E-ISSN:2319-3050

Research Article

Sports Training

International Journal of Research Padagogy and Technology in Education and Movement Sciences

2023 Volume 12 Number 02 APR-JUN

Publisher

www.theuniversityacademics.com

# A COMPARISON STUDY OF TECHNICAL TRAINING MODEL IN MINI GAME PERFORMANCE, SPEED AND ACCURACY AMONG BASKETBALL PLAYERS

**Kaur D.[1*], Singh P.[2], Kadam G.[3], Kadam K.[4]**

DOI: https://doi.org/10.55968/ijems.v12i02.309

[1*] Dilpreet Kaur, Head, Department of Physical Education, Saryadatta Group of Institute, Pune, (M.S.), India.

[2] Prince Inder Singh, Coach, , Punjabi University, Patiala, Punjab, India.

[3] Govind K. Kadam, Professor & Head, Dept. of Physical Education and Sports, Vivekanand College, Aurangabad, (M.S.), India.

[4] Kamlakar K. Kadam, Head, Dept. of Physical Education and Sports, Nutan College, Selu, (M.S.), India.

The study investigated the effect of teaching match Games for Understanding coaching approach on university men basketball players as they have problem in term of speed and accuracy executing general basketballskills, ball control, decision making, skill execution with players on the ball, as well as supporting player's role without ball in 5 versus 5 mini game situations. The study was a quasi-experimental equivalent pretest-posttest groups design whereby sports onuniversity level basketball women players (19-22years old) randomly assigned to experimental groups of(n= 15), and control group (n=15). The trainingmodel was exposed to tactical coaching approach, while the control group underwent predominantly skill-based coaching in Basketball. The effectiveness of these two models was measured standardized basketball test, and Game observation Instrument. Univariate of ANOVA was used to analyze the data, followed with analysis of covariance (ANCOVA) if the pretest results yielded significant difference. The results indicated that there were significant difference between experimental and control group posttest score on speed (1, 28) =15.25, $p<0.05$, and in ball control, 5 versus 5 game play F (1, 28) =3.34, $p<0.05$.

**Keywords:** Teaching Games for Understanding, Coaching, Training, Game Play of Basketball.

**Corresponding Author**

Dilpreet Kaur, Head, Department of Physical Education, Saryadatta Group of Institute, Pune, (M.S.), India.

Email: gkvolleyball@gmail.com

**How to Cite this Article**

Dilpreet Kaur, Prince Inder Singh, Govind K. Kadam, Kamlakar K. Kadam, A COMPARISON STUDY OF TECHNICAL TRAINING MODEL IN MINI GAME PERFORMANCE, SPEED AND ACCURACY AMONG BASKETBALL PLAYERS. IJEMS. 2023;12(02):164-168.

Available From

https://ijems.net/index.php/ijem/article/view/309

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| Conflict of Interest | Funding | Ethical Approval | Plagiarism X-checker | Note |
|---|---|---|---|---|
| NIL | NO | YES | 13 | |

## Introduction

Nowadays agility has become a crucial factor in team sport, the agility index of athletes, is an indicator of the level of the players. The performance level of many sports disciplines depends on the ability to react promptly to stimulus perceptions of various nature and to complete the kinetic responses as soon as possible and perform the correct execution with the optimal range of motion. Normally the strategies actuated during the sports training are focused on the development of agility in specific movements and to execute specific sport technique in a faster way. In various sports, agility is manifested in various forms: initiating the kinetic response with the least latency time after the stimulus (reaction); completing the single gesture in the shortest possible time (rapidity of action); performing cyclic movements with high frequency (speed); applying power to the movement (acceleration) and maintaining high execution speed even in muscle fatigue condition (prolonged speed movement). Agility is a complex ability because it depends on many factors: nervous system, individual anthropometric characteristics; muscular coordination; muscle quality and characteristics of the gesture (strength, range of motion, precision, complexity and duration). Agility is strongly influenced by body and motor control; to achieve rapid movements, the athletes must acquire a high level of specific technical gestures, so as to, enable them to maintain optimum performance, without significant slowdown, even in problematic situations of instability, adjustment and imbalance. Therefore, coordination, understood as organizing, controlling, regulating, modulating, and adapting the movements, is the basic prerequisite for a quick expression of movement. Team sports, are made up of many phases with high uncertainty (Raiola&D'Isanto 2016ab, Altavilla, &Raiola, 2015), so agility is crucial to performance. Delaying a move means giving the opponent the opportunity to take on an important advantage (Raiola, 2017, Altavilla&Raiola, 2014). In basketball, athletes are forced to make change of direction with very narrow and fast passes in limited spaces to achieve effective play actions, then is easy to understand how much is important to reach and training a high level of specific and not specific agility for a basketball player (D'Isanto et al, 2017, Gaetano et al,2016, Izzo, 1996).

