Effectiveness of Under Basket Shoot Through the Maxex Training Model

Dadang Warta Candra Wira Kusuma[1,a*], Moch. Asmawi[1,b], James Tangkudung[1,c]

[1]Sports Education Doctoral Program, Jakarta State University, Jl.Rawamangun Muka, East Jakarta-Indonesia
[a] dadang@ikipmataram.ac.id; [b] moch.asnawi@unj.ac.id; [b] jamestangkudung@unj.ac.id
Corresponding Author

ABSTRACT

The purpose of this study is to create a draft training shooting model in basketball games and to improve the athletes' ability of basketball shooting. This research is mixed-method with research and development (R&D) design. The subject of this research is university player level in Mataram. The formula of t is used with randomized pretest-posttest control groups design. The result of research is creating model of shooting training in basketball games. Thus, the result of data analysis shows that the value of t_{test} is 11,749 and t-table is 1,729 it means that t_{test} is higher than t_{table} (t_{test} > t_{table}). The data analysis shows that there is significant effect of shooting training in basketball games and can enhance the players' ability.

1. INTRODUCTION

In basketball the components of physical and psychological conditions contribute positively as described by the expert "Basketball players must be able to run, jump, accelerate, decelerate, and change direction. A common thread to the success of these physical tasks is to be efficient from the ground up; in other words, you must apply optimal levels of force into the floor in the shortest time. Sir Isaac Newton's third law of motion states that for every action there is an equal and opposite reaction" (Cole & Panariello, 2016). While, (Tangkudung & Puspitorini, 2012) claim that the condition of a good physical condition will affect the psychological aspects in the form of increased work motivation, morale, confidence, and accuracy.

Basketball games are closely related to the physical condition of athletes, because basketball players are required to be able to run, jump, accelerate, decelerate, and change direction, to achieve maximum performance must be supported by the scientific method. (Kusnanik, 2016) says that physical conditions is very important in sport. the success or failure of a team comes from the planning process, therefore in the process of planning the exercise in improving the mastery skills of basic techniques specifically shooting on basketball players need to design exercises that are in accordance with the position and needs of the players themselves in compiling and planning a training program it is crucial, as a trainer must master the concept and science of coaching methodology which is

the basis for the preparation and planning of training programs to deliver the player or team to the top. The role of coach in concepting of program must be supported by knowledge and understanding of concepts and sport coach methodologies. The coach of basketball player should be able to choose the right methods. Making the writer want to overcome the problem above needs to be done a research. The suggested research is developing a shooting training model combined with physical training to support successful shooting in basketball games, the results of this research and development was used as a guide in making an exercise program.

The problem this study is whether by using the maxex training model can improve the shoot under basketball results between the groups given treatment and with convional method.

2. LITERATURE REVIEW

This study uses quantitative research methods with this type of research is a quasi-experiment with a non-equivalent control group design, where a group of experiments and control groups is not randomly selected. In conducting this experimental research, researchers divided the two groups, namely the experimental group and the control group, the two groups had the same

characteristics and characteristics. In the experimental group (given treatment), given a smart egg puzzle game every week twice for two weeks.

Exercise is a way to achieve maximum achievement. To become an accomplished athlete, the athlete does not only rely on talent and interest. Great talents and interests without getting the right training, poor methods of training, and sufficient amounts of training, the results are less to be an accomplished athlete. So the shortness of being an accomplished athlete must get programmed, stretched, and continuous training.

According to (Tangkudung & Wahyunitiyas, 2016) that "exercise is a recurring and increasing process to increase potential in order to achieve maxima achievements" . Maximum pretensions must be supported by training programs that are appropriate to the level or growth and development, both short-term programs and long-term programs. Because training for maximum achievement must be started early in the child.

The definition of practice that comes from the word practice is "activities to improve skills (skills) to exercise by using various equipment in accordance with the goals and needs of the sport" (Sukadianto and Muluk, 2011). During the training process, the trainer should always improve the basic mobility needed by the sports that the athlete engages in, in providing training the trainer should use a variety of supporting equipment."Exercise is basically a process of physical activity (physical) and psychological (mental) by setting (dosage) a certain training load to achieve the desired training goals by using methods, (Sukadianto & Muluk, 2011) material or appropriate forms of training" (Syahfruddin, 2011).

Exercise is a process for a long time to improve and know the needs and abilities of individual athletes. The training program uses a form of sports activity or practice to improve the desired quality in a particular activity. Based on the opinion above the understanding of exercise is a process of practicing or physical activity carried out systematically, programmed by having scientific principles and which are individual in nature that lead to the characteristics of human physiological functions to achieve the desired goals

Maxex training is a training method that combines maximum work to get explosive power. This method of training must be done with caution, with various variations and stages (Lubis, 2013) . According to Bompa "the construction, especially in increasing the ability of athletes. Many methods for developing strength, such as weight training, interval training, circuits and so on. For example, in power training for volleyball smash jumps, it would be better to add enough load when jumping than just the shoe load (Bompa, 2009).

