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EFFECT OF INTERVAL TRAINING ON SKILL RELATED PHYSICAL FITNESS VARIABLES AMONG KHO-KHO PLAYERS

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ABSTRACT
The purpose of this study was to find out the effect of interval training on skill related physical fitness variables among Kho-Kho players. To achieve the purpose of the present study, thirty Kho-Kho players were selected as subjects at random and their ages ranged from 21 to 25 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 eight weeks and the post-tests were conducted. The subjects were tested prior to and after the experimentation on Reaction Time, Cardio Vascular endurance and agility. Dependent 't' test was used to test the treatment effect of the training programmes on all the variables used in the study. It was observed that the eight weeks of interval training have significantly improved the selected skill related physical variables of kho-kho players.

KEYWORDS: Interval Training, Kho-Kho, Physical Variable and Fitness

INTRODUCTION

Kho-Kho is one of the most popular traditional sports in the country. Some of the interesting facts about the game. The position of the players sitting is random; one will never find the same set of players sitting in the same order as when the game starts. The game requires immense stamina and speed. Kho-Kho is played on a rectangular court with a central lane connecting two poles which are at either end of the court. Its origins are as old as Mahabharata, with strategies and tactics likely derived from Mahabharata itself. On the 13th day of the war, the Kaurava Guru Dronacharya planned the unique tactics Chakraviyu a special military defensive strategy breached by the expert warrior Abhimanyu. He died as he had to fight alone against 7 other warriors and he received heavy casualties. His style of fighting reflects the concept of ring play: a defensive tactic in the game. This game fosters many desirable traits such as sportsmanship, teamwork, loyalty, competitiveness, and self-esteem as well as speed, agility, strategy and quick thinking. This game in itself is a personal development tool for the athlete that takes up the challenge.

The modern-day game was invented in the Indian state of Maharashtra. The Deccan Gymkhana of Pune tried to lend a sense of reliability and recognition to the game by introducing certain rules and regulations to make it more formal. As a result, countries such as Pakistan, Bangladesh, Nepal, Sri Lanka, and the Maldives also participated in the game. Sports training are especially focused on optimal performance in a particular sport. Its main aim is to develop the performance capacity of sports persons, so that they achieve the highest possible performance. To do so, it is essential to be mentally strong. The ability to manage stress and anxiety associated with different sports need to be strengthened. Competition in sports makes the participants face varied situations which require the individuals to be mentally fit. It is a particular type of training designed to improve fitness and abilities to perform in a given sport. It includes strength in training, corrective and restorative exercises, conditioning and cardiovascular training. It also includes mental and psychological training and advise on nutritional values. The investigator tries to incorporate the Kho-Kho skill training with pranayama practices to promote the playing performance in the modern era.

STATMENET OF THE PROBLEM

This experimental study was to find out the Effect of Interval Training on Skill Related Physical Fitness Variables among Kho-Kho players.

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METHODS

Experimental Approach of the Problem

The study was formulated as pre-test and post-test randomized group design, based on the voluntary response to participate in, 30 male Kho-Kho players selected and they were divided into two equal groups namely interval training group and control group. The selected subject (n=15) was divided into two groups (n=15) of which group I underwent interval training for a period of 8 weeks and group II was considered as control group (CG). After Pre-test, Group I was treated with interval training, group II was not treated with any training but they were doing their regular activity.

TRAINING PROGRAM

During the training period the experimental group underwent the interval training of selected suitable conditioning exercise for eight weeks of period in addition to their daily routine activities as per the curriculum. Experimental group underwent training program on four alternate days per week for eight weeks of period. All the subjects involved in this study were carefully monitored throughout training program. They were questioned about their physical fitness status throughout the training program, none of them reported with any tear and muscle soreness.

The total duration of interval training is one hour. The load was increased one in two skill training progress and lasted for 45 minutes. During the training period the subject were treated with effects of interval training for three alternative days (Monday, Wednesday, Friday) per week.

