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Effect of complex training on selected motor fitness variables and playing ability among Kabaddi players of TSWREIS

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Abstract

The purpose of the study was to predict the playing ability in Kabaddi from selected Motor Fitness variables among School level Players. Sixty male TSWREIS Kabaddi players were randomly selected from various TSWREIS in Telangana state, India and their age ranged between 12 and 17 years. The subjects had past playing experience of at least three years in Kabaddi and only those who represented their respective TSWREIS teams were taken as subjects. Physical fitness components were measured by the following tests. Agility were assessed by Shuttle run test, Muscular power assessed by Bent Knee Sit-Up's test. The playing ability which was taken as the performance factor was subjectively assessed by three qualified Kabaddi coaches. The results revealed that Agility, Muscular Endurance and Playing ability among Kabaddi players of TSWREIS would be improved due to six weeks Complex Training was accepted at 0.05 level.

Keywords: Prediction, regression, physical, Kabaddi

Introduction

Kabaddi is a traditional outdoor game played with minor variations in all regions of India - in fact, in most parts of Asia. It is an ancient backyard and homegrown game. Kabaddi requires tremendous physical stamina, agility, individual proficiency, neuromuscular coordination, lung capacity, quick reflexes, intelligence and presence of mind on the part of both attackers and defenders.

Modern Kabaddi is a synthesis of the game played in various forms under different names. Kabaddi received international exposure during the 1936 Berlin Olympics. The game was introduced in the Indian Olympic Games at Calcutta in 1938. In 1950 the All India Kabaddi Federation came into existence and compiled standard rules. The Amateur Kabaddi Federation of India (AKFI) was founded in 1973. After formation of the Amateur Kabaddi Federation of India, the first men's nationals were held in Madras (renamed Chennai), while the women's were in Calcutta in 1955. Kabaddi was introduced and popularized in Japan in 1979.

Kabaddi is basically an outdoor team game, played in the tropical countries of Asia. The excitement and thrill provided by the game has made it very popular and Kabaddi is rightly called the 'Game of the masses', since spectators totally involve themselves and give the players a great deal of encouragement. The game requires no equipment whatsoever, and the rules of the game are very easy to comprehend. This is the reason for the popularity of the game in rural areas, since rural youth in India can ill-afford the sophisticated equipment demanded by other sports.

Kabaddi is a high intensity contact sport, with seven players on each side; played for a period of 40 minutes with a 5-minute break (20-5-20). The core idea of the game is to score points by raiding into the opponent's court and touching as many defense players as possible without getting caught; in a single breath. One player, chanting Kabaddi!! Kabaddi!! Kabaddi!! Charges into the opponent court and tries to touch the opponent closest to him, while the seven opponents maneuver to catch the attacker.

Complex Training

Complex training relies upon the performance of a strength exercise, often resistance based, followed by a plyometric exercise. The strength and the plyometric exercise are usually biomechanically similar i.e. they move through similar ranges of movement. It is a quite successful manifestation of physical preparing that joins together both safety quality preparing and plyometric hazardous force preparing. Complex preparing portrays a force advancing workout that consolidates weights and polymetric activities. About 10 years back, these work outs were welcomed with extraordinary praise as examination demonstrated that they could altogether improve quick twitch muscles filament power and along these lines, rapid sports execution. Complex preparing is a standout amongst the most development manifestations of games preparing. Joins safety preparing, plyometric, and sports-particular development. It comprises of an extraordinary safety practice accompanied by a plyometric practice.

'Complex training allows the athlete to work the muscle fibers in conjunction with the nervous system in such a way that the slow-twitch fibers are taught to behave like fast-twitch fibers.' Complex preparing enacts and works the apprehensive framework and quick twitch muscles filament synchronously. The safety practice initiates the quick twitch muscles strands. The plyometric development pushes those muscles strands that have actuated by the safety preparing development. Throughout this actuated state, the muscles have an enormous capability to adjust. This manifestation of extraordinary preparing can educate moderate twitch muscles filaments to perform like twitch strands.

