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Effect of conditioning programme on selected physiological variables

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Abstract
Objective of the study: The purpose of this study was to find out the Effect of conditioning programme on selected physiological variables. The conditioning programme consisted of free hand exercises, circuit training, continuous training, and fartlek training involving the body parts. The conditioning programme was administered during the morning session timing at 06 A.M. to 07 A.M. daily with six days a week,
Methodology Selection of the Subjects: For the purpose of this study thirty (30) male and female students of SGGS Khalsa College Mahilpur, India, were randomly selected as the subjects for this study and divided in to two equal groups namely experimental group and control group. The subject age ranged between 18 to 28 years.
Design of the study: The pre-test and post-test were taken before and after the completion of six (06) week conditioning programme on selected physiological variables.
Statistical Analysis: In order to find out the effect of conditioning programme on selected physiological variables Paired't' test was applied and The level of significance was set at 0.05.
Findings and Conclusion: The study reveals that conditioning programme have significant effect on physiological variables.

Keywords: Conditioning programme, resting heart rate, vital capacity, systolic blood pressure, diastolic blood pressure

Introduction
All these activities are healthy, easier to perform and inexpensive. Conditioning exercises are beneficial in so many ways like strengthening the respiratory muscles, strengthening and enlarge the heart muscle and improve its pumping, improving blood circulation and red blood cells, reducing stress and depression, increasing your stamina and endurance of your muscles, In short it reduces the risk of heart attacks. Sports training is a scientifically based and pedagogically organized process which through planned and systematic effect on performance ability and performance readiness aims at sports perfection and performance improvement as well as at the contest in sports competition. Training is usually defined as a systematic process of repetitive progressive exercise of work involves also the learning process and acclimations. Different training methods have been commonly used to improve physical fitness and its related standers of performance of sports persons; one of the training methods is termed as conditioning training method. Conditioning is the training process that the athlete goes through to become physically fit. It is important to ensure that an athlete has proper comprehensive training for playing a particular position in a specific sport. In addition to being physically fit, a well-conditioned athlete will be less prone to injury when engaging in sporting activities. Conditioning is the ability to reproduce skilful work at the right time, under pressure throughout a competition. Physical fitness also has different components namely physiological, health related, skill related and sports related the physiological aspects of physical fitness are metabolism, morphology and bone intensity, health related aspect include body composition, cardiovascular fitness, flexibility, muscular endurance and muscular strength. Skill related aspects include agility, balance, motor co-ordination, power, speed and reaction time. Sports are categorized in to team games. These games and individual games. These components are equally important and contribute significantly to a general physical fitness.

Methodology

For the present study the subjects were Thirty (30) male and female students of SGGS Khalsa College Mahilpur, India. Participating in state level/university level Championships conducted by the AIU. Age of subject was ranging between 18 to 28 yrs. They were selected randomly for the purpose of the study. For the present study pre-test – post-test randomized group design which consists of control group and experimental group for each level, each group consist of fifteen (15) subjects. Experimental group performs a specific conditioning programme. Whereas control group did not performs any kind of training. The data was collected before, after six weeks of training. The data was analyzed by applying Paired't' test was used to find out the Effect of six week conditioning programme on selected physiological variables. The level of significance was set at 0.05.

Selection of variables

The variables selected for this study were as follows:-
Resting heart rate Vital capacity
Systolic blood pressure Diastolic blood pressure

The following criterion measures were adopted for the present study

Table 1: Criterion measures

Variables	Tests	Units of Measurement
Resting heart rate	Stopwatch	Beats per minute
Vital capacity	Wet-spirometer	liters
Systolic blood pressure	Sphygmomanometer	mm/hg
Diastolic blood pressure	Sphygmomanometer	mm/hg
Research design:		

Pre- post random group design was selected for this study.

Statistical technique

The data was analyzed by applying Paired't 'test was used to find out the Effect of six week conditioning programme on selected physiological variables. The level of significance was set at 0.05.

Results of the Study

The statistical analysis of data on selected variables that were Resting heart rate, Vital capacity, Systolic blood pressure and Diastolic blood pressure collected on 30 students.
Fifteen (15) students from each group i.e. experimental group and control group from SGGS Khalsa College Mahilpur, India. The data was analyze d by applying Paired't' test to investigate the Effect of six week conditioning programme on selected physiological variables.

