IJARCCE



International Journal of Advanced Research in Computer and Communication Engineering

EFFECT OF PERFORMANCE BASED PHYSICAL FITNESS PROGRAM ON FUNDAMENT SKILL IN BASKETBALL: A PILOT STUDY

Ramakant D. Bansode¹, Sinku Kumar Singh²

College of Veterinary & Animal Sciences, Udgir, Maharashtra¹

SRTM University, Nanded, Maharashtra²

Abstract: The data was collected through respondents in the form of different tests. Purposive sampling method was used, as the researcher selected Basketball Players with a specific purpose. 15 Basketball players selected under **Performance based physical fitness program.** This study involves a cross sectional, comparative pre and post-test of experimental group. This study was conducted in a quasi-square experimental design. The **Performance based physical fitness program** were planned for 4 days a week 30 minutes in a day for 06 weeks The result of the study shows that significant effects of **Performance based physical fitness program** were found on Passing, abilities enhance due to performance **based physical fitness program** of basketball players.

Keywords: Performance based, physical fitness, Basketball, Passing

INTRODUCTION

Basketball is a popular <u>team sport</u> in which two teams, most commonly of five players each, opposing one another on a rectangular <u>court</u>, Passing and receiving a basketball allows a team to effectively move the ball quickly around the court. A pass is a method of moving the ball between players. Most passes are accompanied by a step forward to increase power and are followed through with the hands to ensure accuracy. A team that has players with strong passing and receiving skills will spread the defense and be hard to guard. This strength should help create open shots, which will hopefully lead to more scoring opportunities. Shooting, defense, dribbling, passing, and rebounding are some of the most significant abilities in the basketball game of Performance based physical fitness program enable the athlete to overload and train his/her body in a specific position required for a specific competition situation. Today the high level of professional sport focuses on of Performance based physical fitness program is a form of overload exercise. Researchers' state that of Performance based physical fitness program can change the elasticity of muscles and tendons, to enable them to store bigger quantities of elastic energy during a given stretch-shortening movement. Another advantage of Performance based physical fitness program is that it includes movements, which cause elastic energy to maximize the stretch-shortening cycle.

MATERIAL AND METHODS

Sample Size and Technique of data Collection

The data was collected through respondents in the form of different tests. Purposive sampling method was used, as the researcher selected Basketball Players with a specific purpose. 25 basketball players selected under Performance based physical fitness program group Training was given to both groups separately. This study involves a cross sectional, comparative pre and post-test of experimental group. Since only experimental groups were taken by the investigator and there was no control group so this study was conducted in a quasi-square experimental design.

Training Program

The Performance based physical fitness program were planned for 4 days a week 30 minutes in a day for 12 weeks including 10 minutes warm up period and 05 minutes cool down. The result computed also crosschecked by using following statistical variables. Mean standard deviation, T-test.

Passing Test

Basketball passing test required a smooth wall surface of 30 feet. A restraining line 26 feet long was marked out on the floor 8 feet from and parallel to the testing wall. On the testing wall six boxes measuring 2 feet by 2 feet were marked out all 2 feet apart. Moving from the left side of the testing wall, targets A, C and E have their base 5 feet from the floor



International Journal of Advanced Research in Computer and Communication Engineering

Impact Factor 7.39 in Vol. 11, Issue 5, May 2022

DOI: 10.17148/IJARCCE.2022.11555

while B, D and F have their base 3 feet from the floor. Each participant performed a chest pass to the first target square (A), recovered the ball while moving to the second target square (B), performed a chest pass to the second target (B). The participant then continued this action until he reached the last target (F). The test was continued for just thirty seconds. Only chest passes were allowed. Each chest pass that hit the target or on the target lines was awarded 2 points and one point was awarded for each pass that hit between the targets.

RESULTS OF THE STUDY

Table-1 Mean Scores and Standard Deviations of selected components of the Basketball players

Sr. No.	Components	Means Scores	Standard Deviations
1.	Age (Year)	19.45	7.13
2.	Weight (Kg)	65.87	8.59
3.	Height (cm)	175.30	12.35
4.	Training (days/week)	4.73	1.40
5.	Training duration (hours)	2.75	0.66
6.	Warm up (minutes)	10.56	2.13
7.	Competition in one year	12.15	2.85

Table-1, shows that the mean scores and standard deviations of the selected components of the Basketball players.

Mean Score (S.Ds.) age of Basketball players was 19.45 (7.13) years, mean score (S.Ds.) weight was 65.87 (8.59) Kg., mean score (S.Ds.) height was 175.30 (12.35) cm., their training mean score (S.Ds.) was 4.73 (1.40) days, their training duration mean score (S.Ds.) was 2.75 (.66) hours, their warm up mean score (S.Ds.) was 10.56 (2.13) minutes and competition mean score (S.Ds.) was 12.15 (2.85) in one year.