Statement of the Problem

The purpose of the study was to investigate the "Effect of Complex Training on Selected Motor Fitness Variables and Playing Ability among Kabaddi Players of TSWREIS."

Significance of the Study

The findings of the study may be helpful for the physical education teachers and coaches, in assessment of the players ability to take part in different activities and to identify the suitable packages of physical training for the athletes to improve their performance.

Hypothesis

It was hypothesized that there would be significant improvement on "Effect of Complex Training on Selected Motor Fitness Variables and Playing Ability among Kabaddi Players of TSWREIS." between 12 to 17 years age groups.

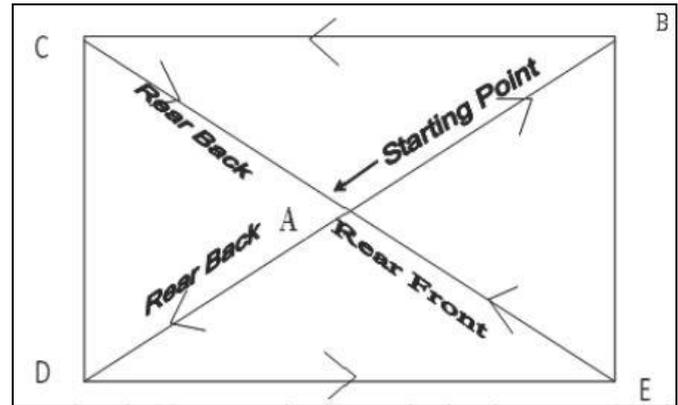
Methodology

The purpose of the study was to investigate the "Effect of Complex Training on Selected Motor Fitness Variables and Playing Ability among Kabaddi Players of TSWREIS." To achieve the purpose of this study 60 male players from various Government of Telangana Social Welfare Residential Educational Institutions Society (TSWREIS) in and around district in the state of Telangana, India. Were randomly selected as subjects and their age ranged between 12 to 17 years.

Foot Work Test Procedure

Players were familiarized with testing procedure by physical demonstration. In this test, the player has to perform raid in

prescribed path and the time taken while performing the test is noted in seconds. Test was performed on kabaddi court and in following manner.



Subject begins test from starting point (A) on command, moves towards point B in Rear Front, (Rear foot followed front foot). From point B moves towards point C in sideward action from point C moves towards point A by using rear back action from point A moves towards point D by using Rear back action from point D moves towards to point E by using side ward action from point E moves towards point A by using Rear front action.⁷ The subject should be given one trial practise. The subject should start with forward roll on the command of the tester, move towards each station. He should cover the circuit as early as possible in the shortest time. The watch is stopped when the subject finishes the circuit or reaches the starting point.¹⁰ Instructions: The subject has to take a standing start and follow the proper path to cover the entire distance. If a foul is committed, the subject has to repeat the entire exercise.¹⁰ Score: Time taken by the subject to complete the move was the final score and recorded in seconds.⁷ Scoring of the test is given as per the following norms

Table 1: Grading scale for the Interpretation of Foot Work test Scores

Grade	Evaluation	Alphabetical Grade
Excellent	Below 19.478	A
Good	19.479 to 22.572	B
Above Average	22.573 to 25.666	C
Average	25.667 to 31.854	D
Below Average	31.855 to 34.948	E
Poor	34.949 to 38.042	F
Very Poor	Above 38.043	G

Experimental Design

Table 2: Criterion Variables and Test

S. No	Dependent Variables	Testes/ Instruments	Unit of Measurement
1.	Agility	Shuttle Run	Sec
2.	Muscular power	Bent Knee sit-ups	Numbers
3.	Foot work Test	Ability Judges Rating	In Points

Analysis of Data

In order to find out the statistical difference between the initial and final performance of Experimental and Control groups, 't' test was employed at 0.05 level of significance.

Table 3: Analysis of T-Ratio on Pre and Post-Test for Control and Experimental Group on Agility

Variables	Group	Mean		SD		Df	't' ratio
		Pre	Post	Pre	Post		
Agility	Control	15.53	15.02	0.83	0.80	1.49	1.70
	Experimental	14.50	13.05	1.23	0.91		

*Significance at .05 level of confidence.

