International Journal of Yoga, Physiotherapy and Physical Education
Online ISSN: 2456-5067; Impact Factor: RJIF 5.24
www.sportsjournal.in
Volume 2; Issue 3; May 2017; Page No. 01-03

Effect of B.P.Ed training on physiological variables of tribal students of Jhargram

Binod Chowdhary
Assistant Professor, Seva Bharati, Mahavidyalaya, Kapgari, Paschim Medinipur, India

Abstract
Aim: The purpose of the present study was to find out the effect of B.P.Ed training on physiological variables of tribal students of Jhargram.
Introduction: To achieve a level of performance physiological development is necessary and to keep the physiological system functional we need to keep our body fit. Since different activity makes different demand upon the organism with respect to circulatory, respiratory, metabolic, neurological and temperature regulation. Physiological system is highly adaptable to each exercise and the changes brought in upon by exposing in different type of environments.
Methodology: To achieve the purpose twenty male students were selected randomly from Seva Bharati Mahavidyalaya, Kapgari, Paschim Medinipur. Their age ranged from 18 to 25 years. They were administered the training programme for ten months that is ; six day a week in the morning and evening time for two hours. The data pertaining the criterion variables were taken before administering the training programme for ten months in relation to the cardiovascular endurance, vital capacity and blood pressure. After pre- test a ten months training schedule of B.P.Ed training were administered and after the completion of training a post- test were taken on all the variables.
Result: The data collected during the study was statistically analyzed by employing t-test at 0.05 level of significance. The result of the study indicates that ten weeks of B.P.Ed training has significant effect on cardiovascular endurance, vital capacity and blood pressure.

Keywords: Cardiovascular Endurance, Vital capacity, Systolic and diastolic blood pressure

1. Introduction
Physical activity always positively influences an individual's overall health, wellness and fitness. Improving an individual's level of physical fitness can prevent, remediate, improve, maintain, slow the decline of, or lower the risk of impairments, functional limitations, and disabilities. Quality physical education programmes stimulate the central nervous system for optimal growth and development, assist in bone mineralization, promotes the maintenance of lean body tissues, reduces obesity, improve the function of heart and develops movement skills that are necessary for an active life style. Disabilities have been regarded as a peripheral issue in discussions on health services. Sports performance is byproduct of biological, psychological, and physical makeup of an individual. In games and sports not only physiological factors but also psychological factors play a significant role in determining the performance level of an individual. However great importance is assigned to psychological parameters in competitive sports (Schilling & Hayashi, 2001) [5].
The investigator tries to find out how physical activity can positively affect their health status and for the purpose the investigator wants to see the effect of B.P.Ed training on physiological variables on tribal students of Seva Bharati Mahavidyalaya, Jangalmahal.

1.1 Objective of the study
To investigate the effect of B.P.Ed training on physiological variables of tribal students of jangalmahal.

1.2 Hypothesis
It was hypothesized that there will be significant changes in the physiological variables of tribal students as a result of ten months B.P.Ed training.

2. Methodology
For the purpose of the present study 20 students were selected randomly from B.P.Ed section of Seva Bharati Mahavidyalaya, Kapgari. The age of the subjects were ranged from 18 to 25 yrs. All the subjects were tested on selected variables prior to and immediately after the ten months training periods. The selected criterion variables such as cardiovascular endurance measured with the help of Harvard step test, vital capacity measured with the help of spirometer and blood pressure measured with the help of sphygmomanometer and stethoscope.

2.1 Finding of the study
In order to identify the significant differences on selected variables, collected initial and final scores were analyzed by using't' test at 0.05 level of significance. The findings of the study are as follows: Significance of differences between the pre-test and posttest means of cardiovascular endurance of the tribal students.

Table No. 1

Variables	Pre-test Mean	Post-test Mean	S.D Pre-test	S.D post test	MD	't' Value
Cardiovascular endurance.	67.46	88.37	8.627	11.743	20.91	6.434*

*significant at 0.05 level.

