



Effect Of Aerobic Training On Flexibility Among College Women Hockey Players

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Abstract

The purpose of the present study was to investigate the Effect of aerobic training on flexibility among college women hockey players. to achieve the purpose of the study thirty women hockey players were selected from Sri Sarada College of Education . The subject's age ranges from 18 to 24 years. The selected players were divided into two equal groups consists of 15 women players each namely experimental group and control group. The experimental group underwent an aerobic training programme for six weeks. The control group was not taking part in any training during the course of the study. Flexibility were taken as criterion variable in this study. The selected subjects were tested on flexibility by sit and reach test. Pre-test was taken before the training period and post- test was measured immediately after the six week training period. Statistical technique 't' ratio was used to analyse the means of the pre-test and post test data of experimental group and control group. The results revealed that there was a significant difference found on the criterion variable. The difference is found due to aerobic training given to the experimental group on Flexibility when compared to control group.

Keywords: Aerobic Training, Flexibility and 't' ratio

INTRODUCTION

Aerobic exercise is the exercise that involves or improves oxygen consumption by the body. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy-generating process. Many types of exercise are aerobic, and by definition are performed at moderate 6 levels of intensity for extended periods of time. Flexibility is the ability to execute a wide range of movement in the joints while for repetition of work done in natural speed. Flexibility is more important, flexibility helps to move body parts easily, takes less time, energy to perform a task. Elasticity in muscle reduces tension and provides maximum length.

AEROBIC EXERCISE

Aerobics exercises (Cooper, Kenneth) moderate intensity workout that uses up oxygen at a rate in which the cardio respiratory system can replenish oxygen in the working muscles. Examples of such activity for fat loss when done in the right amounts by highly metabolic if done in excess.(org/wick/aerobic exercise.) (Michael Kent, 1997.). Regular aerobic exercise are strengthening the muscles involved in respiration, facilitating the flow of air in and out of the lungs, strengthening and enlarging the heart muscle, improving its pumping efficiency and reducing the resting heart rate, toning muscles throughout the body, improving circulation efficiency and reducing blood pressure, increasing the total number of red blood cells in the body, facilitating transport of oxygen and improved mental health, including reducing stress and lowering the in incidence of depression.

Guglielmo LG. et. al., (2008), the main purpose of this study was to investigate the relationship between physiological variables related to aerobic fitness (maximal oxygen uptake: VO_2 max; the minimum velocity needed to reach VO_2 max: vVO_2 max; velocity at the onset of blood-lactate accumulation: $vOBLA$) and repeated sprint ability (RSA) in elite soccer players. Twenty-nine Brazilian soccer players (17.9 +/-1.0 years; 178.7 +/-5.2 cm; 73.6 +/- 60.7 kg; 11.1 +/- 1.3% body fat) from 2 national level teams (A, B) took part in the study. Subjects first performed an incremental test on a treadmill to determine their VO_2 mac, vVO_2 max and $vOBLA$. After at least 48 hours, subjects performed an RSA test consisting of 7 34.2-m sprints interspersed with 25 seconds of active recovery, to determine the mean time (MT), the fastest time (FT) and the Sprint decrement (Sdec). Pearson product moment correlations and multiple regressions were used to assess the relationship between aerobic fitness and RSA variables (FT, MT, Sdec, [La] Peak). An analysis of variance, followed by a post hoc test (Tukey), was used to compare the 7 sprints of the RSA test. The level of significance was set at $p < 0.05$. A significant negative correlation was found between both $vOBLA$ and vVO_2 max and MT during the RSA test ($r=-0.49$, $p<0.01$; $r=-0.38$, $p<0.05$, respectively). There were also negative correlations between Sdec and $vOBLA$ ($r=-0.54$), vVO_2 max ($r=-0.49$) and VO_2 max ($r=-0.39$). The multiple regression revealed that the aerobic ($vOBLA$) and anaerobic (FT) components explained approximately 89% of the variance of MT. The results of this study demonstrated that RSA is more strongly correlated with $vOBLA$ and VO_2 max than the more commonly measured VO_2 max.

STATEMENT OF THE PROBLEM

The purpose of the study is to find out the effect of aerobic training on flexibility among college women hockey players.

HYPOTHESIS

It is hypothesized that there will be a significant difference on aerobics training group and control group on flexibility among college women hockey players.

