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Effect of game specific training on selected skill performance variables among basketball players

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Abstract

The purpose of the study was to find out the effect of Game Specific Training (GST) on selected skill performance variables among basketball players. To achieve the purpose of the study forty men basketball players (N=40) were randomly selected as a participant from Chennai district, Tamil Nadu. The participants were aged between 17 to 25 years. The selected participants were randomly assigned into two equal groups of 20 each, such as Game Specific training group (GSTG) and control group (CG). The GSTG underwent their training programme for three days a week for six weeks of training, each section lasted 60min. The CG did not participate in any kind of special training programme apart from the daily physical activities. The dribbling and shooting were measured by standardized questionnaire. The subjects of the two groups were tested on selected variables prior to and immediately after the training period. The collected data were analysed statistically through analysis of covariance (ANCOVA) to find the significant difference. The 0.05 level of confidence was fixed to test the level of significance difference. The results indicated that the basketball players receiving the GSTG and reported shooting were improved compared to the CG. These findings seem to suggest that GST programs may be a promising approach to promoting dribbling and shooting among basketball players.

Keywords: Game specific training, skill performance variables, basketball players

Introduction

In sports games, many factors might influence the success of an athlete. In addition to possessing good physical and technical factors, success in a sports game is also influenced by psychological and skill performance (Demirci & Phytanza, 2021; Dosil *et al.*, 2014; Phytanza, Burhaein, & Pavlovic, 2021) [5, 2]. Performance in basketball game is a very complex process to understand. Basketball is a team play where two teams pitch against each other to score goals by throwing ball through the open net hanging from a metal loop on the opponent's territory of the field. The game is usually played on a rectangular court. The main objective of basketball is to shoot, throw, dribble and pass. This game is most often played as a team sport with 5 players on each side with two teams. Three-on-three, two-on-two and one-on-one competition are also common.

The recent years has witnessed outstanding growth of Sport Sciences which is now establishes as an academic discipline as well as a valid area of skilled practice. The parent disciplines of sports science include Biomechanics, biochemistry, physiology, psychology and sociology. Its application has matured from general application to sports to application to specific problems in particular sports. Game specific training focus on developing those factors which directly influence the playing performance.

Methods

Research Design

The method that had been adopted in the study was the random sampling design the study itself was the research that strived to find out the changes on selected skill performance variables due to GST among basketball players.

Participants

To achieve the purpose of the study forty men basketball players (N=40) were randomly selected as a participant from Chennai district, Tamil Nadu. The participants were aged between 17 to 25 years.

The selected participants were randomly assigned into two equal groups of 20 each, such as GSTG and CG. The GSTG underwent their training programme for three days a week for six weeks of training, each session lasted 60 min. The CG did not participate in any kind of special training programme apart

from the daily physical activities.

Instrument and Procedure

The dribbling and shooting were measured by standardized test suggested by Leilich Basketball Test.

Table 1: Analysis of covariance for pre and post data on bounce shoot (Scores in Numbers)

| Test | GST | CG | Source of variance | Sum of Squares | Df | Mean square | F |
|----------------|-------|-------|--------------------|----------------|----|-------------|--------|
| Pre-test Mean | 11.99 | 12.02 | Between | 6.208 | 3 | 22.069 | 2.08 |
| | | | Within | 0.122 | 58 | 1.716 | |
| Post-test Mean | 15.29 | 12.99 | Between | 31.491 | 3 | 110.497 | 61.17* |
| | | | Within | 61.158 | 58 | 1.092 | |
| Adjusted Mean | 15.31 | 12.97 | Between | 320.683 | 3 | 106.894 | 60.08* |
| | | | Within | 60.979 | 57 | 1.109 | |

*significant at 0.05 level.

Data Analysis

The subjects of the two groups were tested on selected variables prior to and immediately after the training period. The collected data were analyzed statistically through analysis of covariance (ANCOVA) to find the significant difference. The 0.05 level of confidence was fixed to test the level of significant difference.

