



P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (ISRA): 5.38
IJPESH 2022; 9(1): 208-211
© 2022 IJPESH
www.kheljournal.com
Received: 13-11-2021
Accepted: 20-12-2021

Dr. S Velkumar

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

Dr. P Selvakumar

Physical Director (TF), University College of Engineering Thirukkuvilai, (A Constituent College of Anna University Chennai), Nagapattinam, Tamil Nadu, India

Corresponding Author:

Dr. S Velkumar

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

Influence of skill based training and motor fitness components and playing ability of volleyball players

Dr. S Velkumar and Dr. P Selvakumar

Abstract

Sports quality requires quality of training which is the basic need for good performance. To improve better performance the study was conducted to find out the influence of skill based training and motor fitness components and playing ability of volleyball players. To achieve the purpose 30 Volleyball players were randomly selected as subjects from Tiruvarur district level Volleyball players. The subjects were divided into two equal groups as each group comprising of 15 subjects (Experimental group N=15) (Control Group N=15). Their age group range from 16 to 19 years. The experimental group underwent skill based conditioning training for three days a week for 12 weeks. The variables used for this study was Agility, Speed, Explosive power, and playing ability are tested using the criterion measures. The collected data were statistically analysed by using Analysis of co- variance (ANCOVA) the finding of this study showed that the significant difference was found between the groups on agility, speed, explosive power and playing ability for Volleyball players.

Keywords: Agility, explosive power, speed, motor fitness, playing ability

Introduction

During the past 20 years sports researchers and scientist, researched for efficient model of training for sportsman for competition is to focus on specificity of training. When searching for the facts the researchers and trainers in recent years found a specific method to condition the sportsman according to the games. In order to stimulate the movement pattern and playing ability of the players, the coaches incorporate to conditioning skills and it was implemented. The skill based conditioning was given with the modification of rules and play areas which are structured and conducted in more open and random setting. Skill based conditioning (SBC) promotes greater competence in the sports man in which the intensity is increased gradually by changing the skill from fundamental to advance. In this view it is hypothesized that the skill based conditioning games training will show greater improvement in the motor fitness variables and playing ability. The motor fitness variables are more relevant and found more appropriate for the Volleyball player to exhibit the performance along with other components. So evaluate the skill based conditioning method of training. The training was given continuously, for 12 weeks for gradual increase in intensity after two weeks. When this SBC is given for player with modification of rules, it encouraged the players to work more efficiently for the entire training sessions more interestingly.

Methodology

The purpose of the study was to find out the effect of skill based conditioning games on motor fitness variable and playing ability of Volleyball players. To achieve the purpose 30 male Volleyball players were randomly selected as subjects among one hundred thirty five students through the expert rating method using 10 point rating scale. By this 56 players were extracted whose score point ranged 5 and 6, from Tiruvarur district level Volleyball players. From the selected thirty (30) players were taken for study. The age of the subjects ranged from 16 to 19 years. The subjects were randomly divided into two groups each group comprising of 15 each as experimental and control groups. Group I was considered as experimental group and group II was considered as control group. Their investigator did not make any attempt to equate the group.

The group I was given selected skill based conditioning training for 12 weeks and the group II was not given any treatment. For the experimental study the skill based conditioning games were given as training it was divided into four phase of training for every phase the intensity was increased and also there was modification in the conditioning games and focused on dribbling, passing, ball holding, screening, offensive and defensive play. The variables confined to the study are agility, speed, explosive power and playing ability were tested using appropriate criterion measures. It was considered as pre- test score. After collecting the data 12 weeks of training was given for the players. In the 1st phase of training it was focused on skills like dribbling, ball holding, catching and passing, and in 2nd phase shooting

skills, in 3rd phase scrimmage and 4th phase like pivoting, offensive and defensive play were focused.

After completion of the treatment period of 12 weeks, the data collected on selected variables from experimental and control groups as such in the case of pre-test. The collected data were tested by analysis of covariance (ANCOVA) using SPSS 16 Version to examine the significant differences if any between experimental and control group. To test the derived results 0.05 level of significance as the number of subjects was limited and also as the selected variables might fluctuate due to various extraneous factors. The results of analysis of covariance on comparing effects are as follows.

Analysis of the Data

Table 1: Analysis of variance on agility for volleyball players due to skill based conditioning games

Test	Experiment Group Mean and S.D	Control Group Mean and S.D	Source of Variance	Sum of square	D.F	Mean square	'f'-ratio	Sig.
Pre Test	18.02 ±0.566	17.98 ±0.58	Between Group	0.00	1	0.00	0.00	0.92
			Within Group	9.22	28	0.33		
Post Test	17.35 ±0.53	18.02 ±0.56	Between Group	3.40	1	3.40	11.27	0.00*
			Within Group	8.44	28	0.30		
Adjusted	17.34	18.03	Between Group	3.59	1	3.59	0.578	0.00*
			Within Group	0.16	27	0.00		

*Significant at 0.05 levels 4.19 for df 1,28 and 4.21 for df 1,27

Table-1 reveals the mean, standard deviation and F-values on agility between experimental and control groups. The descriptive measures of mean and standard deviation for experimental group and control group before and after treatment are as follows. Prior to treatment the mean standard deviation for experimental group and control group are 18.02±0.566, 17.98±0.58 and 17.35±0.53, 18.02±0.56 respectively.

