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Influence of SAQ training on selected physical fitness variables of volleyball players

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Abstract

The purpose of the study was to investigate the effect of SAQ training on selected physical fitness variables of volleyball players. Thirty out of players were randomly selected from Navarasam Arts and Science College of women Erode, the selected players were divided into two groups consisting of 15 players. No attempt was made equate the groups. The age of the subjects ranged between 18 to 25 years. The influence of the SAQ training was assessed on selected variables. 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 posttest means of all groups. Pre and post test was conducted on separate days with warm up. The speed measured by 50 meter dash in seconds, muscular strength endurance measured by sit-ups in counts. Further, the findings confirmed the SAQ training is suitable protocol to bring out the desirable changes over the speed, muscular strength of volleyball players.

Keywords: SAQ training, volleyball players, speed, muscular strength endurance

Introduction

The SAQ training method more frequently uses the programmed than random type conditioning after the SAQ continuum. One SAQ session is composed of 7 components, where the main part of the session, explosion and expression of potential, are combinations of programmed and random conditioning. Integral planning and programming is required to progress from fundamental movement patterns to highly positional specific movements. A logical sequence in the learning process must not be neglected because it develops neural structures that are a prerequisite for elite-level upgrade. On sequent, elite players manipulate with their bodies without the loss of speed, balance, strength, and control. Also, with correct movement patterns (technique) and greater muscle power, they accelerate faster. Agility is very important when it comes to soccer players. Not only do they use it to outmaneuver the opposition but it also helps in preventing injuries. Optimal activation and inhibition of muscle fibers can prevent muscle tears and even more prevent the joints from injuries. Jullien *et al.* (2013)

Pearson mentions 4 elements of agility such as balance, coordination, programmed and random agility all of which are used on the SAQ continuum with appropriate volume and intensity with regard to athletes' age and level of motor readiness. The purpose of this study, in agreement with the previously referred, was to determine how much the SAQ training actually influences the power performance parameters of elite soccer players during in-season period. Omcen (2011) ^[3]

Methodology

In order to address the hypothesis presented herein, we selected 30 volleyball players from Navarasam Arts and Science College of women Erode District. Their age ranged from 18 to 25 years. The subjects were randomly assigned in to two equal groups namely, SAQ training Group (SG) (n = 15) and Control group (CG) (n = 15). The respective training was given to the experimental group the 6 days of the weeks for the training period of eight weeks.

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The control group was not given any sort of training except their routine. The evaluated fitness variables were speed was assessed by 50 meter dash unit of measurement was in seconds, muscular strength endurance was assessed by sit-ups unit of measured was in counts. The parameters were measured at baseline and after 8 weeks of circuit training with pranayama were examined. The intensity was increased once in two weeks based on the variation of the exercises. The training programme was lasted for 30 minutes for session in a day, 6 days in a week for a period of 8 weeks duration. These 30 minutes included warm up for 5 minutes, 20 minutes SAQ training and 5 minutes warm down. The equivalent in SAQ training is the length of the time each action in total 6 day per weeks.

Table 1: computation of 't' ratio on speed on experimental group and control group (Scores in Numbers/seconds)

Groups	Pre test	Post test	Numbers	SD	"T" Ratio
Experimental Group	3.45	3.30	15	0.04	15.09*
Control group	3.16	3.15	15	0.06	1.14

*significant level 0.05 level (degree of freedom 2.14, 1 and 14)

Table I reveals the computation of mean, standard deviation and 't' ratio on selected variables namely speed of experimental group. The obtained 't' ratio on speed were 15.09 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 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 speed of control group. The obtained 't' ratio on speed were 1.14 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 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.

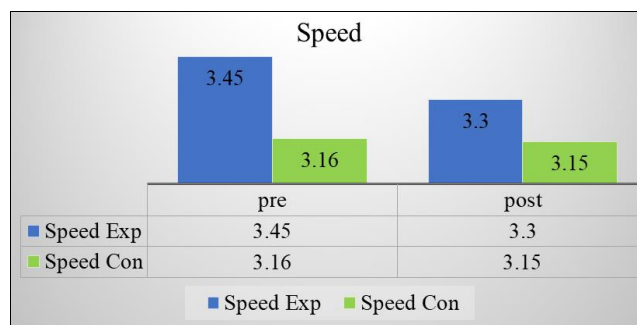


Fig 1: Bar diagram showing the mean value on speed of basketball players on experimental and control group

Table 2: Computation of 't' ratio on muscular strength endurance on experimental group and control group (Scores in Numbers/seconds)

Groups	Pre test	Post test	Numbers	SEM	"T" Ratio
Experimental Group	32.20	36.00	15	0.26	14.51*
Control group	29.66	29.33	15	0.18	1.78

*significant level 0.05 level (degree of freedom 2.14, 1 and 14)

Table I reveals the computation of mean, standard deviation and 't' ratio on selected variables namely muscular strength endurance of experimental group. The obtained 't' ratio on muscular strength endurance were 5.25 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 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 muscular strength endurance of control group. The obtained 't' ratio on muscular strength endurance were 0.94 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 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.

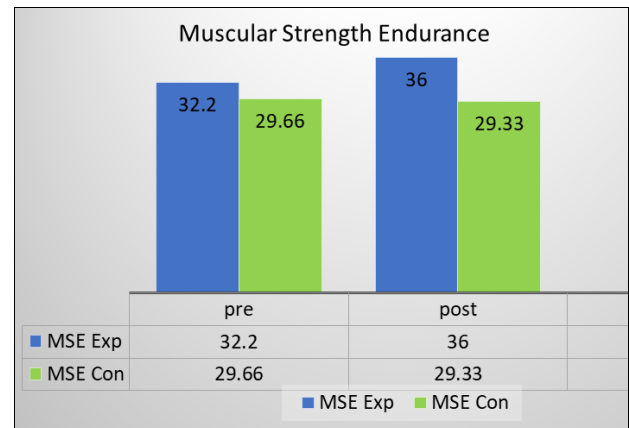


Fig 2: Bar diagram showing the mean value on muscular strength endurance of basketball players on experimental and control group

Discussion and findings

The present study experimented the influence of eight week's SAQ training on the selected the fitness variables of volleyball players. The results of this study indicated that SAQ training is more efficient to bring out desirable changes over the ability of volleyball players. The findings of the present study had similarity with the findings of the investigations referred in this study. However the subjects participated in the control group did not improve their speed, muscular strength endurance.

Vega *et al.*, (2013) reported that the SAQ training program was effective to increase and maintain both muscular and cardiovascular endurance among schoolchildren.

Manickam (2013) suggests that there was a significant improvement on selected strength and endurance parameter namely leg strength and strength endurance.

Taşkın (2009) [8] indicated that the SAQ training, which is designed to be performed 3 days a week during 10 weeks of training, improves sprint-agility and anaerobic endurance.

Sarachandra (2014) reported that the SAQ training was significantly improved the speed and agility among young high school football players.

Hofstetter *et.al.*, (2011) [9] indicated that the SAQ training session per week led to greater improvements in total physical fitness score, but did not increase injury rates.

Sethy *et al.*, (2010) suggested that the SAQ training is effective in improving muscle strength and endurance, and in decreasing the fatigue of the subject thereby improving the subject's ability to walk.

Hence, it was concluded that for fitness components of improvement on SAQ training of volleyball 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 of SAQ training have been significantly improved speed of volleyball players.

2. The 8 weeks of SAQ training have been significantly improved muscular strength endurance of volleyball players.

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