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EFFECTS OF CIRCUIT TRAINING ON SPEED AGILITY AND ENDURANCE AMONG KABADDI PALYERS OF JNTU KAKINADA.

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ABSTRACT:
This paper aimed to investigate the effects of circuit training on speed, agility, and endurance among kabaddi players. Circuit training is a popular training method that combines different exercises targeting various aspects of physical fitness.
The study utilized a pre-test and post-test design, where 40 kabaddi players were randomly assigned to either an experimental group or a control group. The experimental group underwent a 6-week circuit training program, while the control group followed their regular training routine. . During the pre-test period, the subjects were asked to do 50 yard dash, SEMO agility and 12 minute run walk and their initial performance was recorded. Then the group was administered the programmed of circuit training, for a period of six weeks.
Speed was assessed using 50 yards dash, agility was measured through the SEMO, and endurance was evaluated using the12 minutes Run/Walk test. All assessments were performed before and after the training intervention.
Final performance was recorded.

KEYWORDS:
Circuit Training , Speed, Agility, Endurance.

INTRODUCTION:

Circuit training is a highly effective training method used by athletes in various sports to improve their overall performance. This intense and fast-paced form of exercise combines strength training, cardiovascular conditioning, and agility drills, all performed in a circuit or sequence.
When it comes to kabaddi players, speed, agility, and endurance are vital for success in the game. Kabaddi is a high-intensity sport that requires players to have quick reflexes, explosive speed, agility to dodge opponents, and the endurance to last throughout the game. Circuit training has been proven to be highly beneficial in enhancing these aspects of physical performance among kabaddi players.
Firstly, circuit training helps improve speed by incorporating drills that focus on quick, explosive movements. By performing exercises such as sprinting, shuttle runs, and ladder drills, players can develop faster reaction times and accelerated sprinting abilities. These exercises also strengthen the leg muscles, allowing for more powerful bursts of speed when required during a game.
Secondly, agility is a crucial component in kabaddi, as players need to be able to change direction swiftly while maintaining control and balance. Circuit training includes exercises like cone drills, zig-zags, and lateral movements, which enhance players' ability to change direction rapidly and stay light on their feet. These agility exercises also help improve coordination and body awareness, allowing players to react more effectively to the movements of their opponents.
Lastly, endurance is vital in kabaddi, as matches can last for a significant duration, and players need to sustain their energy levels throughout. Circuit training incorporates cardiovascular exercises, such as burpees, jumping jacks, and skipping, that elevates the heart rate and improves aerobic capacity. By improving endurance through circuit training, kabaddi players can perform at a higher intensity for longer durations, reducing fatigue and maintaining their performance levels throughout the game.
In conclusion, circuit training is a highly effective training method for enhancing the speed, agility, and endurance of kabaddi players. Through a combination of strength training, agility drills, and cardiovascular exercises, circuit training helps players develop the necessary skills and physical attributes required to excel in this demanding sport. By incorporating circuit training into their regular training regimen, kabaddi players can significantly elevate their performance on the court.

OBJECTIVES:
To analysis the effects of circuit training on speed agility and endurance among the kabaddi players of jntu Kakinada.

METHODOLOGY:
The purpose of this study was to investigate the effect of selected circuit training on speed, agility and endurance among kabaddi players. To fulfil these aim 40 students of JNTU Kakinada were selected as subjects by random sample selection.

SELECTION OF SUBJECTS:
Total twenty control and twenty experimental students of JNTU, KAKINADA were selected as a subject for the presented studies and their age ranged from 18to 21 years were selected.

ADMINISTRATION OF TEST:
Considering the physical variables following test were administrated.
1. 50 Yards Dash
2. SEMO Agility
3. 12 minutes Run/Walk

For the physical variables the AAPHER physical fitness test were used.
For the physical variables the COOPER physical fitness test were used.

1.50 yard dash:
PURPOSE:
Tofind the speed of the subjects.
EQUIPMENT:
Stop watch, measuring tape.
PROCEDURE:
Two lines are marked on the ground 50 yard dash apart one line is used as starting line and the other as the finish line. On the signal "ready go". Then the subject start running at their best to reach the finish line at their earliest, the signal "go" is accomplished with the downward swipe of starters arm to give the visual signal to the inner that stands at the finish line.
SCORING:
The interval between the starting signal and the instant subject crosses the finish line is the score of the test. The time is recorded correct up to tenth of a second.

