ORIGINAL RESEARCH PAPER | Physical Education | Volume : 6 | Issue : 8 | August 2016 | ISSN - 2249-555X | IF : 3.919 | IC Value : 74.50

Effect of SAQ Training on Selected Physical Responses Among College Men Students

KEYWORDS: SAQ Training, Speed, Quickness and Agility

R.Rajkumar
Ph.D (Part Time Research Scholar) Alagappa University College of Physical Education, Alagappa University, Karaikudi

Dr.K.Divya
Assistant Professor, Alagappa University College of Physical Education, Alagappa University, Karaikudi

ABSTRACT *The purpose of the present study was to investigating the Effect of SAQ training on selected physical responses among college men students. To achieve this purpose, 30 college students will be randomly selected from Alagappa University College of Physical Education in Karaikudi; Tamil Nadu.The subjects' age ranges from 18 to 25 years. The selected subjects thirty (N=30) were divided into two groups equally and randomly, of which Experimental Group I undergo SAQ training and Group II Control group will be asked to take part in any training during the course of the study. The experimental groups was be treated with their respective training for a period of six weeks, three days a week; one session each day, each session lasted maximum 60 minutes. The selected dependent variable namely speed, quickness and agility were being taken as criterion variable in this study. All the subject were tested prior to and immediately after the experimental period on the selected dependent variables. The data will be collected before and after the experimental treatment. The data obtained from the experimental period will be statistically analyzed with dependent 't' – test The level of significance will be fixed at .05 level of confidence for all the cases. From that it can be clearly noticed that SAQ training group responded to the training with more positive influences of speed, quickness and agility responses when compared with the control group. The SAQ training group responded better when compared with the control group.*

INTRODUCTION

Speed Agility and Quickness (SAQ) training Speed, agility and quickness training has become a popular way to train athletes. Whether they are school children on a soccer field or professionals in a training camp, they can all benefit from speed, agility and quickness training. This method has been around for several years, but it is not used by all athletes primarily due to lack of education regarding the drills. Speed, agility and quickness training may be used to increase speed or strength, or the ability to exert maximal force during high-speed movements. It manipulates and capitalizes on the stretch-shortening cycle while bridging the gap between traditional resistance training and functional-specific movements. Some benefits of speed, agility and quickness training include increases in muscular power in all multi planar movements, brain signal efficiency, kinesthetic or body spatial awareness, motor skills and reaction time (Brown, Ferrigno & Santana, 2000).

Speed, agility and quickness training can cover the complete spectrum of training intensity, from low to high intensity. Every individual will come into a training program at a different level; thus training intensities must coincide with the individual's abilities. Low intensity speed, agility and quickness drills can be used by everyone for different applications. No significant preparation is needed to participate at this level of speed, agility and quickness training. Higher intensity drills require a significant level of preparation. A simple approach to safe participation and increased effectiveness is to start concurrent strength training program when starting speed, agility and quickness training (Brown, Ferrigno & Santana, 2000).

Speed, agility, and quickness are some of the most significant, and visible components of athletic success. An improvement in the ability to react quickly, apply significant force rapidly in the appropriate direction, and to redirect that force if needed is the ultimate goal of a program to improve speed, agility, and quickness. A carefully designed program that addresses these factors of athleticism significantly improves overall performance and reduces the risk of injury. Speed, agility, and quickness all involve learned motor skills. Although the magnitude of proficiency will vary with each individual, learning the efficient and effective execution of these skills can improve overall athletic ability (Brown, Ferrigno & Santana, 2000).

METHODS

Thirty men college students of age 18 to 25 years from Alagappa University College of Physical Education College, Karaikudi, Tamil Nadu were selected as subjects at random to undergo the training. They were divided into three groups namely SAQ training group (Experimental group I) and control group (group II) each consists of 15 subjects. The experimental groups (I) were subjected to six weeks of SAQ training respectively, and the group II acted as control. The experimental groups I used speed training of "A" March Walk , "B" March, Ladder speed run, "A" Skips, "B" Skips, Ladder stride runs, Partner assisted lets go, Partner-resisted starts ,Run through (Hurdle drill), Agility training of Z-Pattern cuts, Zig Zag ,T-Drill ,Dot drill, Hexagon drill, Change of direction & Quickness training of Back pedal Side Shuffle, Foot tapping, frequency and the load given were progressively increased from 50%,60%,70% intensity level SAQ training drills respectively for one hour per day for three days a week for a period of six weeks. The subjects of all the three groups were tested on speed, agility and quickness prior to and after the training period.