## Purpose of the study

The purpose of this study is to investigate the effect of TGfU coaching model compared to skilled based Technical model of SDT training on players, in term of in speed and accuracy executing general basketball skills among players.

## Methodology

In order to understand which parameters have more prominence in output performance, we decided to follow a PRE-POST case study, based on three different training protocols and a control group.The main methodology that proposed in this research is Quasi-experimental balanced group design pre and posttest. The study was carried out over a period of 12weeks.The samples consists of n = 30 players of Basketball(19-22 years old) that were selected out of total 50 players using simple random technique and assign equally into groups of TMGfU, n = 15 and SDT model, n = 15.

The players underwent three (5) training session per week (two (2) hour per session) for twelve weeks as training intervention. These study the establing reliability using in Maharashtra environment. The effect of the Technical training model at pre-test and post-test were analyzed using SPSS using ANOVA. In addition ANCOVA (as pre-test score was used as covariate) and were used to confirm the results when there were significant difference at base line level.

## Results

Speed and Accuracy For the performance skill variables for the Players (19 to 22 years)

Table 1: Pre-Test and Post-Test Score for Speed and Accuracy Executing Basketball Skills

*Enclosed as Annexure 01*

As for speed, Univariate ANOVA indicated no significant difference between TMGfU(M/SD:10.43±2.39), and SDT(M/SD: 12.52±3.16,($F(1,28)=4.07$, $p > 0.05$) and for accuracy too indicated no significant difference between TMGf(M/SD:5.43±2.34) and SDT(M/SD: 5.52±1.57), ($F(1,28)=0.32$, $p > 0.05$) at pre-test level. Whereas post-test results indicated there was significant difference between TMGf (M/SD: 9.74±.6.13) and SDT model (M/SD: 11.43±3.17) onspeed (1, 28) =.15.25, $p < 0.05$. TMGf seemed to be better model for speed of executing hockey general skills. However for accuracy, post-test

Results indicated, there was no significant difference between TMGf (M/SD: 7.16±1.61) and SDT model (M/SD: 5.87±2.13), F (1, 28) = 3.34, p > 0.05.Table 1 indicate the mean and SD for speed executing basketball skills at pre and post-test.

Ball Control, Decision Making, Skill Execution and Supporting Player's Role in performance skill variables for the Players (19 to 22 years)

Table 2: Pre-Test and Post-Test Score for Ball Control, Decision Making and Skill Execution

*Enclosed as Annexure 02*

Ball Control, decision making, skill execution, supporting players Univariate ANOVA test indicated there was no significant difference between TMGfU with SDT training model on ball control in pre-test, F(1.28)= 4.27, p>0.05 (TMGfU, M/SD: 3.13±.353, n = 15 and SDT, M/SD: 3.00±.537:, n=15). Howeverpost-test result indicated significant difference between TGfU (M/SD: 3.13±.516) and SDT model (M/SD: 3.13±.596), F (1,28)=4.27, p<0.05. Table 2 illustrates the results mean and SD for ball control. TMGfU seems to be significantly better training model after training intervention based on mean score, TMGfU: 3.56±.537, SDT: 3.10±3.10 at post-test level.

