STAR
Research Journal

Availableonlineatwww.starresearchjournal.com(StarInternationalJournal)

PHYSICAL EDUCATION

EFFECT OF AEROBIC DANCE TRAINING ON SYSTOLIC AND DIASTOLIC BLOOD PRESSURE AMONG VOLLEYBALL PLAYERS

Dr.T.P.YOKESH

Assistant Professor, Alagappa University College of Physical Education, Karaikudi, Tamilnadu, India.

ABSTRACT

The purpose of the study was to find out the effect of aerobic dance training on systolic and diastolic blood pressure among volleyball players. It was hypothesized that there would be significant differences on systolic and diastolic blood pressure due to the effect of aerobic dance training among volleyball players. For the present study the 30 volleyball players from Alagappa University College of Physical Education, Karaikudi, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent aerobic dance training and Group 'B' has not undergone any training. Systolic and diastolic blood pressure was assessed by sphygmomanometer. The data was collected before and after six weeks of training. The data was analyzed by applying ANCOVA test. The level of significance was set at 0.05. The level of significance was set at 0.05. The aerobic dance training had significantly reduced systolic blood pressure and diastolic blood pressure among volleyball players.

KEYWORDS: Aerobic Dance Training, Systolic Blood Pressure, Diastolic Blood Pressure, Volleyball.

INTRODUCTION

Aerobic dance has become an extremely popular form of exercise over the past decade; the nature of this activity has evolved in several directions. For e.g. a destination is now made between "high-impact aerobics" involving repetitive jumping on one or both feet and "low-impact aerobics" in which one foot remains on the ground at all times. Some aerobic dance activities incorporate. Then use of hand held weights or weighted wrist and ankle bands to provide increased resistance. With interest in physical fitness booming in the past years, dozens for exercise programme have come and gone. But aerobic dancing has stood the test of time. Largely through word of mouth advertising it has grown from a single class in a church basement almost three decades ago to a nationwide craze today. A typical class begins with a ten-to fifteen minutes warm up period of stretching and floor work, followed by vertical firmness a booster to gradually accelerate the heart rate and then six to ten aerobic dances. During vertiform, students may use hand weights and ankle weights, if desired for further and strengthening. After each dance, heart rated is monitored to ensure. They reach working levels but not exceed safe limits. Class ends with a slow cool down dance and some post cool down stretches to gradually bring down students hearty rates. The competitive volleyball season in the United States begins in January and ends with the National championship tournament sometime in the spring. There are other major tournaments at other times during the year throughout the world and in some places, such as Southern california, volley ball is played year round. Because of the varied length the season in different places, the off-season training program varies greatly. Volleyball is one of the leading games in the world. It is an american contribution to the world sports, is being played in more than 175 countries and by more than 140 million people. As a recreational team sports, volleyball is ranged the third most popular games in the world as considered as top level competitive sports.

METHODOLOGY

The purpose of the study was to find out the effect of aerobic dance training on systolic and diastolic blood pressure among volleyball players. It was hypothesized that there would be significant differences on systolic and diastolic blood pressure due to the effect of aerobic dance training among volleyball players. For the present study the 30 volleyball players from Alagappa University College of Physical Education, Karaikudi, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent aerobic dance training and Group 'B' has not undergone any training. Systolic and diastolic blood pressure was assessed by sphygmomanometer. The data was collected before and after six weeks of training. The data was analyzed by applying ANCOVA test. The level of significance was set at 0.05. The level of significance was set at 0.05.

RESULTS

TABLE I
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE OF SYSTOLIC BLOOD PRESSURE OF EXPERIMENTAL AND CONTROL GROUP

	Control	Experiment	Sum of variance	Sum of squares	df	Mean square	F
Pre test mean	120.85	122.30	BG	1.60	1	1.60	2.11
			WG	28.80	38	0.76	
Post test mean	120.90	120.50	BG	21.03	1	21.03	15.74*
			WG	50.75	38	1.34	
Adjusted mean	121.28	120.12	BG	9.56	1	9.56	23.98*
			WG	14.75	37	0.40	

Table value for df 1 and 38 was 4.10 * Significant at 0.05 level
Table value for df 1 and 37 was 4.10

The obtained 'F' value for adjusted mean for systolic pressure were 23.98 was greater than the required value 4.10 at 0.05 level. Since the observed 'F' value on systolic pressure were highly significant, the adjusted mean differences between experimental and control group was statistically significant. It was concluded that the treatment adopted to this study influenced systolic blood pressure. The bar diagram for obtained mean on systolic blood pressure for experiment group and control group are postulated in the figure I.

