EFFECT OF DIFFERENT PACKAGES OF TRAINING ON SELECTED MOTOR ABILITY COMPONENTS AND PHYSIOLOGICAL VARIABLES OF COLLEGE FOOTBALL PLAYERS

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Abstract

The study was to access to effect of different packages of training on selected motor ability components and physiological variables of college football players. 45 football players from Alagappa University, Karaikudi, TamilNadu at age ranged between 17 to 21 years. The selected subject was assigned into three equal groups with fifteen subjects with each group. The experimental group-I plyometric group, experimental group-II, S A Q training and control group. The experimental groups were under 12 weeks of training and control group was not under experimentation. Muscular endurance was measured by sit-ups test and breath holding time was measured nose holding method was taken for both groups. The initial and the final readings derived from the experimental and the control group underwent a procedure of statistical analysis using ANACOVA. The confidence level was 0.05. These finding suggest that the plyometric training and s.a.q training program has a statistically significant influence in developing the selected criterion variables.

Keywords: Plyometric Training, S.A.Q Training, Muscular Endurance, Breath Holding Time, College Football Players

Introduction

Football is a game which calls for strenuous, continuous thrilling action and therefore appeals to the youth the world over. Football is a game of physical and mental challenges. The must execute skilled movements under generalized conditions of restricted space, limited time, physical and mental fatigue and opposing players you must be able to run several miles during a game mostly at sprint like speed and respond quickly to a variety of rapidly changing situations

during play. The skills involved in the game are simple natural and yet are highly stimulating and satisfying to anyone who participates in the game

Plyometric is a very effective training method as it helps the body to reach its maximum strength in the smallest amount of time possible. Athletes have discovered that the biggest improvements to their performance have been when they combine plyometric training with weight training. Scientific studies have shown that by combining these two styles of training athletes are able to get the maximum gains towards their jumps, acceleration, power, strength and agility. Plyometric training is an intense, advanced form of exercise in which the muscles are first stretched, then contracted. Plyometric movements are powerful and high-impact, although the impact should be controlled as much as possible. Plyometric training requires both strength and endurance.

Running is the basis of many sports and has a ballistic quality common to other movements. 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 programme at a different level; thus training intensity must coincide with the individual's abilities. Low intensity speed, agility, and quickness drills can be used by everyone for different applications. Changing speed and direction also requires the muscles to shorten in an elastic or reactive manner, immediately after lengthening. In this sense, many speed, agility, and quickness drills can be considered single-leg plyometric movements with horizontal emphasis. The reactive types of single leg movements should be progressively addressed in conjunction with heavy resistance training and testing.

Statement of the problem

The intention of the exploration was effect of different packages of training on selected motor ability components and physiological variables of college football players

Methods

Subject and variables

To accomplish the purpose of the study was jumpers 45 football from Alagappa university at age ranged between 17 to 21 years. The selected subject was assigned into three

equal groups with fifteen subjects with each group. The Experimental group-I Plyometric Training group, Experimental group-II S.A.Q training and control group. The Plyometric Training and S.A.Q Training underwent training for a period of twelve weeks. The training sessions were conducted three days a week. Measurement of Muscular Endurance and Breath Holding Time variables was taken for the both groups.

Table –I

Selection of the test measures

Sn.no	Variables	Test Items	Units
1.	**Muscular endurance**	Sit-ups test	counts
2.	**Breath Holding Time**	Nose holding method	Seconds

The data's were collected before and after the training period. The initial and the final readings derived from the experimental and the control group underwent a procedure of statistical analysis using ANACOVA. The IBM-SPSS-V22 software was used and the confidence level is maintained at 0.05 levels.

Analysis of Co-variance for the Pre, Post and Adjusted Post Test Mean Values for Plyometric Training Group, S.A.Q Training with And Control Group on muscular endurance

Test	Plyometric Training Group	S.A.Q Training	Control Group	Source of Variance	Sum of square	df	Mean Square	'F' ratio
Pre Test Mean	22.00	21.73	22.00	Between	.711	2	.356	.135
				With in	110.93	42	2.64	
Post Test Mean	24.93	23.66	22.33	Between	50.71	2	25.35	**6.84***
				With in	155.60	42	35.10	
Adjusted Post Test Mean	24.85	23.82	22.25	Between	51.41	2	25.70	**15.14***
				With in	69.61	41	1.69	

***Significant at 0.05 level of confidence. Table value df 3.22**

The table 1 showed that the pre-test mean values on muscular endurance of Plyometric training group, s.a.q training group and control group are 22.00, 21.73 and 22.00 respectively. The obtained 'F' ratio .135 for pre-test mean was less than the table value 3.22 for df 2 and 42 required for significance at 0.05 level of confidence on muscular endurance. The post-test mean values on muscular endurance of Plyometric training group, s.a.q training group and control group are 24.93, 23.66 and 22.23 respectively. The obtained 'F' ratio **6.84*** for post-test mean was greater than the table value 3.22 for df 2 and 42 required for significance at 0.05 level of confidence on muscular endurance. The adjusted post-test means of Plyometric training group, s.a.q training group and control group are 24.85, 23.82 and 22.25 respectively. The obtained 'F' ratio **15.14*** for adjusted post-test mean was greater than the table value 3.23 for df 2 and 41 required for significance at 0.05 level of confidence on muscular endurance.