PHASE I

During the 1st to 3rd weeks of interval training, the subjects were treated with warm up for 10 minutes. Followed by Interval training exercises namely 15mts sprint, 20mts sprint, 25mts sprint, 30mts sprint 5 repetition with 1 set. Further the session ended with cool down for 10 minutes.

PHASE II

During the 4th to 6th weeks of interval training the subjects were treated with warm up of 10 minutes. Followed by Interval training exercises namely shuttle run from 1st to 8th line, 8th to 1st line, 1st to 3rd line 3,6, end line, 1,4,8, end line, 3 repetition 1 set. Further the session ended with cool down for 10 minutes.

PHASE III

During the 7th & 8th weeks of training, the subjects were treated with warm up for 10 minutes. Followed by Interval training exercises namely 150mts run 4 repetition 1 set, 200mts run 3 repetition 2 sets, 300mts run 2 repetition 3 sets, 400mts run 1 repetition 4 sets. Further the session ended with cool down for 10/minutes.

STATISTICAL ANALYSIS

As the purpose of the study was to find out the effect of interval training on skill related physical fitness variables among kho-kho players, the collected data prior to treatment and after of treatment period were tested using statistically dependent 't' test. It was considered as appropriate for this study.

RESULTS

Table 1: Computation of 't' ratio between pre and post-test means of Experimental group on Performance Variables

EXPERIMENTAL GROUP					
Performance variables	**Pre / Post test**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**'t' ratio**
Reaction Time	Pre test	0.41	0.03	0	7.33*
	Post test	0.38	0.03		
Cardio Vascular Endurance	Pre-Test	36.20	5.49	0.58	8.62*
	Post test	41.21	4.45		
Agility	Pre test	20.36	1.09	0.145	8.48*
	Post test	19.13	0.71		

*Significant at 0.05 level of confidence df = 14(2.14).

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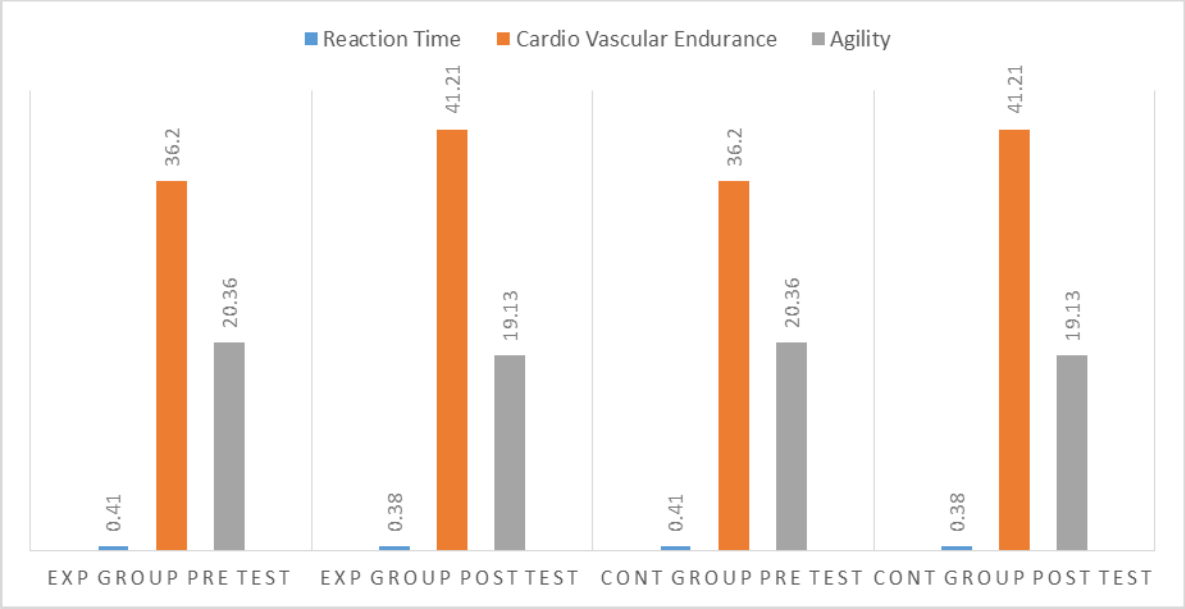
Table 1 reveals the computation of 't' ratio between pre and post-test means of experimental group on Performance Variables. The 't' ratio on speed, speed endurance and agility are 7.33, 8.62, 8.48 respectively. The required table value was 2.14 for the degree of freedom 14 at 0.05 level of significance. Since the obtained 't' ratio values were greater than the table value, it was found statistically significant.

