



COMPARATIVE EFFECT OF SAQ TRAINING WITH AND WITH OUT SPEED TRAINING ON SPEED AND ACCELERATION AMONG COLLEGE STUDENTS

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ABSTRACT

The purpose of the study was to compare the effect of SAQ Training with and without speed training on speed and acceleration among college students. Twenty four college students studying their B.P.E.S course from St. John's college of physical education, veeravanallur were selected randomly as subjects. The age of the subjects ranged from 19 to 21 years. The selected subjects were divided into two groups. Group I underwent SAQ training with Speed training and Group II underwent SAQ training without speed training. The experimental groups (SAQ training with speed and SAQ training without speed training) were subjected to the respective trainings for alternative three days for up to six weeks. The SAQ training with speed training and SAQ training without speed training were selected as independent variables and the criterion variables speed and acceleration were selected as dependent variables and the selected dependent variables were assessed by the standardized test items. speed was assessed by 50 Meters test and the unit of measurement in seconds, and acceleration was assessed by 30 Meters Fly test and the unit of measurement in seconds. The experimental design selected for this study was pre and post test randomized design. The data were collected from each subject before and after the training period and statistically analyzed by using dependent 't' test and analysis of covariance (ANCOVA). It was found that there was a significant improvement and significant difference exist due to the effect of SAQ training with speed training and SAQ training without speed training on speed and acceleration.



KEY WORDS : SAQ Training , physical education , Speed training.

INTRODUCTION

SAQ (Speed, Agility and Quickness) training is highly related with all sports and games, aimed at improving the fundamental movement skills, balance and posture of the body. Now a days, the enhancement of sports sciences the sports persons are need with the demands of the modern games. In physical fitness terms it is sports involving a vast collection of movement, bursts and activity changes ([www. Assert.softball.org.au](http://www.Assert.softball.org.au))

In recent times, the 'speed, agility and quickness' (SAQ) training method has become a popular method in the conditioning of athletes. It originated in the USA in the 1980's and was made popular by several American football coaches. Since then it has been altered for use in many sports (**Polman et al, 2004**).

Baechle (1994) defined speed as "the rapidity of movement" (**Brown, Woodman & Yap, 2000**). Agility is the rapid whole body movement with change of velocity or direction in response to a stimulus (**Sheppard & Young, 2006**). **Moreno (1995)** defined quickness as "the ability to read and react to a situation;

it is a multidirectional skill that combines explosiveness, reactivity, and acceleration” (**Brown, Woodman & Yap, 2000**). SAQ aims to coach the necessary techniques to provide the basic skill to complete the movements.

Polman, Bloomfield & Edwards (2009) stated that the SAQ training method “involves progressive exercises to develop an athlete’s ability to be more skilful at faster speeds and with greater precision”. **Reilly (1997)** suggested that games players require a high level of physical fitness to cope with the demands of the game (**Brown, Woodman & Yap, 2000**). Therefore it is essential that coaches condition their athletes in an effective manner to improve their sport specific attributes and prepare them for competition.

Many game sports (eg football, rugby, hockey) involve a mix of intermittent, dynamic and skilled movement activities. This poses a problem for coaches and staff as to how they train the players to achieve the correct balance of fitness. The fitness attributes required for games sports are extensive and include; high aerobic and repeat sprint capacity, muscular strength and endurance, speed, agility, quickness and flexibility (**Bloomfield et al, 2007**).

METHODOLOGY

To achieve the purpose, twenty four college students studying B.P.E.S. course from St. John’s college of physical education, veeravanallur were selected randomly as subjects. The age of the subjects ranged from 19 to 21 years. They were assigned randomly into two groups (group I) underwent SAQ training with speed training and (group II) underwent SAQ training without speed training of twelve subjects each. The experimental groups were subjected to the both trainings (SAQ training with speed training and SAQ training without speed training) during morning hours for three alternative days. SAQ training with speed training and SAQ training without speed training were selected as independent variable and the criterion variables speed and acceleration were selected as dependent variables and the selected dependent variables were assessed by the standardized test items. Speed was assessed by 50 meters run test and the unit of measurement in seconds, and acceleration was assessed by 30 meters fly test and the unit of measurement in seconds. The experimental design selected for this study was pre and post test randomized design. The data were collected from each subject before and after the training period and statistically analyzed by using dependent ‘t’ test and analysis of covariance (ANCOVA).

