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Analysis of predominance of specific preseason training selected motor ability components game playing ability on physiological and psychological variables of men volleyball players

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Abstract
The purpose of the study was to find out the Analysis of predominance of specific preseason training selected motor ability components game specific exercises on physiological and psychological variables of men volleyball players. To achieve this purpose of the study sixty men volleyball players were selected studying Bachelor's degree in the Department of Physical Education and Sports Sciences, A.V.V.M Sri Pushpam College, Poondi, Tamil Nadu, India at random bases. They were divided into three equal groups of each twenty players as weight training group (Group I), specific preseason training group (Group II) game specific exercises group and act as control group (Group III). Group I and II were underwent their respective training programme for three days per week for twelve weeks who did not underwent any specific training programme apart from their regular physical education curriculum. The following physiological and psychological variables such as resting pulse rate and anxiety were selected as criterion variables. The resting pulse rate was assessed by taking radial pulse rate and anxiety was assessed by using stress questionnaire. All the subjects of three groups were tested on selected criterion variables at prior to and immediately after the training programme as pre and posttest selected. Analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the groups on each selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as an appropriate. There was a significant difference among specific preseason training group, game specific exercises group and control group on physiological and psychological variables such as resting pulse rate and anxiety.

Keywords: specific preseason training, *specific aerobic training, physiological and* psychological, *resting pulse rate,* anxiety

Introduction

Volleyball is an excellent all round team-sport, and it has been widely accepted as a highly competitive and recreational game throughout the world. Since its inception in 1985, it has not only developed from a slow moving game into a fast one, but also has become and spectators alike. It is interesting to note that the speed of a powerfully spiked ball in the game of volleyball is about 45meters per second, which is much faster than the movement of the game offers a wider opportunity for the development of strength, speed, endurance, agility, neuromuscular skills, and co-ordination volleyball has an added advantage in being suitable for both sexes, regardless of age and physical ability, as it is highly adaptable. It is game easy to learn, and since there is no body-contact between opponents, there is title danger of series injuries.

Motor fitness is a term that describes an athlete's ability to perform effectively during sports or other physical activity. An athlete's motor fitness is a combination of five different components, each of which is essential for high levels of performance.

Volleyball is a team game and there must be a good understanding and coordination among players to be effective as a group. To the extent motor components are concerned. Volleyball requires agility, coordination and reaction ability for playing and a good suspicion to lift and hit the ball. In volleyball changes in the speed of game and scoring system the set finishes quickly, players need high level of agility, coordination and reaction ability. The individual not only physically fit but also possesses good motor control an body coordination in addition to excelling in the specific skills of his/her game of specialization (Kansal, D. K., 1996) [1].

The performance of players is influenced by many factors such as physical, physiological and psychological variables, technique, tactics, physique, body size, body composition and application of biomechanical principles (Ortega, F. B., Ruiz, J. R., Castillo, M. J. & Sjostrom, M., 2008) [4].

The present study was done to correlate the selected motor fitness such as agility, coordination and reaction time with the playing ability of volleyball players of Guru Ghasidas Vishwavidyalaya, Bilaspur. It was expected that there would be significant relationship.

Methodology

The purpose of the study was to find out the Analysis of predominance of specific preseason training selected motor ability components game specific exercises on physiological and psychological variables of men volleyball players. To achieve this purpose of the study sixty men volleyball players were selected studying Bachelor's degree in the Department of Physical Education and Sports Sciences, A.V.V.M Sri Pushpam College, Poondi, Tamil Nadu, India at randomly. They were divided into three equal groups of each twenty players as weight training group (Group I), specific preseason training group (Group II) game specific exercises group and act as control group (Group III). Group I and II were underwent their respective training programme for three days

per week for twelve weeks who did not underwent any special training programme apart from their regular physical education curriculum. The following physiological and psychological variables such as resting pulse rate and anxiety were selected as criterion variables. The resting pulse rate was assessed by taking radial pulse rate and anxiety was assessed by using stress questionnaire. All the subjects of three groups were tested on selected criterion variables at prior to and immediately after the training programme as pre and posttest selected. Analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the groups on each selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as an appropriate.

Training Programme

During the training period, group I underwent specific preseason training, group II underwent game specific exercises, for three days per week for twelve weeks in addition to their regular physical education activity, every day workout lasted about 45-60 minutes including warm-up and warm down exercises. Group III acted as control who did not participate any specific training, however, they per-form regular physical education programme.

Statistical Analysis

The data was collected from three groups at prior to and after completion of the training period on selected criterion variables, were statistically examined for significant difference if any, by applying analysis of covariance (ANCOVA). The Scheffe's post hoc test was applied to know the significant difference between groups, if they obtained 'F' ratio was significant. In all cases .05 level of confidence was utilized to test the significance.

Resting Pulse Rate

The analysis of covariance of the data obtained for Resting pulse rate of pre-test and post-test of Specific preseason training group, game specific exercises group and control group have been presented in Table 1.

Table 1: analysis of covariance for the pre and post test scores on resting pulse rate of specific preseason training group, Game specific exercises group and control group

test	Specific Preseason Training Group	Game Specific Exercises Group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test								
Mean	71.26	71.33	71.46	Between	0.31	2	0.15	0.17
				Within	38.00	42	0.90	
Post Test								
Mean	67.66	65.06	71.06	Between	271.60	2	135.80	96.34*
				Within	59.20	42	1.41	
Adjusted Post Test								
Mean	67.67	65.06	71.05	Between	268.94	2	134.47	93.99*
S.D.	-4.40	-2.70	0.45	Within	58.69	41	1.43	

* Significant at .05 level of confidence.

