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Effect of pre-season training on selected skill performance variables of high school volley ball boys

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Abstract

The purpose of the study was to investigate the effects of pre-season training on selected skill performance variables of high school volleyball boys. Thirty High school volley ball players were randomly selected from Government Higher Secondary School, Kizhakancheri, Palakkad District and their age ranged between 11 to 13 years. Skill performance variables such as service and overhead pass. For this study pre-test – post-test randomized group design, which consists of control group (n=15) and experimental group Preseason training (n=15) were used. The data was collect through the pre-test (before training) and post-test after Six weeks of preseason training. To find out the effect of pre-session training on selected skill performance variables before and after training analysis of covariance was used. The level of significance was set at 0.05 level of confidence. Based on the analyzes of the study the pre-session training group showed significance improvement on serving (224.52) and overhead passing (319.51) of high school volley ball players than the control group. It can be concluded that the pre-season training programme has influenced the skill performance variables of serving and overhead passing.

Keywords: Pre-season training, service, overhead pass

Introduction

In modern times, sports have evolved into highly competitive fields, requiring a systematic approach encompassing various disciplines like physiology, biomechanics, sports training and psychology. Achieving top-level performance, especially in events like the Olympics, necessitates talent identification, scientific training methods and a focus on psychological and physiological aspects. Volleyball, for instance, demands explosive power and quickness with training emphasizing agility, endurance and jumping ability. Success in many athletic skills, particularly vertical jumping, relies on explosive power, which can be developed through targeted training strategies. Regular assessments help identify deficiencies and tailor training programs for optimal performance.

Pre-season training

Pre-season training, crucial for sports preparation, focuses on perfecting skills, enhancing fundamentals and achieving peak physical fitness. It aims to strengthen muscles, improve endurance and reach optimal conditioning. Thomas Reily emphasizes its importance for enhancing aerobic power and endurance. Bowers and Fox recommend 4 to 5 training sessions per week for endurance sports like volleyball. Periodization, a vital aspect of high-performance training, involves systematically planning the training cycle to achieve top form during the main competition. The preparatory period comprises three phases:

- Increasing load-taking ability, goal-oriented improvement
- Direct preparation for competition,
- Ensuring athletes are at their best during the competitive season.

Statement of the problem

The purpose of the study was to find out the effects of pre-season training on selected skill performance variables of high school volley ball boys.

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Methodology

This chapter outlines the methodology used in the study, covering subject selection, variable selection, data and test reliability, instrument reliability, subject orientation, test administration and statistical techniques employed.

Selection of subjects

The study included thirty high school volleyball players aged 11 to 13, randomly selected from Government Higher Secondary School, Kizhakancheri, Palakkad District.

Selection of variables

Keeping the feasibility criterion in mind, the researcher selected the following variable for the present study:

1. Independent variables – Pre-season training
2. Dependent variables – Service and Overhead pass

Criterion measures

S.no	Variables	Test	Measuring units
1	Service	Russell Lange Service Test	In Points
2	Overhead pass	Brady Wall Volley Test	In Numbers

Experimental design

To achieve the purpose of the study thirty high school volleyball players were selected from government higher secondary school, Kizhakancheri, Palakkad District and their age ranged from 11 to 13. The subjects were randomly divided into an experimental (Pre-season Training) group and control group. Initial assessments of skill performance variables were conducted as pre-tests. The experimental group underwent a six-week pre-season training program, including interval, resistance, circuit, agility and plyometric for five days a week. The control group did not receive any specific training.

Statistical technique

Analysis of covariance (ANCOVA) was used to assess the difference in selected skill performance variables between the two groups before and after training. The level significance was fixed at 0.05.

Results of treatment effect

Table 1: Analysis of Covariance on Service (Russell Lange Service Test) of Pre-session and Control Groups

	Experimental group	Control group	Source of variance	Sum of square	df	Mean square	'F' ratio
Pretest mean	18.20	18.33	B	0.13	1	0.13	0.04
			W	83.73	28	2.99	
Posttest mean	32.53	21.20	B	963.33	1	963.33	224.52*
			W	120.13	28	4.29	
Adjusted mean	32.59	21.14	B	980.92	1	980.92	434.58*
			W	60.94	27	2.26	

* Significant at 0.05 level of confidence

The pre-test analysis showed no significant difference between the control (18.33) and experimental group (18.20) with an F ratio of 0.04 below the required 4.20 for significance. However, the post-test revealed a significant difference (F ratio 224.52) in favor of the experimental group (32.53) over the control group (21.20). The adjusted post-test means remained significantly different (F ratio 434.58) with values of 32.59 and 21.14 for the experimental and control groups respectively. The study concludes a significant

improvement in serving ability at a 0.05 confidence level.