Table 2: Comparison of pre-test and post-test of resting heart rate of Experimental and control group

Group	Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Experimental	Pre-test	63.90	2.17	1.50	2.28*
	Post-test	61.00	2.18		
Control	Pre-test	61.10	2.75	0.90	1.68
	Post-test	64.03	3.90		

Significant at 0.05 level o f significance, Tab't' (0,05), (14) = 2.05

Table-2 indicate that there is significant difference between pre-test and post-test re sting heart rate of experimental group as calculated 't' value 2.2 8 is more than tabulated 't' value 2.05. Thus it clearly evident that six week conditioning programme had significant effect on test resting heart rate of experimental group. While it also evident from table that there is no significant difference between pre-test and post-test resting heart rate of control group as calculated 't' value 1.68 is less than tabulated 't' value 2.05. Thus it Clearly evident that six week conditioning program had insignificant effect on test resting heart rate of control group.

Graphical Representation of resting heart rate of experimental and control group

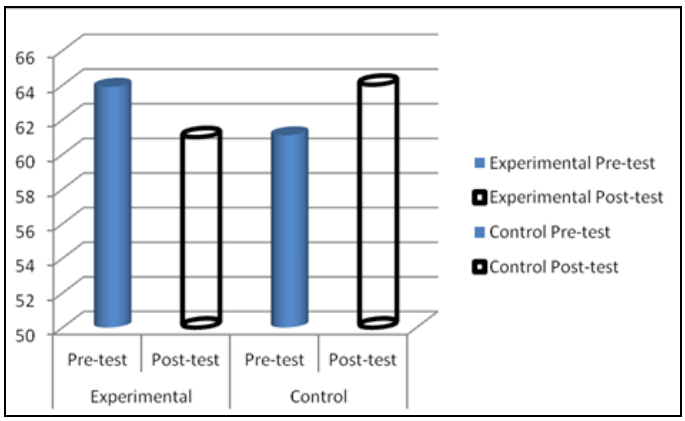


Table 4: Comparison of pre-test and post-test of vital capacity of experimental and control group

Group	Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Experimental	Pre-test	2.90	0.91	0.27	4.01*
	Post-test	3.24	0.83		
Control	Pre-test	3.01	1.01	0.21	0.51
	Post-test	3.14	0.51		

Significant at 0.05 level of significance, Tab't' (0,05), (14) = 2.05

Table-4 indicate that there is significant difference between pre-test and post-test vital capacity of experimental group as calculated 't' value 4.01 is more than tabulated 't' value 2.05. Thus it clearly evident that six week conditioning programme had significant effect on test vital capacity of experimental group. Table also indicate that there is insignificant difference between pre-test and post-test vital capacity of control group as calculated 't' value 0.51 is less than tabulated 't' value 2.05. Thus it clearly evident that six week conditioning programme had insignificant effect on test vital capacity of control group.

Graphical Representation of vital capacity of experimental and control group

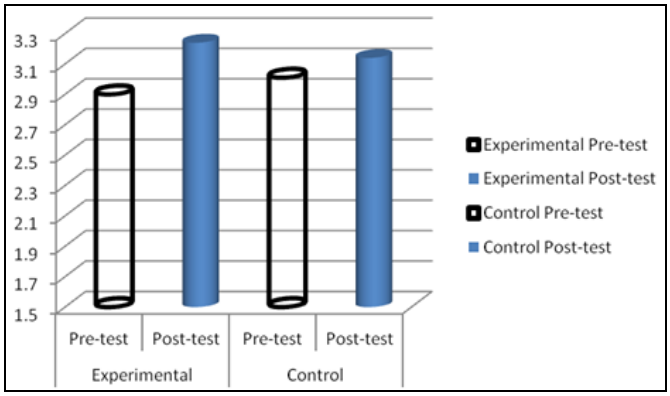


Table 3: Comparison of pre-test and post-test of systolic blood pressure of experimental and control group

Group	Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Experimental	Pre-test	124.20	6.90	0.33	1.21
	Post-test	124.53	7.01		
Control	Pre-test	127.6	2.75	0.90	1.68
	Post-test	128.5	3.90		

Significant at 0.05 level of significance, Tab't' (0,05), (14) = 2.05

Table-6 indicate that there is insignificant difference between pre-test and post-test systolic blood pressure of experimental group as calculated 't' value 1.21 is less than ta bulated 't' value 2.05. Thus it clearly evident that six w eek conditioning programme had insignificant effect on test systolic blood pressure of experimental group. Where table also revealed that there is no significant difference between pre and post-test systolic blood pressure of control group as calculated 't' value 1.68 is less than tabulated 't' value 2.0 5. Thus it clearly evident that s ix week conditioning programme had in significant effect on test systolic blood pressure of control group.