Table 2: Computation of 't' ratio between pre and post-test means of Control group on Performance Variables

CONTROL GROUP					
Performance variables	**Pre / Post test**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**'t' ratio**
Reaction Time	Pre test	0.44	0.03	0	1.35
	Post test	0.43	0.03		
Cardio Vascular Endurance	Pre-Test	35.10	6.52	0.27	0.69
	Post test	35.29	6.81		
Agility	Pre test	22.26	2.25	0.35	0.18
	Post test	22.33	1.99		

*Significant at 0.05 level of confidence df = 14(2.14).

Table 2 reveals the computation of 't' ratio between pre and post-test means of experimental group on Performance Variables. The 't' ratio on speed, speed endurance and agility are 1.35, 0.69, 0.18 respectively. The required table value was 2.14 for the degree of freedom 14 at 0.05 level of significance. Since the obtained 't' ratio values were lower than the table value, it was found statistically not significant.



DISCUSSION ON FINDINGS

The results of the study indicated that the physical fitness variables like agility, reaction time and cardio vascular endurance were improved significantly after undergoing interval training. The changes in the selected parameters were attributed with proper planning, preparation and execution of the training package given to the players.

The interval training is a fantastic training which has been found to be beneficial for the kho-kho players. To study the interval training on physical fitness variable of kho-kho players it was tested under, to differentiate between interval training group and control group. The interval training includes on agility, reaction time and cardio vascular endurance. The interval training exercises were namely,15mts sprint,20mts sprint,25mts sprint,30mts sprint, shuttle run form 8th to 1st lane,1st to 8th

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lane,1st to 3rd lane,3,6,end lane,1,4,8,end lane, 150mts race,200mts race,300mts race,400mts race are helps to improve physical fitness components are namely agility, reaction time and cardio vascular endurance. The obtained result proved positively the interval training group significantly improved. The result of the present study showed that the interval training has significant improvement of kho-kho players. The following studies was revealed that Stankovic et al., (2023) summarized the effects of High Intensity Interval Training (HIIT) on physical performance in female team sports athletes. The review included longitudinal studies, elite, sub-elite, and college female athletes, and measured primary outcome measures such as maximal oxygen uptake, repeated sprint ability, speed, explosive strength, and body composition. Han, Z et al., (2023) concluded A study examining the impact of high-intensity interval training on young handball players' physical fitness was conducted. The study involved 46 players, divided into two groups: the experimental group, who engaged in regular physical activity, and the control group, who engaged in interval training.

The result of the study supports the result of the present study. These finding had not been previously replicated for a sample of college students. The result of the study showed that the control group was not significantly improved.

CONCLUSION

Based on the findings and within the limitation of the study, it was noticed that practice of interval training helped to improve agility, reaction time and cardio vascular endurance ability of kho-kho players. It was also seen that there was progressive improvement in the selected criterion variables of interval training group of kho-kho players after eight weeks. Further, it also helps to improve agility, reaction time and cardio vascular endurance.

1. It was concluded that individualized interval training group showed a statistically significant positive sign over the course of the treatment period on physical fitness variables of kho-kho players.
2. It was concluded that individualized effect of control group showed a statistically insignificant over the course of the period on physical fitness variables of kho-kho players.
3. The results of comparative effects lead to conclude that the interval training group had better significant improvement on physical fitness variables (agility, reaction time and cardio vascular endurance) of kho-kho players as compared to their performance with control group.

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