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INFLUENCE OF AEROBIC TRAINING ON VITAL CAPACITY AMONG RURAL AREA SCHOOL STUDENTS

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ABSTRACT

The purpose of this investigation was to find out the effect of aerobic training on vital capacity among rural area school students. Fifteen school going boys students (n = 15) were randomly selected as subjects and their age was ranged between 14 to 18 years. Vital capacity was considered as a criterion variable for this investigation and the training package were given priority for the aerobic in nature. Vital capacity was measured by using the standard equipment of wet-spirometer. The training duration was extended up to eight weeks and the data were collected prior and immediately after the training duration. The collected data were statistically analysed by using dependent 't' test. The level of confidence was fixed at 0.05 levels in all cases. The result of the study highlights that the eight weeks of aerobic training were produced significantly better improvement on vital capacity among the selected subjects.

KEYWORDS :Vital capacity, wet spirometer, rural area school students.

INTRODUCTION :

A rural areas population density is very low. Many people live in a city, or urban area. Their homes and businesses are located very close to one another. In a rural area, there are fewer people, and their homes and businesses are located far away from one another. A rural area is an open swath of land that has few homes or other buildings, and not very many people (education. nationalgeographic.com).

Aerobic literally means "with oxygen", and refers to the use of oxygen in muscles' energy-generating process. Aerobic exercise includes any type of exercise, typically those performed at

moderate levels of intensity for extended periods of time that maintains an increased heart rate. In such exercise, oxygen is used to "burn" fats and glucose in order to produce adenosine tri-phosphate, the basic energy carrier for all cells (www.sciencedaily.com).

Vital capacity refers to the maximum amount of air the person is capable of expelling from their lungs after maximum inhalation. This is equal to the sum of inspiratory reserve volume, expiratory reserve volume and tidal volume. You can measure a person's vital capacity using a regular or wet spirometer. Combining this with other physiological measurements you can measure the vital capacity to help determine if a patient is suffering from an underlying lung disease. Note that exercises can help to increase vital capacity while smoking decreases it.

The purpose of this study was to find out the effect of elastic strength training on explosive power among the college men. To achieve this purpose thirty college men students were selected from Annamalai University campus as subjects. The selected subjects were in the age group between 18 and 22 years. The total strength was further divided in to two groups of experimental group and the control group. The experimental group was assigned elastic strength training three days (Monday, Wednesday & Friday) per week for the period of 8 weeks. The training programme was scheduled for one session in a day. All the subjects involved in the training programme were questioned about their status throughout the training period. None of them reported any injuries while training duration. However, muscle soreness was reported in the early weeks, and it subsided later. The data on explosive power was collected two days prior to the training and immediately after the training programme for the criterion variable. The data were collected from two groups prior to and after experimentation on explosive power was statistically examined for significant differences, if any, by applying the statistical tool of analysis of covariance (ANCOVA). The level of significance was fixed at 0.05 levels in all aspects.

MATERIALS AND METHODS

The aim of this investigation was to evaluate the influence of eight weeks aerobic training on vital capacity among rural area school going students. To achieve this purpose fifteen (n = 15) high school boys were randomly selected from rural area school of Palakad district in Kerala state. The criterion variable of vital capacity was measured by using the equipment of wet spirometer. The training was planned with the consultation of the experts and the training was conducted three days per week for eight weeks duration. The data were collected before and after the training duration and the collected data were analysed by using the statistical tool of dependent 't' test. The level of confidence was fixed at 0.05 levels in all cases.

RESULTS AND DISCUSSION

Table - I

Analysis of Dependent 't' test on Vital Capacity Among Rural area School Boys

Subjects	Strength	Mean Value	SD	*'t'*
Pre Test	N= 15	2.86	0.26	4.52*
Post Test		3.17	0.23	

*Significant at 0.05 level of confidence

Table –I showed that the mean values of pre and post test vital capacity were 2.86 and 3.17. The obtained 't' ratio of 4.52 is greater than the table value of 2.04. Hence, the result of the study was

pointed out that the aerobic training were positively influenced the selected criterion variable. The mean values of vital capacity in pre and post test were graphically represented in figure 1.

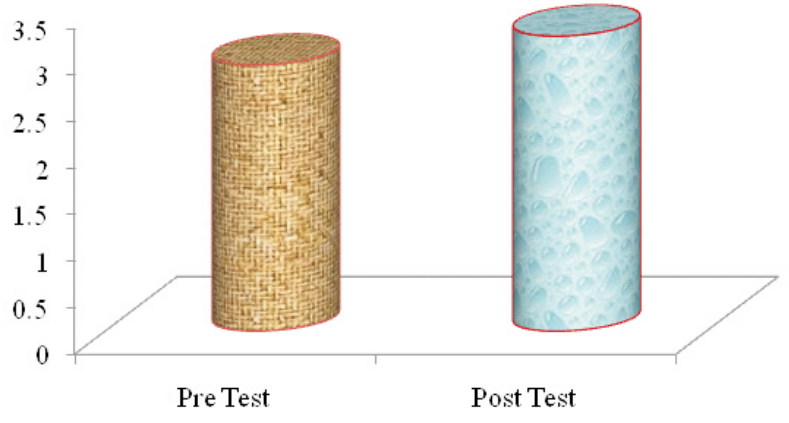

Figure 1: The mean values of Vital Capacity in pre and post test data for rural and urban area school students.

Muralikrishna and Shelvam (2014) were conducted a study of different intensities of aerobic training and its influence on vital capacity among the college students of department of physical education at Annamalai University, Tamil Nadu. The result of the study pointed out that the training were positively improved the quality of vital capacity among the selected subjects. Fatima et al. (2013) evaluated the role of 30 minutes duration of aerobic training on vital capacity among the medical students of aged 18 to 24 years at Pakistan. The result of the study pointed out that, the training were significantly improved the criterion variable among the subjects. Kusuma et al. (2014) evaluated the role of aerobic training on vital capacity among the secondary school girl students. The study was concluded that the training of aerobic dance was positively influencing the variable for the study. Gejalakshmi and Vallimurugan (2014) conducted their study among girl subjects and the training was planned as aerobic in nature. The study was concluded that, the training have positive role on vital capacity among the girl subjects. Selvaganesh et al. (2015) evaluated the effect of aerobic training among the hostel students of Ramco Institute of Technology, Rajapalayam at Tamil Nadu state. The training was planned for six weeks duration and reached the conclusion that the training was positively influenced the vital capacity among the selected subjects. The studies of Khalili et al (2009), Zahraet al. (2015), Ibrahim and Abdullah (2015) and Shahid (2013) also proved that the aerobic training was improved the capacity of vital capacity after the training duration. The result of the present study pointed out that the eight weeks of aerobic training was improves the vital capacity among the selected subjects of rural area school going boys students.

CONCLUSION

The result of the study revealed that the eight weeks of aerobic training were significantly improved the selected criterion variable of vital capacity among rural area school students. It was further conclude that, the eight weeks of training enough to change the vital capacity of the selected subjects.

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