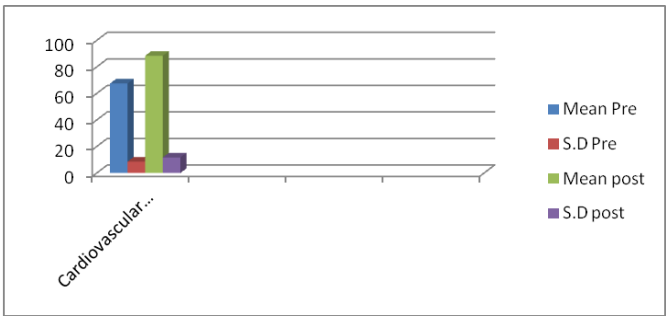

Fig 1: Graphical Representation of mean and standard deviation of pre and post values of cardiovascular endurance of tribal students of Jangalmahal

It is evident from table no-1 that significant difference was found between the mean scores of pre and posttest in relation to impact of ten months B.P.Ed training on cardiovascular endurance of tribal students as the t- value was found 6.434 which was higher than the required value at 0.05 level of significance.

Table No-2

Variables	Pre-test Mean	Post-test Mean	S.D Pre-test	S.D post test	MD	't' Value
Vital Capacity	3.647	4.875	2.36	1.94	1.228	2.99*

Table no-2 indicates the mean and standard deviation values of pretest of vital capacity were found to be 3.647 and 2.36 respectively. And the values of means and standard deviation of posttest of vital capacity were found to be 4.875 and 1.94 respectively. Table-no 2 also indicates the't' value of vital capacity of tribal students which shows there was significant difference in the pre and posttests values of vital capacity. The calculated value of't' test was found to be 2.99 which is higher than the tabulated value of 't' i.e. 2.88 at 0.05 level of significance. Therefore it is concluded that there is a significant difference in the vital capacity after ten months B.P.Ed training.

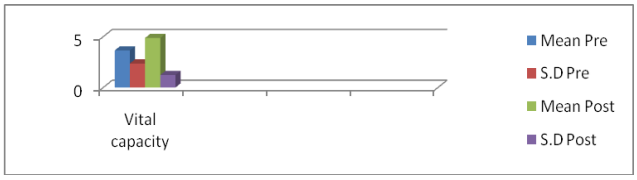

Fig 2: Graphical Representation of mean and standard deviation of pre and post values of Vital Capacity of tribal students of Jangalmahal

Table 3: Blood pressure- Systolic

Variables	Pre-test Mean	Post-test Mean	S.D Pre-test	S.D post test	MD	't' Value
Systolic Blood pressure	142.54	134.72	3.48	2.29	7.82	9.09*

*Significant at 0.05 level.

Table no-3 indicates the mean and standard deviation values of pretest of systolic blood pressure were found to be 142.54 and 3.48 respectively. And the values of means and standard deviation of posttest of systolic blood pressure were found to be 134.72 and 2.29 respectively. Table-no 3 also indicates the't' value of systolic blood pressure which shows there was significant difference in the pre and posttests values of tribal students . The calculate systolic blood pressure d value of 't' test was found to be 9.09 which is higher than the tabulated value of 't' i.e. 2.88 at 0.05 level of significance. Therefore it is concluded that there is a significant difference in the systolic blood pressure after ten months B.P.Ed training.

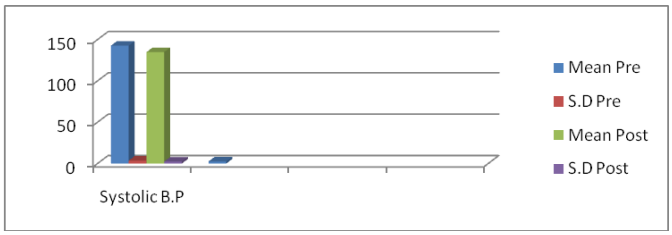

Fig 3: Graphical Representation of mean and standard deviation of pre and post values of Systolic Blood Pressure of tribal students of Jangalmahal

Table 4: Diastolic Blood Pressure

Variables	Pre-test Mean	Post-test Mean	S.D Pre-test	S.D post test	MD	't' Value
Diastolic blood pressure	89.31	85.82	2.31	1.53	3.49	5.63*

*Significant at 0.05 level.