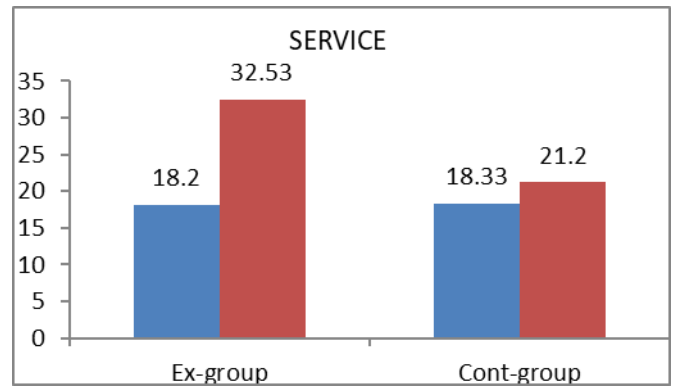


Fig 1: Graphical representation of mean values of pre-test and post-test of experimental and control groups in relation to Service

Table 2: Analysis of Covariance on Overhead pass of Experimental and Control Groups

	Experimental group	Control group	Source of variance	Sum of square	df	Mean square	'F' ratio
Pretest mean	19.33	19.47	B	0.13	1	0.13	0.13
			W	27.07	28	0.97	
Posttest mean	32.53	23.00	B	681.63	1	681.63	319.51*
			W	59.73	28	2.13	
Adjusted mean	32.55	22.98	B	683.44	1	683.44	319.55*
			W	57.75	27	2.14	

* Significant at 0.05 level of confidence

The pre-test analysis showed no significant difference between the control (19.47) and experimental group (19.33) with an F ratio of 0.13, below the required 4.20 for significance. However, the post-test revealed a significant difference (F ratio 319.51) in favor of the experimental group (32.53) over the control group (23.00). The adjusted post-test means remained significantly different (F ratio 319.55) with values of 32.55 and 22.98 for the experimental and control groups respectively. The study concludes a significant improvement in the Overhead pass at a 0.05 confidence level.

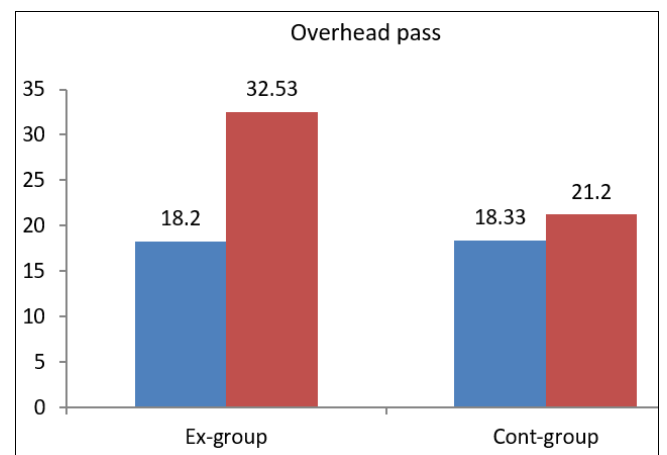


Fig 2: Graphical representation of mean values of pre-test and post-test of experimental and control groups in relation to overhead pass.

Results of the study

The analysis indicates that the pre-season training group exhibited significant improvements in various aspects, including serving (224.52) and overhead passing (319.51) ability compared to the control group among high school volleyball players.

Discussion on findings

The study aimed to assess the impact of pre-season training on skill performance variables among high school volleyball players. The results indicate significant improvements in the selected variables following a 6-weeks pre-season training program. A comparison with the control group showed that the criterion variables for skill performance demonstrated significant enhancements. Therefore the formulated hypotheses regarding these variables were accepted.

Conclusion

Based on the statistical analysis and result of the study within the limitations, it was concluded that, the pre-season training programme has influenced the skill performance variables of service and overhead pass. The control group did not show any significant difference in this study.

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