To ascertain speed of the subjects was used 50Mts Dash were administered mean value count by Seconds.

To ascertain agility of the subjects was used Hexagonal Obstacle Test were administered mean value count by Seconds.

Volume : 6 | Issue : 8 | August 2016 | ISSN - 2249-555X | IF : 3.919 | IC Value : 74.50

To ascertain quickness of the subjects was used Human benchmark online reaction Test were administered mean value count by Mille seconds.

STATISTICAL TECHNIQUE

The following statistical procedures were used. The "t" ratio was calculated to find out the significance of the difference between the mean of the initial and final test of the experimental group.

Analysis of the Data

The data retraining to speed, quickness and agility for both experimental and control groups were tested by't' test. The level of significant was fixed at 0.05 levels.

RESULTS AND DISCUSSION

Table No.1. Difference in Mean of Experimental and Control Group in Speed, Agility and Quickness

(Speed mean value measure by 50 Mts Dash in Seconds)						
Groups	Mean		Mean Difference	S.D.	Standard Error	't' ratio
	Pre	Post				
Experimental	7.812	7.59	.222	.147	.038	5.838*
Control	7.837	7.867	.03	.168	.043	.691
(Agility mean value measure by Hexagonal Obstacle Test in Seconds)						
Groups	Mean		Mean Difference	S.D.	Standard Error	't' ratio
	Pre	Post				
Experimental	16.21	15.792	.418	.5127	.132	3.157*
Control	18.138	18.289	.151	.891	.230	.657
(Quickness mean value measure by Human benchmark online reaction time test in Mille Seconds)						
Groups	Mean		Mean Difference	S.D.	Standard Error	't' ratio
	Pre	Post				
Experimental	367	366.72	.282	.320	.082	3.41*
Control	374.27	374.41	.145	2.546	.657	.221

***Significance at 0.05 level; Number of subject in each group is 15**

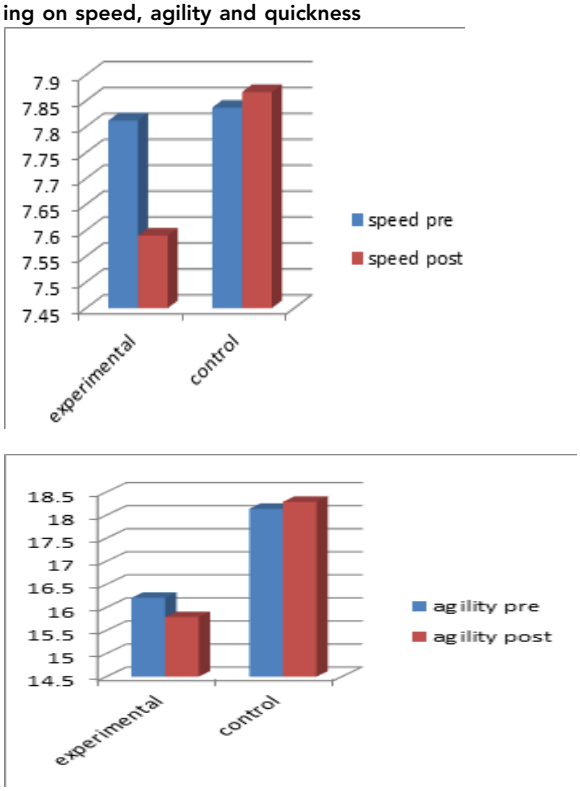
Table value required for significant at 0.05 level with df 28 table value are 2.04 respectively.