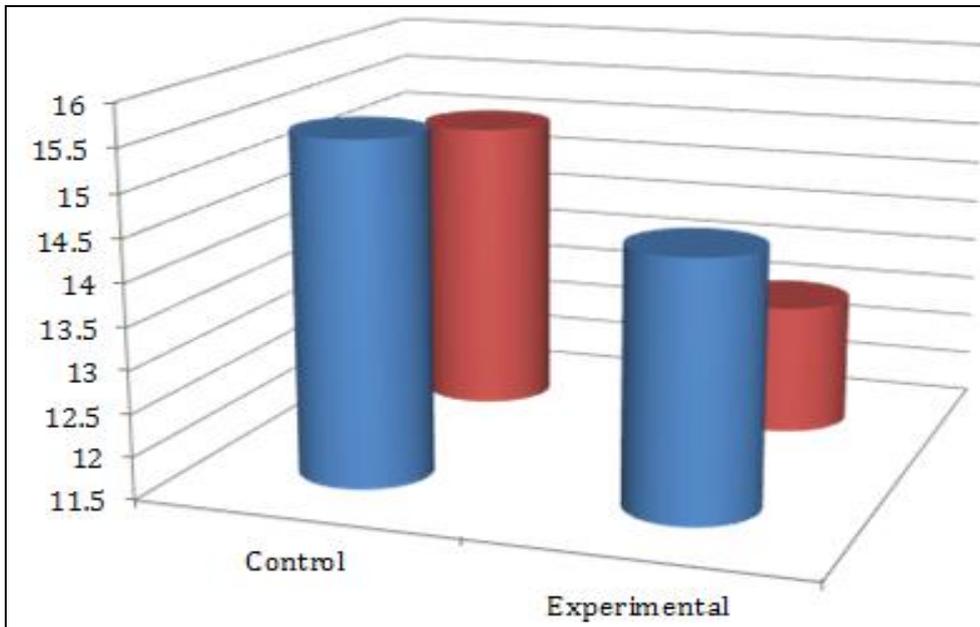


Fig 1: The Diagram Shows the T Ratio between Pre and Post Tests of Control and Experimental Group on Agility

Table 4: Analysis of T-Ratio on pre and post-test for control and experimental group on muscular endurance

Variables	Group	Mean		SD		Df	't' ratio
		Pre	Post	Pre	Post		
Muscular Endurance	Control	40	40.6	0.99	1.86	0.57	0.20
	Experimental	41.6	42.17	0.98	1.99		

*Significance at .05 level of confidence.

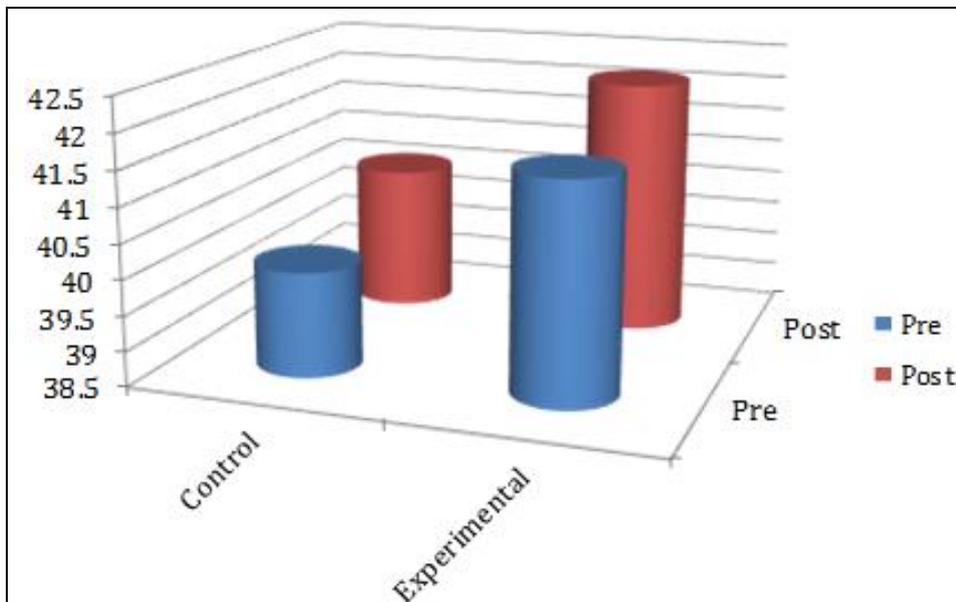


Fig 2: The diagram shows the T ratio between pre and post tests of control and experimental group on muscular endurance