.Diagram Showing the Pre, Post and Adjusted Mean Values of Plyometric Training, S.A.Q Training and Control Group on muscular endurance

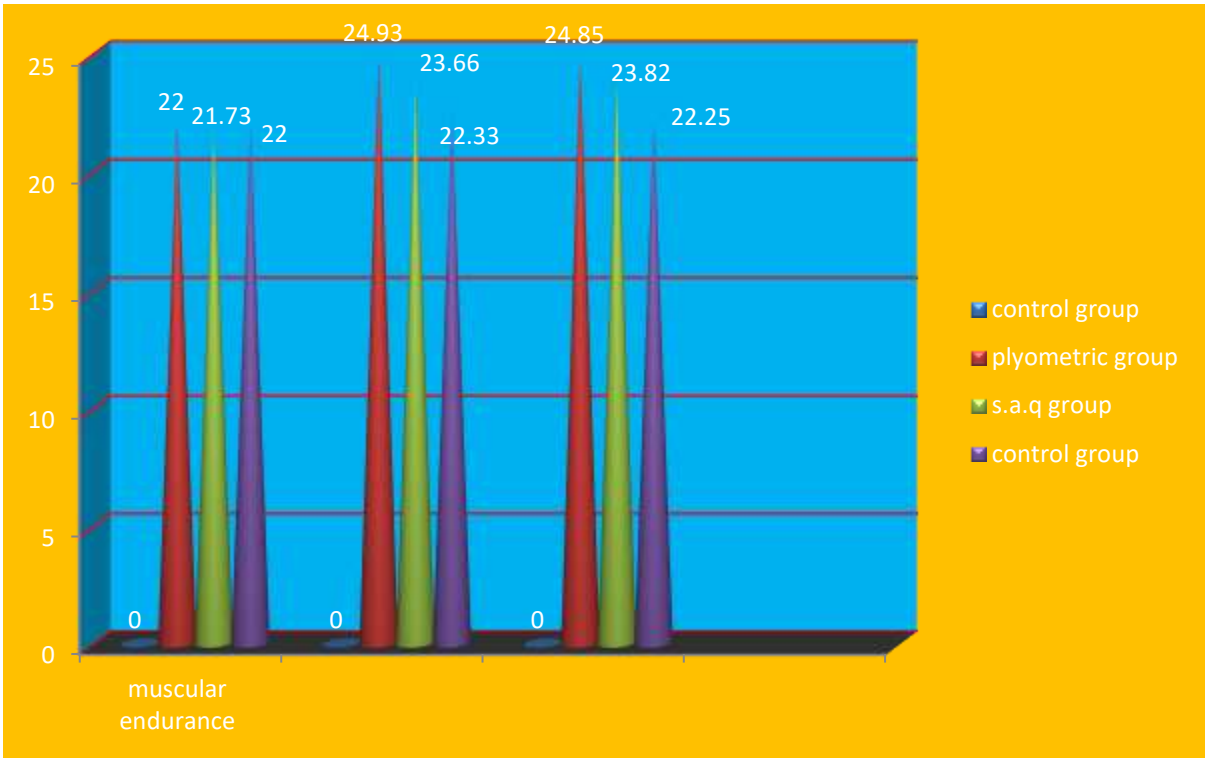


Table-2

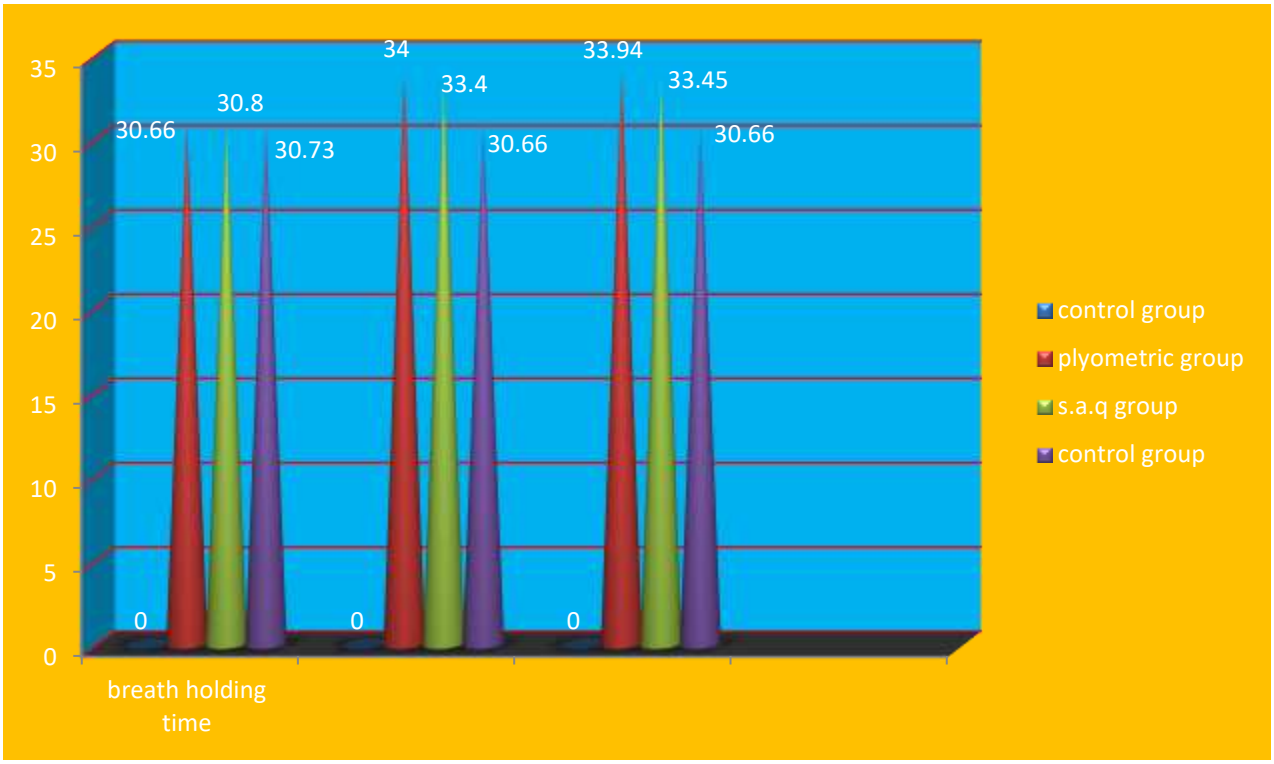
Analysis of Co-variance for the Pre, Post and Adjusted Post Test Mean Values for Plyometric Training Group, S.A.Q Training with And Control Group on Breath Holding Time

Test	Plyometric Training Group	S.A.Q Training	Control Group	Source of Variance	Sum of square	df	Mean Square	'F' ratio
Pre Test Mean	30.80	30.66	30.73	Between	.133	2	.067	.018
				With in	594.6	42	14.15	
Post Test Mean	34.00	33.40	30.66	Between	94.71	2	47.35	**3.62***
				With in	548.93	42	13.07	
Adjusted Post Test Mean	33.94	33.45	30.66	Between	93.79	2	46.89	**15.09***
				With in	127.40	41	3.10	

***Significant at 0.05 level of confidence. Table value df 3.22**

The table 2 showed that the pre-test mean values on breath holding time of Plyometric training group, S.A.Q training group and control group are 30.80, 30.66 and 30.73 respectively. The obtained 'F' ratio .018 for pre-test mean was less than the table value 3.22 for df 2 and 42 required for significance at 0.05 level of confidence on breath holding time. The post-test mean values on breath holding time of Plyometric training group, S.A.Q training group and control group are 34.00, 33.40 and 30.66 respectively. The obtained 'F' ratio **3.62*** for post-test mean was greater than the table value 3.22 for df 2 and 42 required for significance at 0.05 level of confidence on breath holding time. The adjusted post-test means of Plyometric training group, S.A.Q training group and control group are 33.94, 33.45 and 30.66 respectively. The obtained 'F' ratio **15.09*** for adjusted post-test mean was greater than the table value 3.23 for df 2 and 41 required for significance at 0.05 level of confidence on breath holding time.

Diagram Showing the Pre, Post and Adjusted Mean Values of Plyometric Training, S.A.Q Training and Control Group on Breath Holding Time



Conclusion

- In the light of the study undertaken with certain limitations imposed by the experimental conditions, the following conclusions were drawn.
- The result of the study reveals that there was a significant improvement in the experimental groups on selected variables when compared to the control group after the completion of twelve Weeks of Plyometric training and S.A.Q training
- The Plyometric training and S.A.Q training has showed better performance on Muscular Endurance and Breath Holding Time than the control groups

Recommendation

- The result of this study can be used by physical directors and coaches as aid in screening and selecting team players.
- It is recommended by that the same study may be repeated by selecting subjects belonging to different age groups and levels of achievement other than those employed in the present study.
- The trainers and coaches can modify their training methods with respect to the findings of this study.

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