FIGURE I
BAR DIAGRAM SHOWING THE PRE MEAN, POST MEAN AND ADJUSTED MEAN OF SYSTOLIC BLOOD PRESSURE

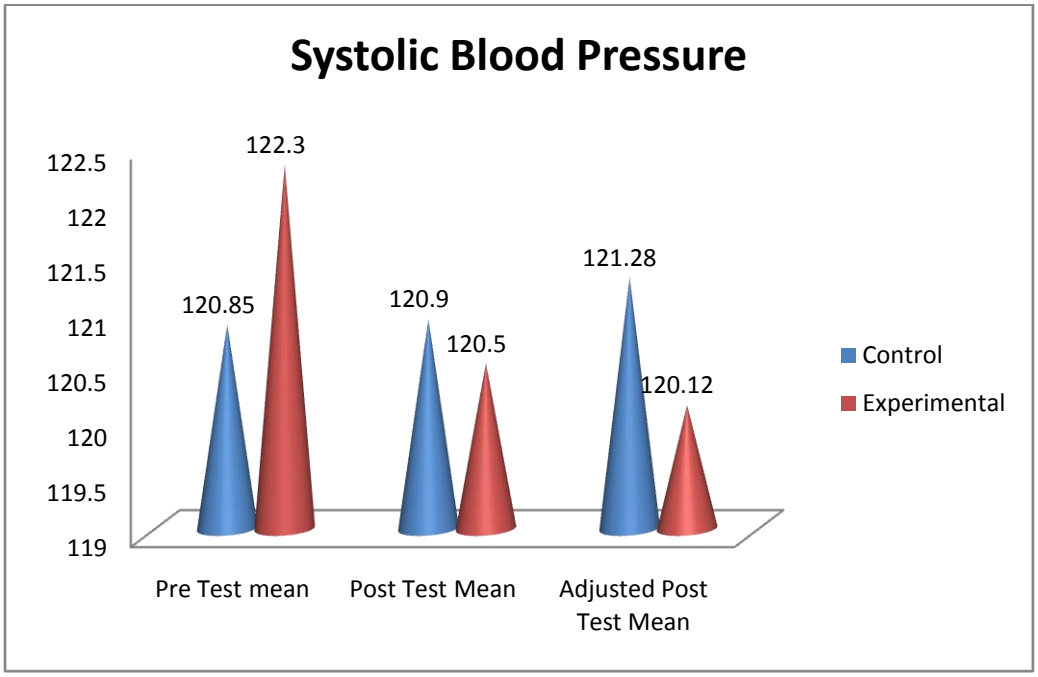


TABLE II
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE OF DIASTOLIC BLOOD PRESSURE OF EXPERIMENTAL AND CONTROL GROUP