Figure-1, shows that the mean scores and standard deviations of the selected components of the Basketball players.



International Journal of Advanced Research in Computer and Communication Engineering

TABLE-2

MEAN SCORES AND STANDARD DEVIATIONS OF PRE & POST-TEST PASSING ABILITY AMONG Basketball Players

Basketball skill test	Test	No	Mean Scores	Standard Deviations	T-test
Passing	Pre-test	15	39.15	5.67	P<.05
	Post-Test	15	48.10	6.20	

Table-2, Shows that the mean scores and standard deviations of basketball passing ability among group.



Figure-2, Shows that the mean scores and standard deviations of basketball passing ability Basketball Players

RESULT AND DISCUSSION

A pass in basketball is one of the most basic and fundamental skills needed to play the game. It is **when a player moves the ball to another teammate through the air without being right next to each other**. A pass advances the ball anywhere around the court anytime a player is not dribbling it. With regard to pretest of passing ability of, they have obtained mean values 39.15 and the standard deviation was 5.67 respectively. Furthmore, the Post-test of passing ability of group, they have obtain mean values 48.10 and the standard deviation was 6.20 respectively, the findings of the study revealed that there was significant difference of passing ability was found between pre and post of basketball players. The findings of the study revealed that Performance based physical fitness program enhance the passing ability of the players. The findings show the Improving passing ability and the performance enhancement of basketball skills through Performance based physical fitness program.

REFERENCES

- [1]. Abhijeet.S (2013). Effects of selected exercises to achieve health related physical fitness components among sedentary students. Ph.D thesis.SRTM Univarcity, Nanded.
- [2]. Bhargava, KB., Vinod, BK., Sai, KN., & Vikas, KV. (2013). Effectiveness of neuromuscular training for basketball players on performance of star excursion balance test. Int J Physiother Res, 1(5), pp.251-60.
- [3]. Hopkins, DR., Shick, J., & Plack, JJ. (1984). Basketball for Boys and Girls. Skills Test Manual. Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance.
- [4]. Payne, N., Gledhill, N., Katzmarzyk, P., Jamnik V., & Ferguson, S. (2000). Health implications of musculoskeletal fitness. Can J Appl Physiol, 25, pp.114-126.



International Journal of Advanced Research in Computer and Communication Engineering

DOI: 10.17148/IJARCCE.2022.11555

- [5]. Potteiger, J., Lockwood, R., Haub, M., & Dolezal, B. (1999). Muscle power and fiber characteristic Following 8 weeks of plyometric training. J Strength Cond Res, 13, pp. 275-279.
- [6]. Ross CH., & Rösblad B. (2002) Norms for grip strength in children aged 4-16 years. Acta Paediatrica, 91(6), pp.617-625.
- [7]. Schmitz, RJ., Kulas, AS., Perrin, DH., Riemann, BL., & Shultz, SJ. (2007) Sex differences in lower extremity biomechanics during single leg landings. Clin Biomech, 22(6), pp.681-688
- [8]. Sue, D., Alex, A., & Frank, R. (2010) A six-week neuromuscular training program for competitive junior tennis players. J Strength Cond Res, 24(9), pp.2372-2382.
- [9]. Warburton, D., Gledhill, N., & Quinney, A. (2001). Musculoskeletal fitness and health. Can J Appl Physiol, 26, pp.217-237.
- [10]. Zazulak, BT., Hewett, TE., Reeves, NP., Goldberg, B., Cholewicki, J. (2007). Deficits in neuromuscular control of the trunk predicts knee injury risk: a prospective biomechanical- epidemiologic study. Am J Sports Med, 35(7), pp.1123-1130.
- [11]. Steven S. J. (June, 1897). "A Study of the Effect of Participation Is Selected Physical Education Activities upon Component of HPF", Dissertation Abstract International, 48(3), 596.
- [12]. Thierry A. R. (2000). "The Effect of Training in the Maximum Oxygen Consumption (VO₂ Max) and The Physical Conditions of College Female Soccer Player", Ph.D. Dissertation, TEXAS Amravati University, p. 89.
- [13]. TinnaRitvanenet. (2007). Effect of aerobic fitness on the physiological stress responses at work, international journal of occupational medicine and environmental health 2007; 20(1):1.
- [14]. Tuomainen P. (2005). Regular physical exercise, heart rate variability and turbulence in a 6-year randomized controlled trial in middle-aged men: the DNASCO study. Life Sci. 23-34.