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Effect of aerobic training on agility of men Kho-Kho players

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Abstract

The purpose of the present investigation was to find out the effect of aerobic training on agility. To achieve this purpose, thirty male untrained were selected randomly as subjects. They were assigned randomly into experimental and control groups on fifteen each. Group I underwent aerobic training and group II acted as control. All the subjects of two groups were tested on agility. Analysis of covariance was used to determine the significantly difference existing between pre test and post test on agility. The result of the study proved that due to the effect of aerobic training improved agility of the experimental groups.

Keywords: Aerobic training, Agility, Kho-Kho Players

1. Introduction

Aerobic exercise in which oxygen is used up more quickly than the body is able to replenish it inside the working muscle. As a result, muscle fibers have to derive their contractile energy from stored substrates like Glycogen (stored carbohydrates), ATP (Adenosine Tri- Phosphate), and CP (Creatine Phosphate). Weight training is an example of such an activity. It is highly anabolic in nature but also highly catabolic if done in excess. Aerobic exercise in cystic fibrosis (CF) is limited by the inability of the cardiorespiratory system to compensate for the increase in metabolic demands inherent to sustained effort. Regular exercise in patients with CF has been associated with improved aerobic exercise endurance and quality of life (Kaplan., ZeBranek and McKey 1991). Several training schedules have attempted to improve pulmonary function and exercise tolerance in patients with CF with varying success (Sawyer and Clanton 1993). In a recent study, Nixon and colleagues demonstrated that patients with CF with greater aerobic exercise tolerance also had improved survival

2. Methodology

2.1 Subjects and Variables

The purpose of the study was to find out the effects of aerobic training on agility of men Kho-Kho players. To achieve the purpose of the study thirty male students, from Annamalai University were selected as subjects. The age, height and weight of the subjects ranged from 18 to 23 years, 162 to 175 centimeters and 50 to 65 kg respectively. They were assigned randomly into experimental and control groups on fifteen each. Group I underwent aerobic training and group II acted as control. All the subjects of two groups were tested on agility. Analysis of covariance was used to determine the significantly difference existing between pre-test and post-test on agility. Agility was measured by shuttle run test.

Table -I shows that the pre-test means and standard deviation on agility of experimental group and control groups are $19.43 + 1.20$ and $19.29 + 0.69$ respectively. The obtained F' ratio value of 0.15 was lesser than the required table value of 4.20 for the degrees of freedom 1 and 28 at 0.05 level of confidence, which proves that the random assignment of the subjects were successful as the pre test scores on agility. The post-test means and standard deviation on agility of experimental and control groups are $24.14 + 0.87$ and $19.58 + 0.84$ respectively.

The obtained F' ratio value of 4.66 was higher than the required table value of 4.20 for the degrees of freedom 1 and 28 at 0.05 level of confidence.

It implies that there is a significant difference existed between the groups during the post test period on agility. The adjusted post-test means on agility of experimental and control groups are 21.12 and 19.61 respectively. The obtained F' ratio value of 5.48 was higher than the required table value of 4.21 for the

degrees of freedom 1 and 27 at 0.05 level of confidence. Hence, it concluded that due to the effect of six weeks of aerobic training the agility of the subjects was significantly improved

Table VI: Analysis of Covariance on Agility of Experimental and Control Groups

	Experimental Group,,	Control Group	S o V	Sum of Squares	df	Mean squares	F'' ratio
Pre-Test	19.43	19.29	B	0.14	1	0.14	0.15
Mean SD	1.20	0.69	W	27.01		28 0.96	
Post test Mean SD	24.14	19.58	B	3.45	1	3.45	4.66*
	0.87	0.84	W	30.77	28	0.74	
Adjusted Post Test Mean	21.12	19.61		3.73	1	3.73	5.48*
				3.34	27	0.68	

(The required table value for significance at 0.05 level of confidence with degrees of freedom 1 and 27 is 4.21 and degree of freedom 1 and 28 is 4.20.)

*Significant at .05 level of confidence

3. Conclusion

It concluded that due to the effect of six weeks of aerobic training the agility of the subjects was significantly improved.

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