	*T*
Experimental group	Pre	30	69.666	7.130	29	4.785*
	Post	30	68.666	6.799		
Control group	Pre	30	69.266	6.997	29	1.740
	Post	30	68.400	6.651		

*Significant at 0.05 level,$t_{0.05}$ (29) =2.045, N= 30

Table 3 indicates that, there was a significant difference between the pre and post data onDiastolic blood pressure of experimental group, since the calculated't' value (4.785) was higher than tabulated value(2.045) at 0.05 level of significance with 29df. In case of control group insignificant difference was found in Diastolic blood pressure.

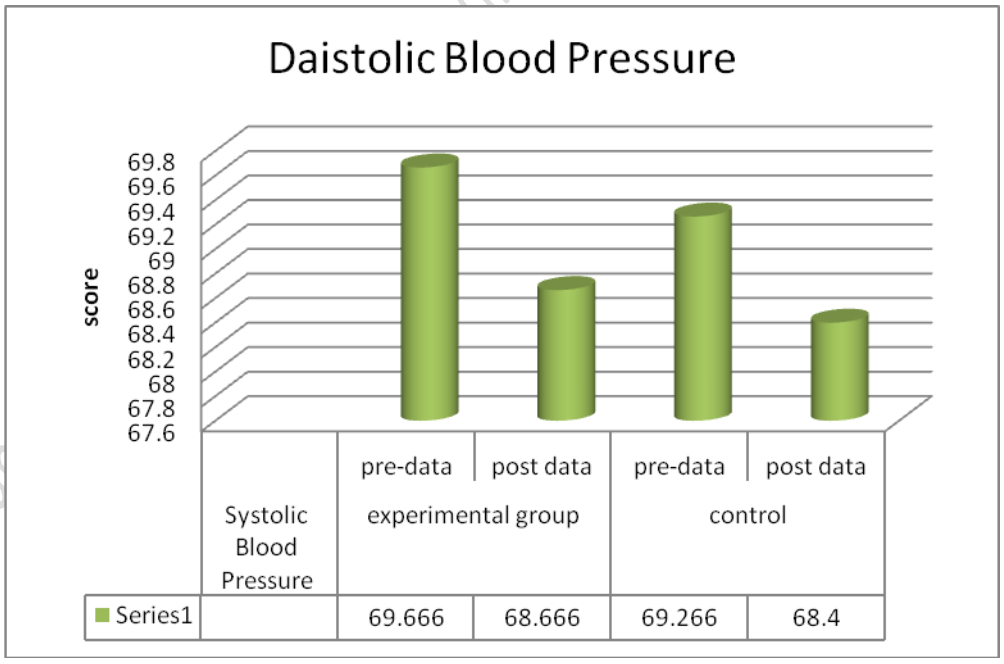

Figure 2 for diastolic blood pressure

CONCLUSION:

Based on the analysis and within the limitation of present study, it may be concluded that there was a significant difference between the pre and post data on systolic blood pressure of experimental group, but in control group insignificant difference was found in systolic blood pressure. Similarly there was there was a significant difference between the pre and post data on Diastolic blood pressure of experimental group but in control group insignificant difference was found in Diastolic blood pressure. The findings of this research showed that physical relaxation technique have a significant effect on blood pressure (systolic and diastolic pressure).These relaxation techniques are proficient for controlling the blood pressure and also effective for stress management (Relaxation: surprising benefits detected by Daniel Goleman, The New York Times, May 13, 1986). Further physical education teacher, fitness trainer sedentary people, health expert in various organization and coach may also use this program. Because literature also shown that these relaxation technique have a significant effect on blood pressure.

RECOMMENDATION:

In the light of the conclusions drawn, the following recommendations are made.

- A study of similar nature may be conducted for school boys and girls.
- Elite sports persons can be chosen as subjects for a similar study.
- Similar study may be conducted on psychological variables.
- These program is beneficial for Hypertension patients.

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