



Efficacy of speed agility quickness drills on selected bio-motor abilities among university athletes

Dr. P Kanagasabai¹, Dr. S Manikandan², Dr. C Lakshmanan³

¹ Professor of Physical Education (Retd), Annamalai University, Chidambaram, Tamil Nadu, India

² Professor Department of Physical Education, Tamilnadu Physical Education and Sports University, Chennai, Tamil Nadu, India

³ Assistant Professor Department of Physical Education Tamilnadu Physical Education and Sports University Chennai, Tamil Nadu, India

Abstract

The purpose of the study was to find out the effect of SAQ drills training on selected bio-motor abilities among university athletes. To achieve this purpose, thirty male athletes (Jumpers, Throwers and Sprinters) were selected as subjects, their aged between 18 to 24 years, they are studying in the various faculties of Annamalai University, chidambaram, Tamil Nadu. The selected subjects were divided into two equal groups of fifteen subjects each, namely SAQ drills group and control group. The experimental group trained for three alternative days in a week for eight weeks with three sets per exercise per session at 60 to 80% with a progressive increase in load with the number of weeks. Speed and agility were selected as criterion variables and they were tested by using 50 meters dash and shuttle run respectively. ANCOVA was used to find out the significant difference if any between the groups. The results of the study showed that there was a significant difference on speed and agility between experimental group and control group.

Keywords: SAQ drills, plyometric training, BIO-MOTOR abilities, speed and agility

Introduction

Sports have become an important part of Nation's cultural as well as of other cultures throughout the world. Sports pervade society to such an extent that it has been described by many as a microcosm of society. Training and conditioning enables an athlete to complete at a higher level and prepares him for other events by getting fit and strong and by improving his skills. A training individual is in a better state of physical fitness than the individual who follows a sedentary, and inactive life.

SAQ (Speed, Agility, Quickness) training and conditioning enables an athlete to compete at a higher level and prepares him for other events by getting fit and strong and by improving his skills.

Training is used for the lower body, upper body and core to enhance speed of movement in more specific skills. SAQ training helps athletes learn greater balance, co-ordination, quickness, agility, speed and power.

SAQ movements are performed in a wide spectrum of sports. In establishing the aim of plyometric training we must proceed from the definition of the general concept of training. We have stated that plyometric training is a means of achieving higher standard performances in athletics.

Methodology

The purpose of the study was to find out the effect of SAQ drills training on selected bio-motor abilities among university athletes. To achieve this purpose, thirty male athletes were selected as subjects, their aged between 18 to 24 years, they are studying in the various faculties of Annamalai University, Chidambaram, Tamil Nadu. The selected subjects were divided into two equal groups of fifteen subjects each, namely SAQ drills group and control group. The experimental group trained for three alternative days in a week for eight weeks with three sets per exercise per session at 60 to 80% with a progressive increase in load with the number of weeks. Speed and agility were selected as criterion variables and they were tested by using 50 meters dash and shuttle run respectively. ANCOVA was used to find out the significant difference if any between the groups.

Experimental Design and Statistical Procedure

The experimental design used for the present investigation was random group design involving 30 subjects for training effect. Analysis of Covariance (ANCOVA) was used as a statistical technique to determine the significant difference, if any, existing between pretest and posttest data on selected dependent variables separately and presented in Table-I.

Table 1

Variables	Test		SAQ drills Training Group	Control Group	Source of Variance	SS	df	Mean Square	'F' Ratio
Speed	Pre test	Mean	7.24	7.17	Between	0.03745	1	0.03745	0.520
		S.D	0.26	0.28	Within	2.017	28	0.07202	
	Post test	Mean	6.69	7.12	Between	1.391	1	1.391	13.807
		S.D	0.22	0.39	Within	2.821	28	0.101	
	Adjusted Post test	Mean	6.65	7.15	Between	1.823	1	1.823	48.517
					Within	1.014	27	0.03757	
Agility	Pre test	Mean	10.93	10.99	Between	0.033	1	0.033	0.742
		S.D	0.252	0.162	Within	1.259	28	0.04495	
	Post test	Mean	10.73	10.96	Between	0.385	1	0.385	22.049
		S.D	0.123	0.141	Within	0.489	28	0.0175	
	Adjusted Post test	Mean	10.73	10.96	Between	0.336	1	0.336	20.307
					Within	0.446	27	0.01653	

(The table value required for significant at .05 level with df 1 and 28; and 1 and 27 are 4.20 and 4.215 respectively).

Results

The pretest mean of experimental group and control group on speed (7.24 ± 0.26 Vs 7.17 ± 0.28) resulted in a 'F' ratio of 0.52. The posttest mean of experimental group and control group (6.69 ± 0.22 Vs 7.12 ± 0.39) resulted in a 'F' ratio of 13.807. The adjusted posttest mean of experimental group and control group (6.65 Vs 7.15) resulted in a 'F' ratio of 48.517. The results of the study indicate that there was a significant difference between experimental group and control group on speed.

The pretest mean of SAQ drills group and control group on agility (10.93 ± 0.25 Vs 10.99 ± 0.16) resulted in a 'F' ratio of 0.742. The posttest mean of experimental group and control group on agility (10.73 ± 0.123 Vs 10.96 ± 0.141) resulted in a 'F' ratio of 22.049. The adjusted posttest mean of SAQ drills group and control group on agility (10.73 Vs 10.96) resulted in 'F' ratio of 20.307. The results of the study indicate that there was a significant difference between experimental group and control group on agility.

Discussion

The result of the study indicates that the SAQ drills training group had significantly improved the selected dependent variables namely speed and agility. However, control group did not show any improvement on the selected variables as it was not involved in any of the specific training means. The result of the study in consonance with the findings of plyometric training has produced significant improvement on speed and agility. Athletes stops abruptly and changes direction quickly, to do this, he drops his center of gravity lows, leans away from the direction of run; plants the feet and this they keeps his body under control, by offsetting the centrifugal force, he is ready to push of in the desired direction. It is inferred from the results of the present study that all the dependent variables were significantly improved due to the influence of SAQ drills programme.

Conclusion

It is concluded that the SAQ drills training program has resulted in significant improvement on selected Bio-Motor abilities such as speed and agility among university athletes.

References

1. Cronin JB, Hansen KT. Strength and Power Predictors of Sports Speed. *J Strength Cond. Res.* 2005; 19(2):349-57.
2. Donald Chu A. *Jumping into Plyometrics*, (New York: Human Kinetics Publishers), 1998, 1.
3. Fredrick Haffield C. and Michael Yessis, *Plyometric Training Achieving Power and Explosiveness in Sports* (Fitness System), 1986.
4. John M. Cooper, *Track and Field for Coach and Athletes*, (Englewood Cliffs: NJ. Prentice Hall, Inc.), 1959, 162-163.
5. John Bunn W. *Scientific Principles of Coaching*, (2nd ed., Englewood Cliffs, New Jersey: Prentice Hall, Inc.), 1972, 125.
6. Pothemus, Burkhard. The Effects of Plyometric Training Drills on the Physical Strength Gains of Collegiate Football Players. *National Strength and Conditioning Association Journal*, 1990; 2:13-15.
7. Walter Winter Bottom, *Soccer Coaching*, (2nd ed., London: The Naldrett Press,), 1954, 54-67.
8. Watson AWS. *Physical Fitness and Athletic Performances*, (New York: Longman Inc.), 1983.
9. Wilf, Evelyn Freeman, *Plyometrics*, Iowa Championship Books, 1984.