Following this, when testing the 'f' value of 0.00 (Pre test) and 11.27 (Post test) at 0.05 level of significance for degrees of freedom 1, 28, it was found that no significant mean

difference was observed between the experimental and control group prior to the treatment, whereas the 'f'-value(11.27) for post test, the mean difference was found to be statistically significant. Besides, when studying the 'f'-value (0.57) for adjusted post test means, the mean difference between experimental and control group was statically significant on agility at 0.05 level of significance for degree of freedom 1, 27. It confirms the effect of 12 weeks of SBC given to the Volleyball players positively have effect on agility.

Table 2: Analysis of variance of explosive power for volleyball players due to skill based conditioning games

Test	Experimental Group Mean and S.D	Control Group Mean and S.D	Source of Variance	Sum of square	D.F	Mean square	'f' value	Significance
Pre Test	48.20 ±7.50	43.26 ±6.87	Between Group	182.53	1	182.53	3.52	0.07
			Within Group	1449.33	28	51.76		
Post Test	43.66 ±7.51	43.80 ±7.02	Between Group	0.133	1	0.133	0.00	0.96*
			Within Group	1481.73	28	52.91		
Adjusted	41.19	46.26	Between Group	171.33	1	171.33	157.0	0.00*
			Within Group	29.46	27	1.09		

*Significant at 0.05 levels 4.19 for df 1,28 and 4.21 for df 1,27

Table-2 reveals the mean, standard deviation and F-values on explosive power between experimental and control groups. The descriptive measures of mean and standard deviation for experimental group and control group before and after treatment are as follows. Prior to treatment the mean standard deviation for experimental group and control group are 48.20±7.50, 43.26±6.87 and 43.66±7.51, 43.80±7.02 respectively.

Following this, when testing the 'f' value of 3.52 (Pre test) and 0.00 (Post test) at 0.05 level of significance for degrees of freedom 1, 28, it was found that no significant mean

difference was observed between the experimental and control group prior to the treatment, whereas the 'f'- (0.00) value for post test, the mean difference was found to be statistically significant. Besides, when studying the 'f'- value (157.0) for adjusted post test means, the mean difference between experimental and control group was statically significant on agility at 0.05 level of significance for degree of freedom 1, 27. It confirms the effect of 12 weeks of SBC given to the Volleyball players positively have effect on explosive power.

Table 3: Analysis of variance of speed for volleyball players due to skill based conditioning games

Test	Experimental Group Mean and S.D	Control Group Mean and S.D	Source of Variance	Sum of square	D.F	Mean square	'f' value	Significance
Pre Test	6.94 ±0.29	7.53 ±0.25	Between Group	2.58	1	2.58	33.60	0.00*
			Within Group	2.15	28	0.07		
Post Test	7.40 ±0.39	7.49 ±0.27	Between Group	0.06	1	0.06	0.56	0.45*
			Within Group	3.24	28	0.11		
Adjusted	7.74	7.15	Between Group	1.17	1	1.17	88.34	0.00*
			Within Group	0.35	27	0.01		

*Significant at 0.05 levels 4.19 for df 1,28 and 4.21 for df 1,27

Table-3 reveals the mean; standard deviation and F-values on speed between experimental and control groups. The descriptive measures of mean and standard deviation for experimental group and control group before and after treatment are as follows. Prior to treatment the mean standard deviation for experimental group and control group are 6.94±0.29, 7.53±0.25 and 7.40±0.39, 7.49±0.27 respectively. Following this, when testing the 'f' value of 33.60 (Pre test) and 0.56 (Post test) at 0.05 level of significance for degrees of freedom 1, 28, it was found that no significant mean

difference was observed between the experimental and control group prior to the treatment, whereas the 'f' - (0.56) value for post test, the mean difference was found to be statistically significant. Besides, when studying the 'f' - value (88.34) for adjusted post test means, the mean difference between experimental and control group was statically significant on speed at 0.05 level of significance for degree of freedom 1,27. It confirms the effect of 12 weeks of SBC given to the Volleyball players positively have effect on speed.

Table 4: Analysis of variance of overall playing ability for volleyball players due to due to skill based conditioning games

Test	Experiment Group Mean and S.D	Control Group Mean and S.D	Source of Variance	Sum of square	D.F	Mean square	'f' value	Sig.
Pre Test	6.46 ±1.18	6.00 ±0.92	Between Group	1.63	1	1.63	1.45	0.24*
			Within Group	31.73	28	1.13		
Post Test	7.73 ±0.96	5.73 ±0.77	Between Group	30.00	1	30.00	39.31	0.00*
			Within Group	21.36	28	0.76		
Adjusted	7.56	5.90	Between Group	19.57	1	19.57	126.99	0.00*
			Within Group	4.16	27	.15		

*Significant at 0.05 levels 4.19 for df 1,28 and 4.21 for df 1,27

Table-4 reveals the mean, standard deviation and F-values on overall playing ability between experimental and control groups. The descriptive measures of mean and standard deviation for experimental group and control group before and after treatment are as follows. Prior to treatment the mean standard deviation for experimental group and control group are 6.46±1.18, 6.00±0.92 and 7.73±0.96, 5.73±0.77 respectively.