Table no-4 indicates the mean and standard deviation values of pretest of diastolic blood pressure were found to be 89.31 and 2.31 respectively. And the values of means and standard deviation of posttest of diastolic blood pressure were found to be 85.82 and 1.53 respectively. Table-no 4 also indicates the't' value of diastolic blood pressure which shows there was significant difference in the pre and posttests values of. The calculated value of't' test was found to be 5.63 which is higher than the tabulated value of 't' i.e. 2.88 at 0.05 level of significance. Therefore it is concluded that there is a significant difference in the diastolic blood pressure after ten months B.P.Ed training.

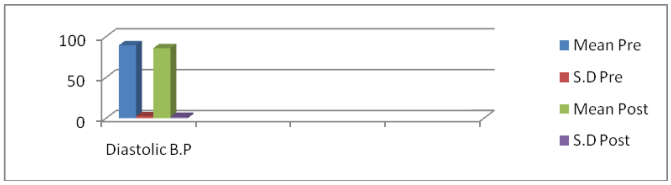

Fig 4: Graphical Representation of Mean and Standard Deviation of Pre and Post values of diastolic Blood Pressure of Tribal Students of Jangalmahal

3. Discussion of finding

A significant difference was found in case of systolic and diastolic blood pressure because the demand of oxygen to the working muscle through the proper channel of blood circulation was similar and their working intensity was similar. Result of present study support finding of Kristine (2008) [6] and Sivaankara (2006), Mccaffrey (2005), Wang

(2004) [9] and Smith (2001) in case of HR, SBP, DSP and health related quality of life.A significant difference was found in case of vital capacity is due to the participation in endurance dominated training the thoracic muscles like intercostals muscle, diaphragm and abdominal might have strengthen due to which the difference in vital capacity may have occurred. The present view can be supported by the finding of the Lindholom P (2007) who stated that due to endurance training the respiratory muscles strengthen and as a result there are chances of improve respiratory function.

4. Conclusion

On the basis of finding it was concluded that the effect of ten months B.P.Ed training had significant changes in the cardiovascular endurance, vital capacity, systolic blood pressure and diastolic blood pressure of the tribal students of Jangalmahal.

5. References

1. Andrew *et al*. Cardiovascular and metabolic effects of community based resistance training in an older population, Journal of science and medicine in sports. 2011. doi;1o.1016/j.jsams
2. Barengo *et al.* Effect of systolic and diastolic blood pressure control on cardiovascular and all-cause mortality among Finnish adults, European journal of cardiovascular prevention & rehabilitation. 17(2 suppl):114 –115.
3. Habibzadeh MR *et al.* Association of blood pressure and heart rate response during exercise with cardiovascular events in the heart and soul study, J Hypertens. 2011; 28(11):2234-42.
4. Judish Lee Grayston. The effect of an eight week water Aerobic programme on selected physiological measurement of female participants Dissertation abstracts international. 1991; 51(7):2312.
5. Schilling TA, Hayashi CT. Achievement motivation among high school basketball and cross country athletes; A personal investment perspective, Journal of applied sports psychology. 2001; 13(1):103-128.
6. Kristine M. The effect of Suryanamaskar yoga practice on resting heart rate and blood pressure, flexibility, upper body muscle endurance and perceived well- being in healthy adults, Master of education at the Cleveland state University, 2008.
7. Mc caffrey *et al*. The effect of yoga on hypertensive persons in Thailand. Holistic Nurse practitioner. 2005; 19:175-180.
8. Sivansankaran Sk, *et al*. The effect of a six – week programme of yoga and meditation on brachial artery ractivity; do psychosocial interventions affect vascular tone", Clinical Cardiology. 2011; 29:4.
9. Wang T *et al.* Effect of tai chi exercise on physical and mental health of college students. The American Journal of Chinese Medicine. 2004; 32:453-459.