METHODOLOGY

The purpose of the study was to find out the effect of aerobic training on flexibility among college women hockey players. To achieve this purpose of the study, thirty women players were selected as subjects at random. The age of the subjects were ranged from 18 to 24 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as aerobic training group (Experimental Group) and control group. The experimental group underwent aerobic training for three days per week for six weeks. Control group, which they did not undergo any special training programme apart from their regular physical activities as per their curriculum. The variable, namely flexibility were selected as criterion variable. All the subjects of two groups were tested on flexibility by sit and reach test at prior to and immediately after the training programme. The 't' test was used to analysis the significant differences, if any, in between the groups respectively. The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

ANALYSIS OF THE DATA

The significance of the difference among the means of the experimental group was found out by pre-test. The data were analysed and dependent 't' test was used with 0.05 levels as confidence.

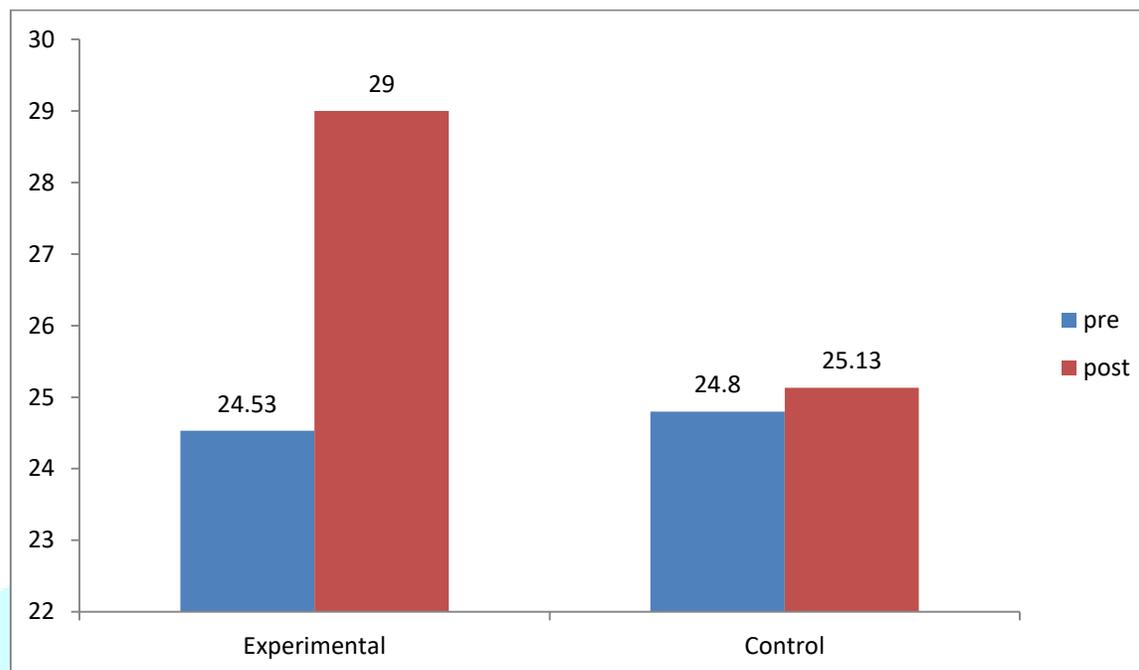
TABLE I
ANALYSIS OF T-RATIO FOR THE PRE AND POST TESTS OF EXPERIMENTAL AND CONTROL GROUP ON FLEXIBILITY

Variables	Group	Mean		SD		Sd Error		df	't' ratio
		Pre	Post	Pre	Post	Pre	Post		
Flexibility	Experimental	24.53	29.00	1.36	3.30	0.35	0.85	14	6.91*
	Control	24.80	25.13	1.37	1.36	0.35	0.35		1.78

*Significance at .05 level of confidence.

FIGURE – 1

THE BAR DIAGRAM SHOWS IN THE RESULT OF PRE AND POST MEAN OF THE AEROBIC TRAINING ON FLEXIBILITY AMONG COLLEGE WOMEN HOCKEY PLAYERS



The Table-I shows that the mean values of pre-test and post-test of the control group on flexibility were 24.80 and 25.13 respectively. The obtained 't' ratio was 1.78, since the obtained 't' ratio was less than the required table value of 2.14 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of the experimental group on flexibility were 24.53 and 29.00 respectively. The obtained 't' ratio was 6.91* since the obtained 't' ratio was greater than the required table value of 2.14 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in flexibility. It may be concluded from the result of the study that the experimental group decreased in flexibility due to six weeks of aerobic training.

DISCUSSIONS ON FINDINGS

The result of the study indicates that the experimental group, namely aerobic training group had significantly improved the selected dependent variable, namely flexibility, when compared to the control group. It is also found that the improvement caused by aerobic training when compared to the control group.

CONCLUSIONS

There was a significant difference between experimental and control group on flexibility after the training period. There was a significant improvement in flexibility. However the improvement was in favor of experimental group due to six weeks of aerobic training.

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