2. SEMO AGILITY TEST:
PURPOSE:
To measure agility of the subjects.
EQUIPMENT:
Stopwatch, four plastic cones and handball court
PROCEDURE:
The tester asks the subject to stand just the marked rectangle at the starting point with his back towards the free throw line, the subject waits for the signal "ready go" at the word go the testers starts the stopwatch while the subjects starts side steeping to his fastest speed until he reaches outer corner of the second corner of the second cone from were the subject starts back pedalling. As soon as he steps outside the finish line with his both feet, the testers stops the stopwatch.
SCORING:
Each subject is given two trails and time of each trail is noted accurate up to 0.1 second. The lesser the value of the time out of the two trails is the score of the subject.

4. COOPER 12MINUTES RUN/WALK TEST:

PURPOSE:

To find the endurance of the subjects

EQUIPMENT:

Track, stop watch, cones.

PROCEDURE:

The subject is asked to take a standing start. At the signal ready and go the subjects start running the 12 minutes run/ walk. The test is usually performed on 8 to 10 subjects together by pairing of before the start of the event walking is permitted but the performer is to cover the 12 Minutes.

SCORING:

The time taken to 12 Minutes Run Walk recorded in 12 Minute score of the test.

Experimental Variable:

The group was subject to the experimental treatment. Six circuit stations were fixed with specific exercise, with specified distance or number of repetitions for each exercise, for three complete circuits of six exercises. This group was under this training for three days a week over a period of six weeks. The exercise include in the circuit training program were originated by Don Schmidt had been slightly modified and were as follows.

1	SQUAT JUMPS	5 TIMES
2	BURPEES	5 TIMES
3	HIGH KNEES	10 TIMES
4	SIT UPS	10 TIMES
5	BICYCLE KICKS	10 TIMES
6	SINGLE LEG KICK BACKS	10 TIMES

Tools of the Study:

For the present study, modified tools were used for data collection stopwatch, measuring tape.

Collection of data:

Data was collected on individually through 20 control and 20 experimental group subjects at university ground, the instruction of test was given in ground.

Analysis of data and result of the study:

The result of the study present through table and figures, which are given below. Mean score, standard deviation and tvalue of Experimental and Control group students with respect to 50 yard dash, Semo Agility and 12 minute Run/Walk variables.

Table 1:

Shows statistical comparison of Speed between pre-test and post-test of experimental group is as under

GROUP	MEAN	SD	T' RATIO
Pre-Test	7.43	1.32	
Post test	7.40	1.32	0.07

From the above table it is observed that the mean of Experimental group students in pre-test and post test is7.43 and 7.40 respectively. After applying “t” test it is found that the t-ratio is 0.07 which was not significant at the 0.05 level of significance. So the hypothesis was rejected.

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Table 2:
Shows statistical comparison of Speed between pre-test and post-test of control group is as under.

GROUP	MEAN	SD	T' RATIO
Pre-Test	8.45	3	
PostTest	8.31	4	2

From the above table it is observed that the mean of Control Group students in pre-test and post-test is 8.45 and 8.31 respectively. After applying "t" test it is found that the t-ratio is 2.

Table 3:
Shows statistical comparison of Agility between pre-test and post-test of experimental group is as under.

GROUP	MEAN	SD	'T' RATIO
Pre-Test	12.78	1.20	
Post Test	12.59	1.22	0.51

From the above table it is observed that it is observed that the mean of Experimental Group students in pre-test and post-test id 12.78 and 12.59 respectively. After applying "t" test, it is found that the t-ratio is 0.51 which was not significant at the 0.05 level of significance. So the hypothesis was rejected.

Table 4:
Shows statistical comparison of Agility between pre-test and post-test of control Group is as under

GROUP	MEAN	SD	T' RATIO
Pre-Test	13.07	0.96	
Post Test	13.17	1.56	0.25

From the above table it is observed that the mean of control group students in pre-test and post-test is 13.07 and 13.17 respectively. After applying "t" test it is found that the t-ratio is 0.25.

CONCLUSION:
On the basis of statistical result the following conclusions were drawn within the limitation of the study.
1. There was no significant effect of speed between control group and experimental group among kabaddi players
2. There was no significant effect of agility between control group and experimental group among kabaddi players
3. There was no significant effect of Endurance between control group and experimental group among kabaddi players.

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