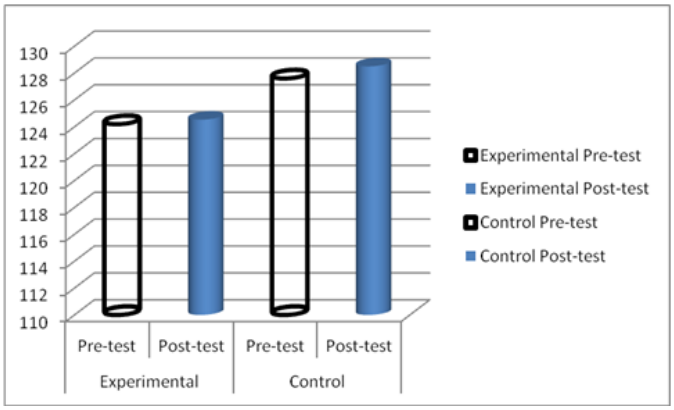


Fig 5: Graphical Representation of systolic blood pressure of experimental and control group

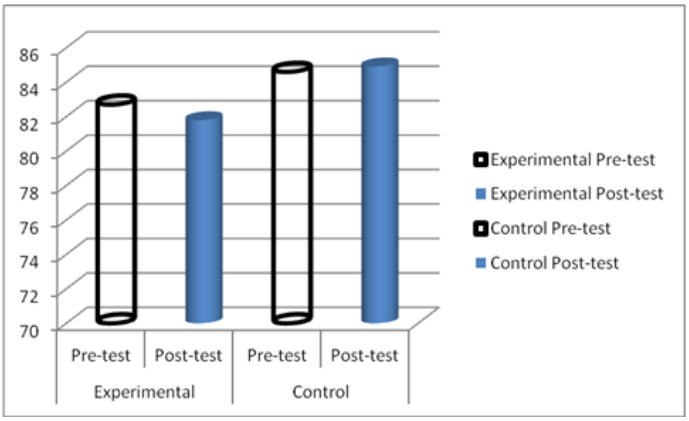
Table 4: Comparison of pre-test and post-test of diastolic blood pressure of experimental and control group

Group	Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Experimental	Pre-test	82.7	6.10	0.91	1.90
	Post-test	81.79	5.80		
Control	Pre-test	84.6	4.01	0.31	1.10
	Post-test	84.91	5.10		

Significant at 0.05 level of significance, Tab't' (0, 05), (14) = 2.05

Table-8 indicate that there is insignificant difference between pre-test and post-test diastolic blood pressure of experimental group as calculated 't' value 1.90 is less than ta bulated 't' value 2.05. Thus it clearly evident that six w eek conditioning programme had insignificant ant effect on test diastolic blood pressure of experimental group. Table also revealed that there is no significant difference between pre and post-test diastolic blood pressure of control group as calculated 't' value 1.10 is less than tabulated 't' value 2.0 5. Thus it clearly evident that s ix week conditioning programme had in significant effect on test diastolic blood pressure of control group

Graphical Representation of diastolic blood pressure of experimental and control group



Discussion of Findings

There is significant difference between pre-test and post-test resting heart rate Thus, it evident that six week conditioning programme had significant effect on test resting heart rate

There is	Significant difference between pre-test	And post-test vital capacity. Thus, it
evident	that six week conditioning programme	had significant effect on test vital
Capacity.		

There is insignificant difference between pre-test and post -test systolic blood pressure. Thus, it evident that six week conditioning programme had insignificant effect on test systolic blood pressure.

There is insignificant difference between pre-test and post-test diastolic blood pressure. Thus, it evident that six week conditioning programme had insignificant effect on test diastolic blood pressure.

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