



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2019; 4(1): 635-636

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www.theyogicjournal.com

Received: 10-11-2018

Accepted: 12-12-2018

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Effect of SAQ training on speed and reaction time among Kabaddi players

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Abstract

The main aim of this study is to find out the effect of SAQ training on speed and reaction time among Kabaddi players. To attain the purpose, 24 Kabaddi players were selected from Thoothukudi District Kabaddi clubs and their age ranged from 18 to 24 years. The subjects were randomly divided into two groups with 12 subjects each namely experimental and control groups. Experimental group underwent SAQ training programme for a period of 12 weeks with alternative three days. Speed and reaction time were selected as dependent variables and they were measured by 50m run and snatch card drop tests respectively. Pre and post tests randomized control group design was used as experimental test. The collected data from the subjects were analyzed with the dependent t- test and Analysis of covariance. It was concluded that speed and reaction time had significantly improved due to 6 weeks of intensive interval training and control group didn't produced any changes on speed and reaction time. Experimental group significantly differed with control group at .05 level of significance.

Keywords: SAQ, speed and reaction time, Kabaddi

Introduction

The SAQ exercise is a training method that has been commonly used by athletes, both beginners and advanced, in recent times. According to Mario *et al.* (2011), SAQ is an acronym of the transitional Speed, Agility and Quickness.

Palaniswamy & Velmurugan (2012) ^[8] noted that SAQ exercises incorporated in the modern training system produced, within a single training programme, the integrated effects of many physical capacities. Also, (Remco, Jonathan, & Andrew, 2009) ^[6] contend that training systems integrated with SAQ are designed for improvement of compatibility of acceleration between the hand and the eye along with the explosive power and the response speed. That exercises SAQ integrated training system is designed to improve acceleration, compatibility between the Eye and the hand, the explosive power, the speed of response (Remco, Jonathan, & Andrew, 2009) ^[6].

Exercise of speed, agility, and quickness (SAQ) has become a popular way to train athletes. Speed, agility, and quickness to cover the complete spectrum intensity of exercise, from low intensity to high intensity. SAQ drills can also be used to teach movements, such as heating, or to improve the physical condition of athletes (Sharma, Dhapola, 2015) ^[7].

Purpose of the study

The purpose of the study is to find out the effect of SAQ training on speed and reaction time among Kabaddi players.

Methodology

To achieve the purpose, 24 Kabaddi players were selected from Thoothukudi District Kabaddi clubs and their age ranged from 18 to 24 years. The subjects were randomly divided into two groups with 12 subjects each namely experimental and control groups. Experimental group underwent SAQ training programme for a period of 12 weeks with alternative three days. Speed and reaction time were selected as dependent variables and they were measured by 50m run and snatch card drop tests respectively. Pre and post tests randomized control group design was used as experimental test. The collected data from the subjects were analyzed with the dependent t- test and Analysis of covariance. The level of significance fixed as 0.05.

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Analysis of Data

Table 1: Summary of the Mean, Standard Deviation and Dependent t-test on speed and reaction time between experimental and control groups among Kabaddi players

| Variables | Test | Experimental Group | | Control group | |
|---------------|-----------|--------------------|----------------|---------------|----------------|
| | | Mean | Std. Deviation | Mean | Std. Deviation |
| Speed | Pre test | 7.86 | 0.12 | 7.86 | 0.13 |
| | Post test | 7.46 | 0.12 | 7.83 | 0.12 |
| | T-test | 9.38* | | 0.67 | |
| Reaction time | Pre test | 50.25 | 1.60 | 50.83 | 1.75 |
| | Post test | 44.67 | 2.61 | 51.00 | 1.81 |
| | T-test | 17.85* | | 0.25 | |

*Significance level at 0.05 with df t_{11} is 2.20.

The above table shows that the obtained t- test value for experimental group on speed and reaction time are 9.38 and 17.85 respectively, which are greater than the tabulated t-test value of 2.20 with df 11 at.05 level of significance. It indicates that there is a significant improvement on speed and reaction time due to the effect of 12 week of SAQ training among Kabaddi players and also control group found no significant improvement.

Table 2: Summary of the adjusted mean value and F-ratio on speed and reaction time between experimental and control groups among Kabaddi players

| Variable | SS | df | MS | F Ratio |
|---------------|---------|----|---------|---------|
| Speed | 3.25 | 1 | 3.25 | 232.93* |
| | 0.29 | 21 | 0.01 | |
| Reaction time | 1550.92 | 1 | 1550.92 | 465.07* |
| | 70.03 | 21 | 3.33 | |

*Significance level at 0.05 with df $f_{(1,21)}$ is 4.32

The above table shows that the obtained F- value for speed and reaction time are 232.93 and 465.07 respectively, which are greater than the tabulated F-value of 4.32 with df 1 and 21 at.05 level of significance. It indicates that there is a significant difference between the experimental and control group on speed and reaction time among Kabaddi players.

Discussion on findings

The results of the studies indicated that there is a significant improvement on speed and reaction time due to the effects of 12 weeks of SAQ training among Kabaddi players. Also there is a significant difference between experimental and control groups on speed and reaction time.

The results of the present study is also supported with the following studies. According to Jovanovic, Sporis, Omrcen, & Fiorentini, (2011) [2] evaluated the effects of the speed, agility, quickness (SAQ) training method on power performance in soccer players. Milanovic, Z., Sporis, Trajkovic, Sekulic, James, & Vuckovic, (2014) [4] determined the effects of a 12 week speed, agility and quickness (SAQ) training program on speed and flexibility in young soccer players. Azmi, & Kusnanik, (2018) [1] aimed to analyze the effect of speed, agility and quickness training program to increase in speed, agility and acceleration. Walker, Lennemann, Doczy, Klein, Sidrow, & Harrison, (2010) [9] determine how substituting agility training for traditional linear running influences physiological and cognitive performance. Karthick, Radhakrishnan, & Kumar, (2016) [3] investigate effects of SAQ training on selected physical fitness parameters and kicking ability of High School Level male Football Players. Mohamed, & Larion, (2018) [5] investigated the effect of SAQ training on certain physical variables and performance level for sabre fencers.

Conclusions

1. There was a significant improvement on speed and reaction time due to the effects of 12 weeks of SAQ training among Kabaddi players.
2. There was a significant difference between experimental and control groups on speed and reaction time among Kabaddi players.
3. Control group had no significant improvement on speed and reaction time.

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