(Table F-ratio at 0.05 level of confidence for 2 and 57 (df) =3.16, 2 and 56(df) 3.17).

Table I shows that the pre-test means on Resting pulse rate of Specific preseason training group, game specific exercises group and control group are 71.26, 71.33 and 71.46 respectively. The obtained 'F' ratio value 0.17 is less than the required table value 3.16 for 2 and 57 at 0.05 level of confidence on Resting pulse rate.

The post-test means on Resting pulse rate of Specific preseason training group, game specific exercises group and control group are 67.66 65.06 and 71.06 respectively. This obtained 'F' ratio value 96.34 is greater than the required table value 3.16 for 2 and57 at 0.05 level of confidence on Resting pulse rate.

The adjusted post-test means on Resting pulse rate of Specific preseason training group, game specific exercises group and control group are 67.67, 65.06 and 71.05 respectively. This obtained 'F' ratio value 93.99 for adjusted post-test is greater than the required table value 3.16 for 1 and 56 at 0.05 level of confidence on Resting pulse rate.

The results of the study indicated that there was a significant difference between the adjusted post-test means of Specific preseason training group, game specific exercises group and control group on Resting pulse rate.

Since, three groups were compared, whenever the obtained 'F' ratio for adjusted posttest was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table 1.

Table 2: The Scheffe's Test for the Difference between Paired Means on Resting Pulse Rate

Specific Preseason Training Group	Game Specific Exercises Group	Control group	Mean Differences	Confidence Interval Value
67.67	65.06	-	2.61*	0.55
67.67	-	71.05	3.38*	0.55
-	65.06	71.05	5.99*	0.55

*Significant at 0.05 level of confidence.

The table 2 shows that the mean difference values between Specific preseason training group, game specific exercises group Specific preseason training group and control group, game specific exercises group and control group are 2.61, 3.38 and 5.99 respectively on resting pulse rate which were greater than the required confidence interval value of 0.55 significance.

The results of this study showed that there was a significant difference between Specific preseason training group, game specific exercises group, Specific preseason training group and control group and game specific exercises group and control group on resting pulse rate.

Anxiety

The analysis of covariance of the data obtained for anxiety of

pre-test and post-test of and control group have been presented in Table 3.

Table 3: Analysis of Covariance for the Pre and Post Test Scores on Anxiety of Specific Preseason Training Group, Game Specific Exercises Group and Control Group

test	Specific Preseason Training Group	Game Specific Exercises Group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test								
Mean	20.85	22.30	21.50	Between	21.10	2	10.55	3.10
				Within	193.75	57	3.40	
Post Test								
Mean	13.50	19.95	21.05	Between	665.43	2	332.72	92.11*
				Within	205.90	57	3.61	
Adjusted Post Test								
Mean	13.56	19.89	21.05	Between	615.00	2	307.50	84.19*
S.D.	-7.35	-2.35	-0.45	Within	204.53	56	3.65	

* Significant at .05 level of confidence.

(Table F-ratio at 0.05 level of confidence for 2 and 57 (df) =3.16, 2 and 56(df) 3.17)

Table 3 shows that the pre-test means on anxiety of Specific preseason training group, game specific exercises group and control group are 20.85, 22.30 and 21.50 respectively. The obtained 'F' ratio value 3.10. Is less than the required table value 3.16 for 2 and 57 at 0.05 level of confidence on anxiety The post-test means on anxiety of Specific preseason training group, game specific exercises group and control group are 13.50, 19.95 and 21.05 respectively. This obtained 'F' ratio value 92.11 is greater than the required table value 3.16 for 2 and 57 at 0.05 level of confidence on anxiety.

The adjusted post-test means on anxiety of Specific preseason training group, game specific exercises group and control group are 13.56, 19.89 and 21.05 respectively. This obtained 'F' ratio value 84.19 for adjusted post-test is greater than the required table value 3.17 for 1 and 56 at 0.05 level of confidence on anxiety.

The results of the study indicated that there was a significant difference between the adjusted post-test means of Specific preseason training group, game specific exercises group and control group on anxiety.

Since, three groups were compared, whenever the obtained 'F' ratio for adjusted posttest was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table 4.

Table 4: The Scheffe's Test for the Differences between Paired Means on Anxiety

Specific preseason training group	game specific exercises group	Control group	Mean Differences	Confidence Interval Value
13.56	19.89		-6.33*	1.52
13.56		21.05	-7.50*	1.52
	19.89	21.05	-1.17*	1.52

"Significant at 0.05 level of confidence.

The table 4 shows that the mean difference values between Specific preseason training group, game specific exercises group, Specific preseason training group and control group, game specific exercises group and control group, -6.33, -7.50 and -1.17 respectively on anxiety which were greater than the required confidence interval 1.52 significance.

The results of this study showed that there was a significant difference between Specific preseason training group, game specific exercises group, Specific preseason training group and control group, game specific exercises group and control group on anxiety.

Conclusion

The following conclusions were drawn from the results of the study.

- There was a significant difference among Specific preseason training group, game specific exercises group and control group on resting pulse rate.
- There was a significant difference among Specific preseason training group, game specific exercises group on anxiety.
- There was a significant difference improvement on among Specific preseason training group, game specific exercises group and control group, on resting pulse rate and anxiety.

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