The obtained F value on the pre-test means a score of 2.08 was lesser than the required F value of 4.20 to be significant at 0.05 levels. This proved that there was no significant difference between the groups at the initial stage and the randomization at the initial stage was equal. The post-test scores analysis proved that there was a significant difference between the groups as the obtained F value at 61.17 was

greater than the required F value at 4.20. This proved that the differences between the post-test mean of the participants were significant. Taking into consideration the pre and post-test scores among the groups, adjusted mean scores were calculated and subjected to statistical treatment. The obtained F value at 60.08 was greater than the required F value at 4.21 to be significant at 0.05 levels, hence it was accepted that there was a significant difference among the adjusted post-test means on the bounce shoot of the participants.

The pre, post, and adjusted means on bounce shoot were presented through a bar diagram for a better understanding of the results of this study in Figure-1.

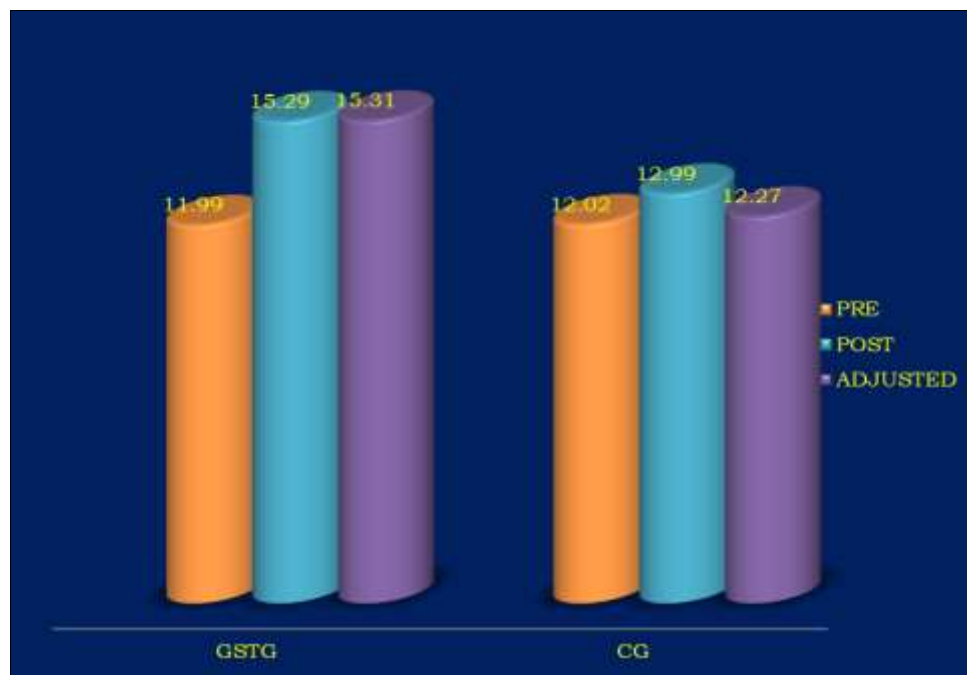


Fig 1: Pre, Post and Adjusted Post Test Differences of the GSTG and CG on Bounce Shoot

Table 2: Analysis of covariance for pre and post data on half minute shooting (Scores in Numbers)

| Test | GST | CG | Source of variance | Sum of Squares | df | Mean square | F |
|----------------|-------|-------|--------------------|----------------|----|-------------|--------|
| Pre-test Mean | 12.03 | 12.12 | Between | 14.243 | 3 | 4.75 | 1.63 |
| | | | Within | 69.408 | 58 | 1.239 | |
| Post-test Mean | 13.88 | 12.55 | Between | 81.56 | 3 | 27.188 | 48.31* |
| | | | Within | 83.11 | 58 | 1.484 | |
| Adjusted Mean | 13.86 | 12.52 | Between | 75.76 | 3 | 25.252 | 46.72* |
| | | | Within | 83.03 | 57 | 1.510 | |

*significant at 0.05 level.