The speed Table shows that the mean values of pre-test and post-test of control group on speed were 7.8373 and 7.8673 respectively. The obtained 't' ratio was .691, since the obtained 't' ratio was less than the required table value of 2.04 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of experimental group on speed were 7.812 and 7.59 respectively. The obtained 't' ratio was 5.83* since the obtained 't' ratio was greater than the required table value of 2.04 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in speed. It may be concluded from the result of the study that experimental group improved in speed due to six weeks of SAQ training.

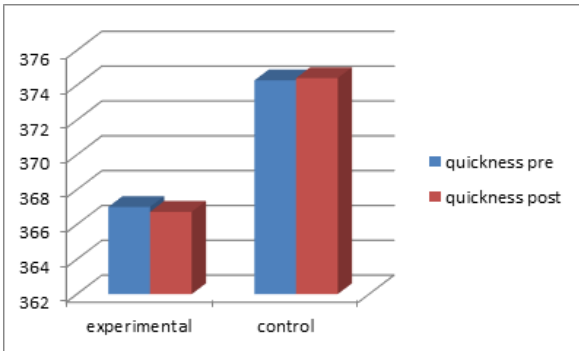
The agility Table shows that the mean values of pre-test and post-test of control group on speed were 18.138 and 18.289 respectively. The obtained 't' ratio was .657, since the obtained 't' ratio was less than the required table value of 2.04 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of experimental group on agility were 16.21 and 15.792 respectively. The obtained 't' ratio was 3.157* since the obtained 't' ratio was greater than the required table value of 2.04 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in agility. It may be concluded from the result of the study that experimental group improved in agility due to six weeks of SAQ training.

The quickness table shows that the mean values of pre-test and post-test of control group on speed were 374.27 and 374.4 respectively. The obtained 't' ratio was .221, since the obtained 't' ratio was less than the required table value of 2.04 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of experimental group on quickness were 367 and 366.72 respectively. The obtained 't' ratio was 3.410* since the obtained 't' ratio was greater than the required table value of 2.04 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in quickness. It may be concluded from the result of the study that experimental group improved in quickness due to six weeks of SAQ training.

Figure I. Bar diagram shows mean values of SAQ training on speed, agility and quickness



Volume : 6 | Issue : 8 | August 2016 | ISSN - 2249-555X | IF : 3.919 | IC Value : 74.50



DISCUSSION OF FINDING

The SAQ training groups showed improvements in speed than active control group. Speed performance of the SAQ training group showed 2.02% improvement from pre-to post-test. This finding is in agreement with the studies of Young, McLean & Ardagna, (1995) and Delecluse, (1997) for speed performance of athletes. The underlying mechanisms require further investigation, but SAQ training appears to be an effective way of improving speed.The SAQ training group showed larger improvements in agility than PLYO and active control groups. Agility performance of the SAQ training group showed 7.17% improvement from pre-to post test. This finding is in agreement with the studies of Young, James, and Montgomery, (2002) for agility performance of handball players. Plyometric training shows improved performance in quickness tests either because of better motor recruitment or neural adaptations. It is clear from this study that agility performance can be improved through PLYO training, However, SAQ training showed greater improvement in quickness than PLYO training.

Conclusion

There was a significant difference between experimental and control group on speed, agility and quickness variables after the exercise period.

There was a significant improvement in speed, agility and quickness variables. However the improvement was in favour for experimental group compare better than the control group due to six weeks of SAQ training.

REFERENCES

1. Brown LE, Ferrigno VA, and Santana JC. (2000). Training for Speed, Agility and Quickness. Champaign, Illinois: Human Kinetics.
2. Castello, F., and Kreis, E.J.(1993). Sports Agility. Nashville, TN: Taylor Sports.
3. Young, W.B., McLean, B. and Ardagna, J. (1995). Relationship between strength qualities and sprinting performance. Journal of Sports Medicine and Physical Fitness, 35, 13–19.
4. Young W. B., James R., Montgomery I. (2002). Is muscle power related to running speed with changes of direction? The Journal of Sports Medicine and Physical Fitness, 42(3): 282-8.
5. Jovanovic, M, Sporis, G, Omrcen, D, and Fiorentini, F. (2011). Effects of speed, agility, quickness training method on power performance in elite soccer players. J Strength Cond Res.25(5): 1285–1292.