



Isolated and Combined Effect of General and Specific Fitness Training Packages on Selected Physical Fitness Variables and Skill Performance of Volleyball Players

KEYWORDS

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ABSTRACT We examined the effect of Isolated and combined effect of general and specific fitness training packages on selected physical fitness variables and skill performance of volleyball players. The 12- week -long exercise intervention included 60-min of moderate-to-vigorous General fitness training, Specific fitness training group and General and Specific fitness training five times per week. The control group was not exposed to any of additional activity other than their routine. The study was formulated as a random group design. In this study, 60 male volleyball players were randomly selected as subjects and their age ranged between 14-17 years. A pre and post test was employed for this investigation. The subjects were randomly divided into four groups (three experimental and one control group). Group I (n=15; GFTG) had undergone General fitness training, group II (n=15; SFTG) had undergone Specific fitness training group, group III (n=15; GSFTG) had undergone Combined General and Specific fitness training and group IV (n=15; CG) as control. All the subjects were tested prior and after the 12 weeks training period. Results: The results reveal that the interventions had an impact on the selected variables to a similar degree in all experimental groups; it was observed that the mean gains and losses made from pre and post test were statistically significant.

Introduction:

Kind of supremacy can only be possible through scientific, systematic and, planned sports training as well as channelizing them into appropriate games and sports by finding out their potentialities among the several methods of training. (Carl, 1969). Volleyball is a complex and demanding game requiring training. Players must have good aerobic fitness, speed, strength, technical skills and understanding of basic volleyball strategies. To create a training program that addresses the multiple demands of the game. Those methods fall into three general categories: fitness training, technique development, and strategy and tactics (Ia84 foundation volleyball coaching manual. 2012). A game of volleyball require high proficiency in its various skills such as serving, passing, digging, setting, spiking and blocking etc. which should be learnt and mastered so as to give an outstanding performance. (JomAntony, 1964).

Skilled act is learned through fundamental skills. In learning a skill a player must deal with several intricate movements or segments. The learning of a skilled movement involves utilisation of the receptor and perceptual capacity and limitations. These mechanisms attend to and select for processing certain stimuli in the environment. (Canadian Volleyball Association, 1989).

Methodology:

The study was formulated as a true random group design consisting of a pre-test and post test. The subjects (N=60) were randomly assigned in to four groups of ten each male volleyball players. The groups were designed as experimental group I – General fitness training (GFTG), experimental group II – Specific fitness training group (SFTG) experimental group III -Combined General and Specific fitness training (GSFTG), and control group IV (CG) respectively. Pre test was conducted for all the 60 subjects on chosen variables of the study. The experimental groups (isolated and combine training) underwent in respective training for a period of twelve weeks. The control group did not given any training. The post test was also conducted on the chosen dependent variables after an experimental period of twelve weeks for all the four groups. The different between initial and final mean scores of the groups was the effect of respective experimental treatment on the subjects. The differences in the mean

scores was subjected to statistical treatment using ANCOVA In all cases 0.05 level was fixed test the hypothesis of the study.

Results:

TABLE - I SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF GENERAL FITNESS PACKAGES GROUP

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	8.66	8.07	0.58	0.36	0.09	6.26*
2	Explosive Power	1.09	1.47	0.37	0.08	0.02	16.44*
3	Flexibility	15.46	20.66	5.20	2.27	0.58	8.85*
4	Service	3.40	6.26	2.86	1.40	0.36	7.88*
5	Attack	3.46	6.46	3.00	1.36	0.35	8.52*

Significant at 0.05 level

An examination of table-I indicates that the obtained't' ratios were 6.26, 16.44, 8.85, 7.88 and 8.52 for speed, explosive power, flexibility, service and attack respectively. The obtained't' ratios on the selected variables were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant.

TABLE - II SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF SPECIFIC FITNESS PACKAGES GROUP

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	8.60	8.00	0.59	0.34	0.08	6.64*

2	Explosive Power	1.08	1.46	0.38	0.13	0.03	10.82*
3	Flexibility	15.40	20.93	5.53	2.53	0.65	8.46*
4	Service	3.53	6.20	2.66	1.49	0.38	6.90*
5	Attack	3.53	6.33	2.80	1.56	0.40	6.91*

* Significant at 0.05 level

An examination of table-II indicates that the obtained 't' ratios were 6.64, 10.82, 8.46, 6.90 and 6.91 for speed, explosive power, flexibility, service and attack respectively. The obtained 't' ratios on the selected variables were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant.

TABLE – III SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF GENERAL & SPECIFIC FITNESS PACKAGES GROUP

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	8.74	7.78	0.95	0.47	0.13	7.75*
2	Explosive Power	1.11	1.70	0.59	0.10	0.02	21.64*
3	Flexibility	15.33	23.66	8.33	2.52	0.65	12.77*
4	Service	3.46	7.93	4.46	0.91	0.23	18.89*
5	Attack	3.26	8.20	4.93	0.70	0.18	27.15*

* Significant at 0.05 level

An examination of table-III indicates that the obtained 't' ratios were 7.75, 21.64, 12.77, 18.89 and 27.15 for speed, explosive power, flexibility, service and attack respectively. The obtained 't' ratios on the selected variables were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant.

TABLE – IV SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF CONTROL GROUP

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	8.62	8.58	0.03	0.35	0.92	0.41
2	Explosive Power	1.12	1.15	0.06	0.06	0.01	1.80
3	Flexibility	16.20	17.13	2.08	2.08	0.53	1.73
4	Service	3.20	3.46	1.75	1.75	0.45	0.59
5	Attack	3.53	3.26	1.86	1.86	0.48	0.55

* Significant at 0.05 level

An examination of table-IV indicates that the obtained 't' ratios were 0.41, 1.80, 1.73, 0.59 and 0.55 for speed, explosive power, flexibility, service and attack respectively. The obtained 't' ratios on the selected variables were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be insignificant.

Conclusion:

The results reveal that the interventions had an impact on the selected variables to a similar degree in all experimental groups; it was observed that the mean gains and losses made from pre and post test were statistically significant in the entire experimental and control group.

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