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Dr. Ashok J Zala
 Physical Instructor, Shree
 Bhikhabhai Patel Arts College
 Anand, Gujarat, India

Effect of interval training on skill related physical variables of kho-kho players

Dr. Ashok J Zala

Abstract

The purpose of this study was to find out the effect of interval training on skill related physical variables of kho-kho players. To achieve the purpose of the present study, thirty inter-collegiate kho-kho players from anand and Nadiad city of Gujarat were selected as subjects at random and their ages ranged from 17 to 21 years. The subjects were divided into two equal groups. The subjects (n= 30) were randomly assigned to two equal groups of fifteen kho-kho players each. The interval training group participated the training for a period of six weeks and the post-tests were conducted. The subjects were tested prior to and after the experimentation on speed, speed endurance and agility. Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study. It was observed that the six weeks of interval training have significantly improved the selected skill related physical variables of kho-kho players.

Keywords: Interval training, physical variable and kho-kho

Introduction

The game of kho-kho is very interesting and exciting in nature and demands a high level of physical fitness, stamina, strength, speed technique and self control. Every sports requires a special set of workout to grow endurance and ability of players. Sports training have been an integral part of sportsperson success, trends in this domain is continuously changing as per demand of excellence in sports competitions. The great thing about adding interval training to your workout routine is that you can develop both strength and endurance fast. Interval training is a favorite of coaches because of its effectiveness in cardiovascular buildup and also its ability to make better rounded runners/riders. However, it is also applicable to exercisers sit helps improve exercisers' aerobic capacity to exercise longer at varying intensities (Mayo Clinic, 2009). Interval training has the added advantage of allowing large numbers of athletes to train at the same time (Novich & Taylor, 1983) [6]. Interval training is a programme of repeated running with a set of interval and restful jogging after each run. The period between runs must be long enough to allow the athlete sometime to recover from previous run, but not long enough to afford him complete recovery (Ecker, 1992) [11]. The present study is aimed to effect of six weeks of interval training on skill related physical variables of kho-kho players.

Methodology

Source of Data: The data pertaining to this study were collected from the inter-collegiate Kho-Kho players of Anand and Nadiad city of Gujarat.

Selection of Subject: The total 30 inter collegiate subjects were selected randomly and age of the subject's range between 17-21 years.

Selection of Variable and Criterion Measures

Table 1: The following physical variables and criterion measures were chosen for testing the hypothesis:

No	Physical Variable	Test	Measurement
1	Speed	50 M Dash Test	1/100 th of a second
2	Speed Endurance	600 m run	1/10 th of a second
3	Agility	Shuttle run	1/100 th of a second

Correspondence
Dr. Ashok J Zala
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 Bhikhabhai Patel Arts College
 Anand, Gujarat, India

Experimental Design

The subjects were randomly divided into Interval Training (n=15) and a control group (n=15). Then the subjects voluntarily consented to participate in the study. All tests were carried out before (pre-test) and after the training period (post-test). The duration of training session in the six weeks (18 sessions) was between 45 to 75 minutes approximately, including warming up and cool down. The control group did not participate in any specific training on equivalence with experimental group.

Statistical Methods

The data were compiled and analysis was using SPSS version 20. Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all skill related physical variables used in the study. The level of confidence was set at .05 level.

Findings

Table 1: Computation of Mean and Analysis of Covariance of Speed of Experimental and Control Groups

	Interval Training Group	Control Group	Source of Variance	Sum of Squares	Df	Mean Square	F
Pre Test Mean	6.51	6.48	BG	0.01	1	0.01	0.02
			WG	8.78	28	0.31	
Post Test Mean	6.12	6.47	BG	0.92	1	0.92	4.23*
			WG	6.09	28	0.22	
Adjusted Post Mean	6.12	6.47	BG	4.54	1	4.54	17.70*
			WG	1.55	27	0.06	

* Significant at 0.05 level Table value for df 1 and 28 was 4.20, 1 and 27 was 4.21

The table-1 indicates the adjusted mean value of speed of interval training group and control groups were 6.12 and 6.47 respectively. The obtained F-ratio of 17.70 for adjusted mean was greater than the table value 4.21 for the degrees of

freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among interval training group and control groups on speed.

Table 2: Computation of Mean and Analysis of Covariance of Speed Endurance of Experimental and Control Groups

	Interval Training Group	Control Group	Source of Variance	Sum of Squares	Df	Mean Square	F
Pre Test Mean	81.43	81.37	BG	0.02	1	0.02	0.001
			WG	499.40	28	17.83	
Post Test Mean	78.34	81.27	BG	64.18	1	64.18	4.39*
			WG	409.86	28	14.64	
Adjusted Post Mean	78.34	81.26	BG	66.25	1	66.25	53.06*
			WG	33.71	27	1.25	

* Significant at 0.05 level Table value for df 1 and 28 was 4.20, 1 and 27 was 4.21

The table-2 indicates the adjusted mean value of speed endurance of interval training group and control groups were 78.34 and 81.26 respectively. The obtained F-ratio of 53.06 for adjusted mean was greater than the table value 4.21 for the

degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among interval training group and control groups on speed endurance.

Table 3: Computation of Mean and Analysis of Covariance of Agility of Experimental and Control Groups

	Interval Training Group	Control Group	Source of Variance	Sum of Squares	Df	Mean Square	F
Pre Test Mean	9.42	9.60	BG	0.25	1	0.25	3.66
			WG	1.87	28	0.07	
Post Test Mean	9.25	9.56	BG	0.71	1	0.71	11.10*
			WG	1.79	28	0.06	
Adjusted Post Mean	9.25	9.56	BG	0.13	1	0.13	21.26*
			WG	0.16	27	0.006	

* Significant at 0.05 level Table value for df 1 and 28 was 4.20, 1 and 27 was 4.21

The table-3 indicates the adjusted mean value of agility of interval training group and control groups were 9.25 and 9.56 respectively. The obtained F-ratio of 21.26 for adjusted mean was greater than the table value 4.21 for the degrees of

freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among interval training group and control groups on agility.

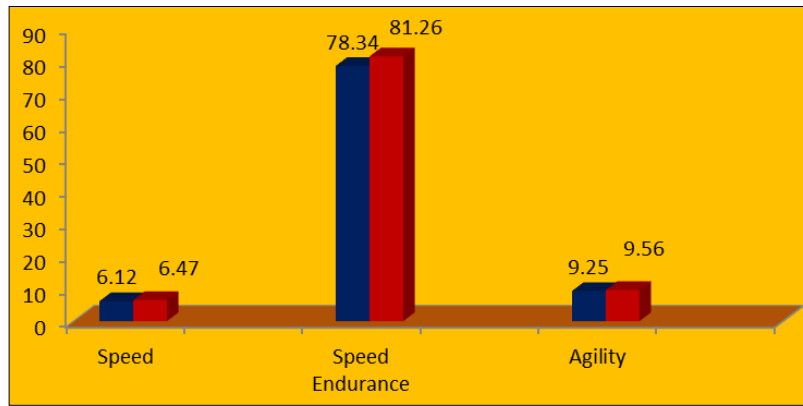


Fig 1: Shows the Adjustment Mean Values on skill related physical variable of Interval Training Group and Control Group

Conclusions

From the results obtained, the following conclusions were drawn:

- It was observed that the six weeks of interval training have significantly improved the selected skill related physical variables of kho-kho players.
- The interval training group had achieved significant improvement on selected skill related physical variables than the control group.

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