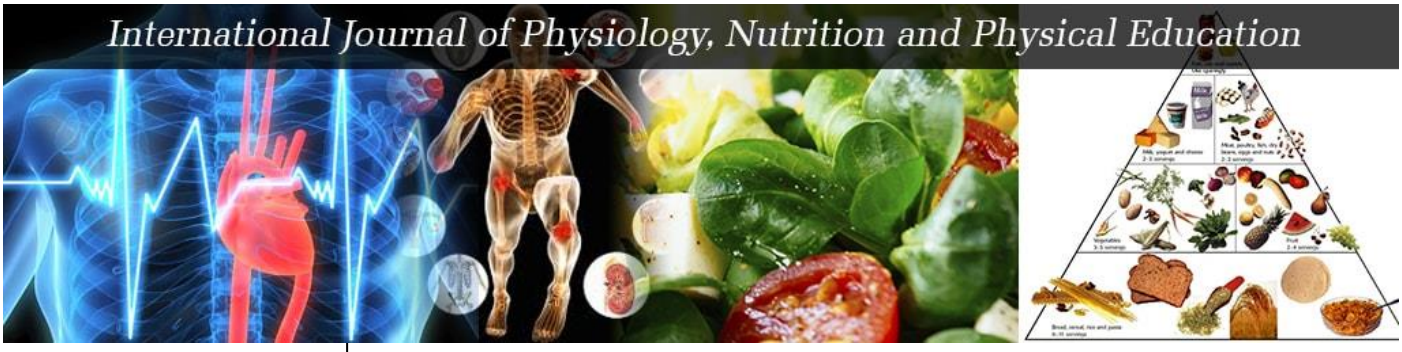

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Effect of resistance training on selected physical fitness variables among inter collegiate men kabaddi players

Dr. S Jayakumar and Dr. C Lakshmanan

Abstract
Resistance training is a form of physical activity that is designed to improve muscular fitness by exercising a muscle or a muscle group against external resistance. Research shows that resistance training, whether done via body weight, resistance bands or machines, dumbbells or free weights, not only helps us build strength, but also improves muscle size and can help counteract age-related muscle loss. More recently it's become popular among those looking to lose weight. The purpose of the study was to investigate the effect of resistance training on selected physical fitness variables among inter collegiate kabaddi players. Forty out of kabaddi players were randomly selected from Bharathidasan university, Trichy district, the selected players were divided into two groups consisting of 20 inter collegiate kabaddi players. No attempt was made equate the groups. The age of the subjects ranged between 18 to 21 years. The influence of the resistance training was assessed on physical fitness. The training load was increased from the maximum working capacity of the subject doing pilot study. The duration of the training period was restricted to eight weeks and the number of sessions per week was confined to three. The data obtained from all the groups before and after the experimental period were statistically analyzed by dependent't' test to find out the significant improvement if any, 0.05 level of confidence was fixed to the level of significance between pre and post test means of all groups.

Keywords: Agility, flexibility, resistance training and kabaddi players

Introduction
Resistance training (also called strength training or weight training) is the use of resistance to muscular contraction to build the strength, anaerobic endurance and size of skeletal muscles. Resistance training is based on the principle that muscles of the body will work to overcome a resistance force when they are required to do so. When you do resistance training repeatedly and consistently, your muscles become stronger. A well-rounded fitness program includes strength training to improve joint function, bone density, muscle, tendon and ligament strength, as well as aerobic exercise to improve your heart and lung fitness, flexibility and balance exercises. Pre-exercise screening is used to identify people with medical conditions that may put them at a higher risk of experiencing a health problem during physical activity. It is a filter or safety net to help decide if the potential benefits of exercise outweigh the risks for you. The game is played with 20 minute halves and a five minute halftime break during which the teams exchange sides. Two teams occupy opposite halves of a field and take turns sending a "raider" into the other half, in order to win points by tackling members of the opposing team; the raider then tries to return to his own half, holding his breath and chanting "kabaddi, kabaddi, kabaddi" during the whole raid. Meanwhile, defenders must form a chain, for example, by linking hands; if the chain is broken, a member of the defending team is sent off. The goal of the defenders is to stop the raider from returning to the home side before taking a breath. The raider is sent off the field if: 1) the raider takes a breath before returning or 2) the raider crosses boundary line or 3) A part of the raider's body touches the ground outside the boundary (except during a struggle with an opposing team member). Each time a player is out the opposing team earns a point. A team scores a bonus of two points, called a lona, if the entire opposing team is declared out. At the end of the game, the team with the most points wins. Kabaddi is a combative team game, played with absolutely no equipment, in a rectangular court, either out doors of indoors with seven players on the ground in each side. Each side takes alternate chances at offense and defense.

The basic idea of the game is to score points by raiding into the opponents' court and touching as many defense players as possible without getting caught on a single breath. During play, the players on the defensive side are called 'Antis' while the player of the offense is called the 'Raider'. Kabaddi is perhaps the only combative sport in which attack is an individual attempt while defense is a group effort. The attack in Kabaddi is known as a 'Raid'. The antis touched by the raider during the attack are declared out if they do not succeed in when their side scores points against the opposite side during their raiding turn or if the remaining players succeed in catching the opponent's raider. (Rao, 2002).

Methodology

Experimental Approach to the Problem

In order to address the hypothesis presented herein, we selected 40 kabaddi players from Bharathidasan University, Trichy district. Their age ranged from 18 to 21 years. The subjects were randomly assigned in to two equal groups namely, resistance training Group (RTG) (n=20) and Control Group (CG) (n=20). The respective training was given to the experimental group the 3 days per weeks (alternate days) for the training period of eight weeks. The control group was not given any sort of training except their routine.