Table 5: Analysis of T-Ratio on pre and post-test for control and experimental group on foot work test

Variables	Group	Mean		SD		Df	't' ratio
		Pre	Post	Pre	Post		
Strength	Control	12.95	11.95	1.95	1.90	0.47	0.96
	Experimental	11.55	11.15	1.52	1.11		

*Significance at .05 level of confidence.

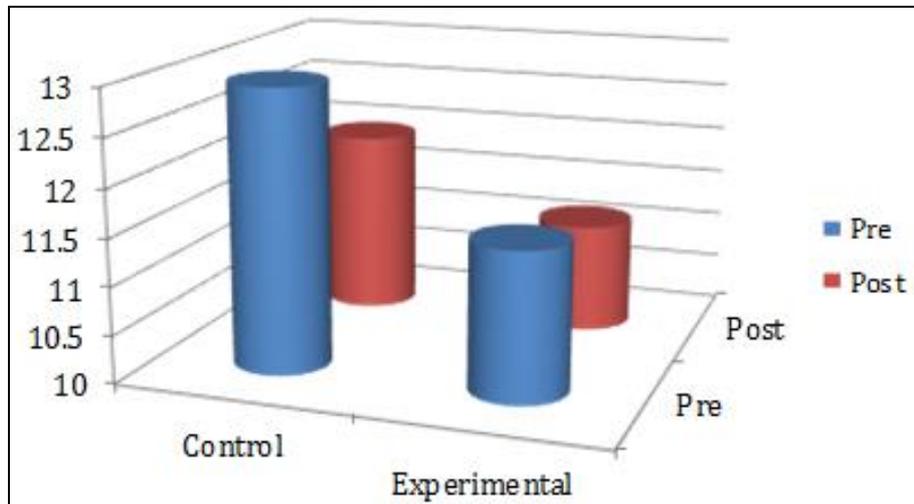


Fig 3: The diagram shows the t ratio between pre and post tests of control and experimental group on foot work test

Statistical analysis was done using two-way random reliability test in SPSS (version 20.0). ± 1.54 and 22.67 with $SD \pm As$ per Cronbach's alpha calculated for footwork test is 0.88 with mean of 22.87 and $SD 0.9$ is considered as $\epsilon < 1.78$. Inter rater reliability for this test is good as per following Cronbach's alpha. Cronbach's alpha 0.5 is unacceptable, $\epsilon < 0.6$ is poor, $\epsilon < 0.7$ is questionable, $\epsilon < 0.8$ is good, $\epsilon < 0.9$ is excellent,

Discussion of Findings

Based on the analysis of statistical results of the Experimental and Control groups on selected Motor fitness, it is clearly observed that the Complex training for six weeks significantly improved the Motor fitness variables of the Kabaddi Players. The statistical factual results obtained from the 't' test on Initial and final mean values Between Experimental and Control groups was greater than the required 't' value to be significant at 0.05 level. And the formulated hypothesis that Complex training would significantly Improve Motor Fitness variables of Kabaddi players was accepted at 0.05 level.

Conclusions

Thin the limitations and delimitations of this study, the following conclusions were drawn. It was concluded that six weeks Complex training significantly improved the Motor Fitness variables of Kabaddi players as measured through Motor Fitness Test. The research Hypothesis that Agility, and Muscular Endurance would be improved due to six weeks Complex training was accepted at 0.05 level. It was concluded that Complex training protocols to Kabaddi Players was beneficial to improve their Motor Fitness variables.

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