## Discussion

There was significant improvement speed in executing hockey general skill among players using TMGfU model after intervention. This finding supports the importance continuous small sided mini game without skill drills activity able to enhance speed of executing hockey skills. These findings show that TMGfU model compared to SDT was significantly more effective.

This finding was parallel and further supports motor learning theory framework that suggests that there is linear relationship between motor performances of ball control with acquisition of game knowledge a through the mini game. As role of supporting players findings indicated no significant difference between TMGfU and SDT, probably too short intervention period. Therefore supporting players role in adjusting their position to receive ball need longer period of learning and training within game situations Based on findings of using TMGfU original model and Tactical Game model, the study revealed that Maharashtra hockey player with tactical and skill understanding "what to do and how to" Which benefited them in term of ball control, decision making (passing, dribbling, throwing and scoring) and skill execution (passing, dribbling, tackling and scoring)

## Conclusion

Therefore supporting players role in adjusting their position to receive ball need longer period of learning and training within game situations based on findings of using original model and Tactical Game model, the study revealed that basketball player with tactical and skill understanding "what to do and how to" which benefited them in term of ball control, decision making and skill execution.

The findings revealed that TMGfU is better model for upgrading player's speed of executing general basketball skill, ball control of game play and more research has to be done to validate these two models in basketball in term of coaching.

## Annexure

*Annexure 01*

Table 1: Pre-Test and Post-Test Score for Speed and Accuracy Executing Basketball Skills

| Sr. no. | Skills | Models | Mean | S.D. | N | P |
|---|---|---|---|---|---|---|
| 1. | Speed Executing | **Pre-Test** | | | | |
| | | TGfU | 10.43 | 2.39 | 15 | F(1,28)=4.07, p>0.05 |
| | | SDT | 12.52 | 3.16 | 15 | |
| | | **Post-Test** | | | | |
| | | TGfU | 9.74 | 6.13 | 15 | F(1,28)=15.25, p<0.05 |
| | | SDT | 11.43 | 1.52 | 15 | |
| 2. | Accuracy Executing | **Pre-Test** | | | | |
| | | TGfU | 5.43 | 2.34 | 15 | F(1,28)=0.32, p>0.05 |
| | | SDT | 5.52 | 1.57 | 15 | |
| | | **Post-Test** | | | | |
| | | TGfU | 7.16 | 1.61 | 15 | F(1,28)=3.34, p>0.05 |
| | | SDT | 5.87 | 2.13 | 15 | |

*Annexure 02*

Table 2: Pre-Test and Post-Test Score for Ball Control, Decision Making and Skill Execution

| Sr. no. | Skills | Models | Mean | S.D. | N | P |
|---|---|---|---|---|---|---|
| 1. | Ball Control | **Pre-Test** | | | | |
| | | TGfU | 3.16 | .354 | 15 | F(1,28)= .654, p> |
| | | SDT | 3.03 | .537 | 15 | 0.05 |
| | | **Post-Test** | | | | |
| | | TGfU | 3.56 | .537 | 15 | F(1,28)= 4.27 , p< |
| | | SDT | 3.13 | .596 | 15 | 0.05 |
| 2. | Decision Making | **Pre-Test** | | | | |
| | | TGfU | 2.92 | .353 | 15 | F(1,28)= 3.34, p> |
| | | SDT | 2.67 | .399 | 15 | 0.05 |
| | | **Post-Test** | | | | |
| | | TGfU | 3.30 | .313 | 15 | F(1,28)=4.87 , p< |
| | | SDT | 2.98 | .463 | 15 | 0.05 |
| 3. | Skill Execution | **Pre-Test** | | | | |
| | | TGfU | 2.92 | .313 | 15 | F(1,28)= 5.34, p< |
| | | SDT | 2.65 | .283 | 15 | 0.05 |
| | | **Post-Test** | | | | |
| | | TGfU | 3.32 | .332 | 15 | F(1,28)= 1.66, p> |
| | | SDT | 3.13 | .452 | 15 | 0.05 |

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