Design

The evaluated physical parameters were agility was assessed by 4x10mt test, flexibility was assessed by sit and reach test. The parameters were measured at baseline and after 8 weeks of resistance training were examined. The intensity was increased once in two weeks based on the variation of the exercises.

Table 1: Computation of 't' ratio on agility on experimental group and control group (Scores in Numbers)

Groups	Pre test	Post test	Sd	"t" ratio
Experimental group	8.96	8.36	1.06	4.54*
Control group	8.90	8.92	0.97	1.33

*significant level 0.05 level (degree of freedom 2.09, 1 and 19)

Table I reveals the computation of mean, standard deviation and 't' ratio on selected variables namely agility of experimental group. The obtained 't' ratio on agility were 4.54 respectively. The required table value was 2.09 for the degrees of freedom 1 and 19 at the 0.05 level of significance. Since the obtained 't' values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and 't' ratio on selected variables parameters namely agility of control group. The obtained 't' ratio on agility were 1.33 respectively. The required table value was 2.09 for the degrees of freedom 1 and 19 at the 0.05 level of significance. Since the obtained 't' values were lesser than the table value it was found to be statistically not significant.

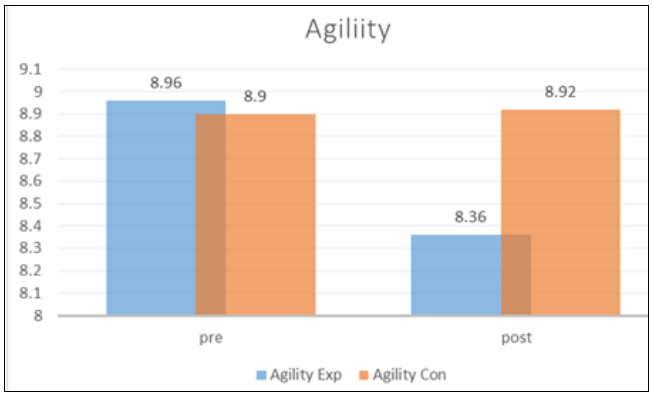

Fig 1: Bar diagram showing the mean value on agility on experimental group and control group

Table 2: Computation of 't' ratio on flexibility on experimental group and control group (Scores in Numbers)

Groups	Pre test	Post test	Sd	"t" ratio
Experimental group	19.73	21.06	1.23	7.32*
Control group	20.66	20.93	1.57	0.65

*significant level 0.05 level (degree of freedom 2.09, 1 and 19)

Table I reveals the computation of mean, standard deviation and 't' ratio on selected variables namely flexibility of experimental group. The obtained 't' ratio on flexibility were 7.32 respectively. The required table value was 2.14 for the degrees of freedom 1 and 19 at the 0.05 level of significance. Since the obtained 't' values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and 't' ratio on selected variables parameters namely flexibility of control group. The obtained 't' ratio on flexibility were 0.65 respectively. The required table value was 2.09 for the degrees of freedom 1 and 19 at the 0.05 level of significance. Since the obtained 't' values were lesser than the table value it was found to be statistically not significant.

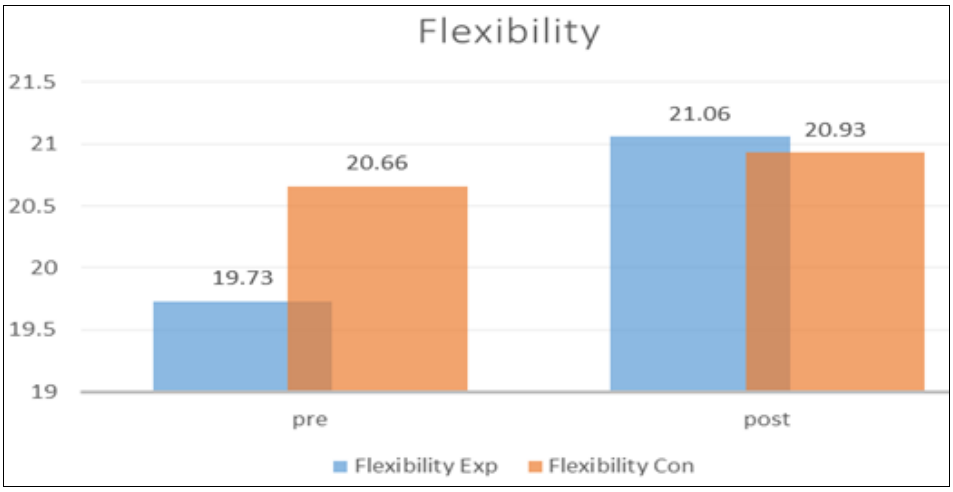

Fig 2: Bar diagram showing the mean value on flexibility on experimental group and control group

Discussion and Findings

The present study experimented the influence of eight weeks resistance training on the selected parameters of inter collegiate men kabaddi players. The results of this study indicated that resistance training is more efficient to bring out desirable changes over the agility and flexibility of men kabaddi players. Tandel, B. S. (2018) [7]. Effect of strength training on selected physical variables of kabaddi players. Hence, it concluded that for agility and flexibility improvement of inter collegiate men kabaddi players.

Conclusions

From the results of the study and discussion the following conclusions were drawn.

1. Based on the result of the study it was concluded that the 8 weeks training of resistance training have been significantly improved agility of inter collegiate men kabaddi players.
2. The 8 weeks training of resistance training have been significantly improved flexibility of inter collegiate men kabaddi players.

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