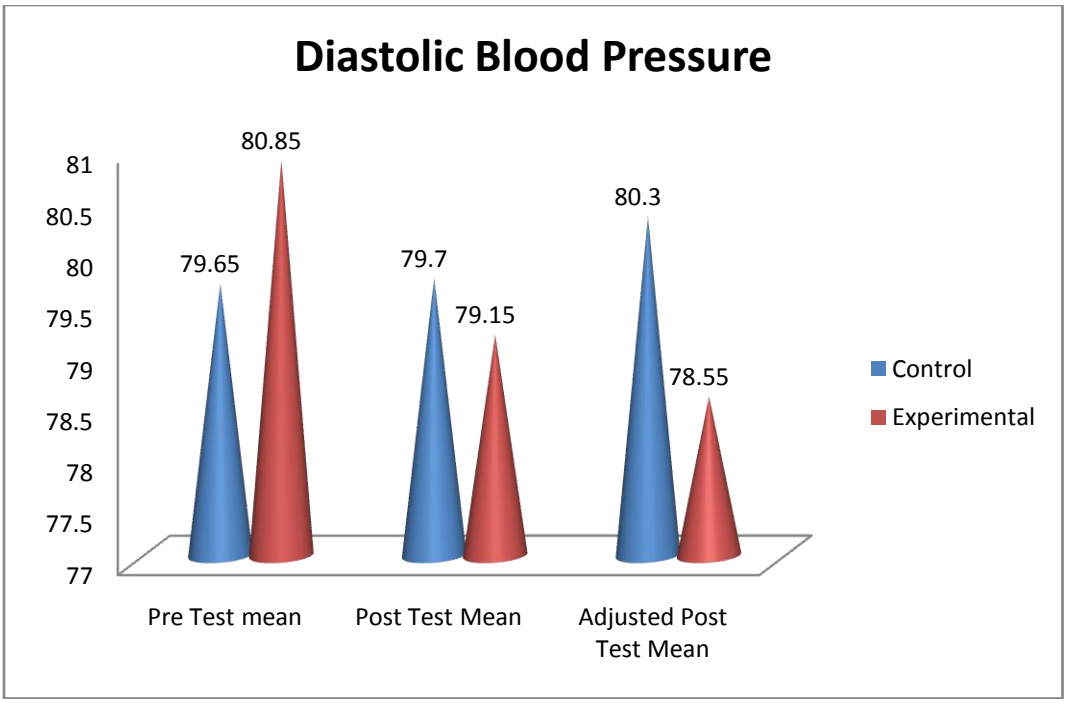
	Control	Experiment	Sum of variance	Sum of squares	df	Mean square	F
Pre test mean	79.65	80.85	BG	3.02	1	3.02	0.44
			WG	262.75	38	6.91	
Post test mean	79.70	79.15	BG	14.40	1	14.40	2.33
			WG	235.10	38	6.19	
Adjusted mean	80.30	78.55	BG	29.07	1	29.07	42.78*
			WG	25.14	37	0.68	

Table value for df 1 and 38 was 4.10 * Significant at 0.05 level
Table value for df 1 and 37 was 4.10

The obtained 'F' value for adjusted mean for diastolic pressure were 42.78 was greater than the required value 4.10 at 0.05 level. Since the observed 'F' value on diastolic pressure were highly significant, the adjusted mean differences between experimental and control group was statistically significant. It was concluded that the treatment adopted to this study influenced diastolic blood pressure. The bar diagram for obtained mean on

diastolic blood pressure for experiment group and control group are postulated in the figure II.

FIGURE II
BAR DIAGRAM SHOWING THE PRE MEAN, POST MEAN AND ADJUSTED MEAN OF DIASTOLIC BLOOD PRESSURE



CONCLUSION

On the basis of findings and within the limitations of the study the following conclusion was drawn:

1. The aerobic dance training had significantly reduced systolic blood pressure and diastolic blood pressure among volleyball players.

REFERENCES

1. Agras, W, S. (1982). Expectation and the blood-pressure-lowering effects of relaxation. Psychosomatic Medicine, Vol 44, Issue 4 389-395.
2. Aram, V. Chobanian. (2003). The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, *JAMA*. Vol 289 No. 19.
3. Carlene, M.M, (2004) Blood Pressure and Stroke. *Stroke*, 35:1024.
4. Cowley, A. W. (1992). Long-term control of arterial blood pressure. Physiological Reviews, Vol 72, 231-300.
5. Cooper, S. (2003). Effect of two breathing exercises (Buteyko and pranayama) in asthma: a randomised controlled trial. Thorax. 58:674-679.
6. Ilse, L. (2000). Overweight, Obesity, and Blood Pressure: The Effects of Modest Weight Reduction. *Obesity Research* 8:270-278.
7. Ivan, Nyklicek. (1999). Elevated Blood Pressure and Self-Reported Symptom Complaints, Daily Hassles, and Defensiveness. International Journal of Behavioral Medicine. Vol. 6, No. 2, Pages 177-189.
8. Kannel, W,B. (2000). Elevated systolic blood pressure as a cardiovascular risk factor. American Journal Cardiology. 15;85(2):251-5.
9. Lawrence J. Appel and William B. Stason. (1993). Ambulatory Blood Pressure Monitoring and Blood Pressure Self-Measurement in the Diagnosis and Management of Hypertension . Volume 118 Issue 11 | Pages 867-882.