Following this, when testing the 'f' value of 1.45 (Pre test) and 39.31 (Post test) at 0.05 level of significance for degrees of freedom 1, 28, it was found that the significant mean difference was observed between the experimental and control group prior to the treatment, whereas the 'f'-value - (39.31) for post test, the mean difference was found to be statistically significant. Besides, when studying the 'f' - value (126.99) for adjusted post test means, the mean difference between experimental and control group was statically significant on overall playing ability at 0.05 level of significance for degree of freedom 1,27. It confirms the effect of 12 weeks of SBC given to the Volleyball players positively have effect on overall playing ability.

Conclusion

The present study due to the skill base conditioning training programme on the motor fitness variables and on the overall playing ability the following are the conclusion that are derived.

The was a significant improvement on the motor fitness variable such as agility, speed, explosive power and on the overall playing ability due to 12 weeks of skill based conditioning programme for Volleyball players.

Discussion

This study proved that after 12 weeks of training the components agility, speed, explosive power, and playing ability improved significantly. The present study observed that the skill based conditioning games are essential for present competition status. Because the competent games are played very speedy now a days so mastery over the skill is need at this junction along with speed play. Studies were conducted for different games by giving skill based conditions to find out the playing ability Training program for teaching team tactics based on a constructivist model has a positive influence on players' capability to facilitate the pass to their teammates. (Francisco Alarcon, *et al.* 2009) [8]. In this study along with playing ability motor fitness components were also included to test for significance. The previous studies acknowledge that the skill based conditioning training improved the overall playing ability. These results suggest that skill-based conditioning games offer a safe, effective method of conditioning for rugby league players Gabbett TJ. (2003) [3]. This training focused on the players to get adopted to play with co- players continuously, get more frequency in a particular skill, and practice with upper range of work out without getting directly involved in play.

It also aims to develop the particular skill of the game; the training method was designed from low intensity in first four week, in the second four week with moderate intensity and high intensity in the last four weeks. This gradual increase in load and modification of the conditioning after two week made the player more fascinated in learning the skill. This training makes the player learn and apply the erudite skill in the same which they practice in the evening session. The coach emphasised to use the learned skill in the game

situation during the practice sessions. When there is repeated change in the conditioning games that made the player to entertainingly learn the skill and work sufficiently hard to gain improvement. Motivation was given to players when they were unable to do the skill according to the intensity, appropriate step was taken in order to pick up the skill according to intensity. This training also helps the players to execute the skill and in decision making during pressure game situation and also helps to develop team coordination in the competition, this also emphasises the game strategies and tactics. The training given in pre-season will give hand during the in-season play. These skills are exhibited by the player when conditioning practiced with the ball rather than doing in empty hands. So the study proved that skill base conditioning is the best training programme to develop the motor fitness variable and overall playing ability for the Volleyball players.

Practical Applications

The finding of the study shows that skill based conditioning games offer a specific

Training stimulus to stimulate the motor fitness variables and overall playing ability as a need for the junior level Volleyball players.

It has been suggested that SBC provides greater improvement on the MFV for the beginning level Volleyball players however it can be given for longer period or for more sessions for the players it can retain more development on the skill.

References

1. Farrow D, Young W, Bruce L. The development of a test of reactive agility for netball: a new methodology. *J Sci Med Sport*. 2005;8:52-60.
2. Gabbett T, Mulvey M. Time-motion analysis of small-sided training games and competition in elite women's football players. *J Strength Cond Res*. 2008;22:543-552.
3. Gabbett T. Do skill-based conditioning games simulate the physiological demands of competition? *Rugby League Coaching Manuals*. 2003;32:27-31.
4. Ha'kkinen K. Changes in physical fitness profile in female volleyball players during the competitive season. *J Sport Med Phys Fit*. 1993;33:223-232.
5. Reilly T, White C. Small-sided games as an alternative to interval training for soccer players [abstract]. *J Sports Sci*. 2004;22:559.
6. Rushall BS, Pyke FS. *Training for Sport and Fitness*. Sydney: Mac Millan; c1990.
7. Sassi R, Reilly T, Impellizzeri F. A comparison of small-sided games and interval training in elite professional soccer players [abstract]. *J Sports Sci*. 2004;22:562.
8. Abenza L, Alarcón F, Piñar MI, Ureña N. Relationship between the anxiety and performance of a basketball team during competition. *Revista de psicología del deporte*. 2009;18(3):409-13.