The obtained F value on the pre-test means a score of 1.63 was lesser than the required F value of 4.20 to be significant at 0.05 levels. This proved that there was no significant difference between the groups at the initial stage and the randomization at the initial stage was equal. The post-test scores analysis proved that there was a significant difference between the groups as the obtained F value at 48.31 was greater than the required F value at 4.20. This proved that the differences between the post-test mean of the participants were significant. Taking into consideration the pre and post-

test scores among the groups, adjusted mean scores were calculated and subjected to statistical treatment. The obtained F value at 46.72 was greater than the required F value at 4.21 to be significant at 0.05 levels, hence it was accepted that there was a significant difference among the adjusted post-test means on the half minute shooting of the participants. The pre, post, and adjusted means on half minute shooting were presented through a bar diagram for a better understanding of the results of this study in Figure-2.

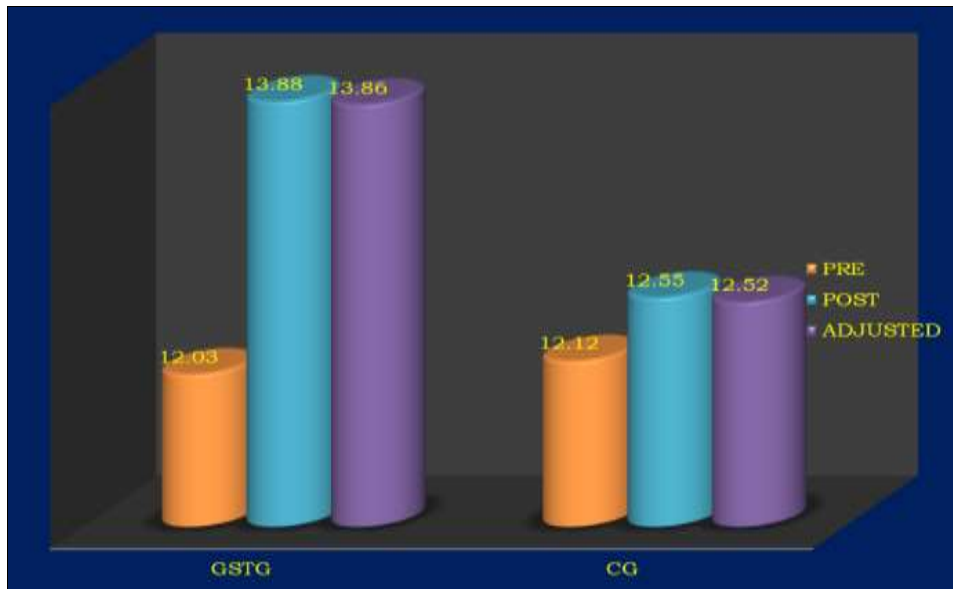


Fig 2: Pre, post and adjusted post test differences of the GSTG and CG on half minute shooting

Conversation on Findings

The present study proved a statistically significant result ($p < 0.05$) in the value of bounce shoot and half minute shooting among basketball players due to GST. The results of the study also supported that Velickovic (2018) [8] programmed training had positive effects on the changes in the explosive strength of young female volleyball players. Sujatha, & Sutharsingh, (2018) [9] found functional and situational training improves physiological variables such as vital capacity and anaerobic power. Tumer (2015) found that athletes preferred training and instruction and situational consideration coaching styles. Parasuraman (2020) [4] revealed that the explosive power and strength endurance significantly improved due to circuit training with Kettlebell exercises.

Conclusion

The results indicated that the basketball players receiving the GSTG and reported bounce shoot and half minute shooting were improved compared to the CG. These findings seem to suggest that GST programs may be a promising approach to promoting bounce shoot and half minute shooting among basketball players.

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