RESULTS AND DISCUSSIONS

The data pertaining to the variables in this study were examined by using dependent ‘t’ test to find out the significant improvement and analysis of covariance (ANCOVA) for each variables separately in order to determine the difference and tested at .05 level of significance. The analysis of dependent ‘t’ test on data obtained for speed, and acceleration of the pre test and post test means of experimental and control group have been analyzed and presented in Table I.

TABLE- I
MEAN AND DEPENDENT 't' TEST OF EXPERIMENTAL GROUPS ON SELECTED VARIABLES

Variables	Mean	SAQ Training With Speed Training	SAQ Training Without Speed Training
Speed	Pre test Mean	7.52	7.41
	Post test Mean	7.50	7.39
	't' test	10.38*	8.86*
Acceleration	Pre test Mean	4.20	4.10
	Post test Mean	4.18	4.08
	't' test	16.26*	25.00*

*Significant at 0.05 level of confidence (11) = 2.201

The obtained 't' ratio value on Speed and Acceleration of experimental groups is higher than the table value, it is understood that the SAQ Training With Speed Training and SAQ Training without Speed Training have made significant improvement on Speed and Acceleration Hence, both Training (SAQ Training with Speed Training and SAQ Training without Speed Training) were improved the post test value on Speed and Acceleration. The analysis of covariance on the data obtained on speed and acceleration due to the effect of SAQ training with speed training and SAQ training without speed training have been analysed and presented in Table II.

TABLE- II
ANALYSIS OF COVARIANCE OF EXPERIMENTAL GROUPS ON SELECTED VARIABLES

Variables	Adjusted Post Test Means		Source of Variance	SS	df	Mean Squares	'F'- Ratio
	SAQ Training with Speed Training	SAQ training without Speed Training					
Speed	7.44	7.45	Between	.000	1	.000	5.74*
			Within	.001	21	000005.235	
Acceleration	4.13	4.12	Between	000005.836	1	000005.836	3.26*
			Within	.000	21	000001.79	

*Significant at .05 level of confidence, df (1, 21) = 4.32

Table II shows that the obtained 'F' ratio value is 5.74 and 3.26 which are higher than the table value 4.32 with df 1 and 21 required to be significant at 0.05 level. Since the obtained value of 'F' ratio is higher than the table value, it indicates that there is significant difference has made among the adjusted post- test means of SAQ Training with Speed Training and SAQ Training without Speed Training on Speed and Acceleration.

The SAQ Training with Speed Training may influence the significant difference in improving the selected dependent variables namely speed and acceleration when compared to SAQ training without speed training.

CONCLUSIONS

1. The SAQ training with speed training had significantly improved the speed and acceleration.
2. The SAQ training without speed training had significantly improved the speed and acceleration.
3. There was significant difference among the adjusted post – test means of SAQ training with Speed Training and SAQ training without Speed Training on speed and acceleration.
4. SAQ Training With Speed Training had significant difference in improving the selected dependent variables namely speed and acceleration when compared to SAQ training without Speed training

REFERENCES

- “SAQ: Speed, Agility, Quickness Training System”. Retrieved from <http://www.assets.softball.org.au/dl/sal/coaching/Resource///>. On 16/09/2014.
- Bloomfield, J., Polman, R., O’Donoghue, P. & McNaughton, L. (2007) ‘Effective Speed and Agility Conditioning Methodology for Random Intermittent Dynamic Type Sports’, *Journal of Strength and Conditioning Research*, 21(4), pp. 1093–1100.
- Brown, L., Woodman, G., & Yap, C. (2000) ‘Development of Speed, Agility, and Quickness for the Female Soccer Athlete’, *National Strength & Conditioning Association*, 22(1), pp. 9-12.
- Sheppard, J. & Young, W. (2006) ‘Agility literature review: Classifications, training and testing’, *Journal of Sports Sciences*, 24(9), pp. 919-932.
- Brown, L., Woodman, G., & Yap, C. (2000) ‘Development of Speed, Agility, and Quickness for the Female Soccer Athlete’, *National Strength & Conditioning Association*, 22(1), pp. 9-12.