Every team that controls the ball must find a position to shoot in order to win the match. In a soccer match, athletes must be supported by physical components such as speed, agility and dribbling ability to find shooting positions (Korkmaz & Karahan, 2012). In warm-up basketball

games an integral part of the training process, heating includes a general section dominated by low intensity aerobic activity designed to increase body temperature and to improve neuromuscular function "(kyranoudis, Nikolaidis, Ispirlidis, Galazoulas, 2018). While, "Warm-up is common activity in basketball, used to increase muscle temperature, muscular lood flow and several other physiological/psychological responses, directed toward performance improvement and injury prevention" (Stevanovic, Jelic, Milanovic, Filipovic, 2019). Gomes et al., In Neumann and Hohnke describing "scoring points from free throws is one of the important skills in basketball. free throws can produce 35% points during the last five minutes in basketball matches and free throw mastery is very important when very small margin points "(Neumann, D., & Hohnke, 2018).

3. METHOD

This research is conducted at the IKIP Mataram, West Nusa Tenggara at the male basketball team IKIP Mataram. This research is mixed-method with research and development (R&D) design. The subject of this research is university player level in Mataram. The formula of t is used with randomized pretest-posttest control groups design.

Table 1. The Scheme of Research Design

Subject	Pre-test	Treatment	Post-test
R	T1	X	T2
R	T1	X-	T2

The population of this research were male basketball atheletes which consist of 20 athletes. The data obtained from the test will be analyzed quantitatively. The analysis of data obtained from test uses 1) a descriptive analysis containing mean, mode, median, and standard deviation; and 2) the inferential analysis which involves t-test. In addtion, to support the analysis data will be used SPSS 22 program.

4. RESULTS AND DISCUSSION

a. Descriptive Statistics

The assessment data from 20 research subjects are shown in the table 2.

Table 2. Shooting Ability for Experimental

No	Experimental			Control		
	Pretest	Postest	Interval	Pretest	Postest	Interval
1.	15	21	6	12	14	2
2.	13	17	4	13	15	2
3.	15	18	3	14	16	2
4.	11	18	7	14	16	2
5.	14	18	4	12	13	1
6.	14	19	5	12	16	4
7.	15	20	5	12	14	2

	Experimental			Control		
No	Pretest	Postest	Interval	Pretest	Postest	Interval
8.	14	20	6	13	15	2
9.	12	16	4	11	15	4
10.	14	18	4	11	14	3
11.	15	20	5	11	13	2
12.	13	17	4	10	14	4
13.	14	16	2	12	15	3
14.	13	15	2	14	15	1
15.	12	15	3	11	14	3
16.	12	14	2	12	13	1
17.	12	14	2	13	15	2
18.	13	17	4	13	17	4
19.	11	16	5	12	16	4
20.	14	16	2	12	16	4
Total	266	345	79	244	296	52
Mean	13,3	17,25	3,95	12,2	14,8	2,6

b. Normality

Table 3. The Result of Normality Test

One-Sample Kolmogorov-Smirnov Test

Group	Pre_test Experimental	Post_test Experimental	Pre_test Control	Post_test Control
Kolmogorov-Smirnov Z	.915	.577	.992	.755
Asymp. Sig. (2-tailed)	.372	.893	.279	.618

The result of the normality used Kolmogorov Smirnov test, the calculation using the SPSS 22 program. If the calculation results obtained by probability (p) is higher with significant error (0.05), then the data is normally distributed. Calculation of the normality test for the pretest and posttest basketball shooting practice model obtained the Kolmogorov Smirnov value for the pretest and post test data of 0.915 with Asymp. Sig. (2-tailed) = 0.372> 0.05. So it can be concluded the normal distribution model. Based on this analysis shows that, the two variable data are normally distributed.

c. Homogeneity

Table 4. Data test of Homogenitas of variancez (Experimental)

One-Sample Kolmogorov-Smirnov Test

		Pre_test	Post_test
N		20	20
Normal Parametersa,b	Mean	13.3000	17.2500
	Std. Deviation	1.30182	2.04875
Most Extreme Differences	Absolute	.205	.129
	Positive	.141	.129
	Negative	-.205	-.110
Kolmogorov-Smirnov Z		.915	.577
Asymp. Sig. (2-tailed)		.372	.893

a. Test distribution is Normal.

b. Calculated from data.

Table 5. Test of Homogeneity of Variances

Group	Levene Statistic	Sig.
Experimental	.436	.781
Control	1.033	.406

d. Paired Sample t-test

Table 6. Paired Samples Test

Group		Paired Differences Mean	t	df	Sig. (2-tailed)
Experimental	Post_test - Pre_test	3.95000	11.749	19	.000
Control	Post_test - Pre_test	2.60000	10.614	19	.000

5. DISCUSSION

The results of the study were that the shooting practice model in ball games met valid criteria according to experts, suitable for use by athletes at the student level and effective for improving shooting skills in basketball games based on the results of the study. Shooting exercises that are applied to the experimental group represent a model designed to improve shooting abilities based on theory, components or require shooting practice models that are interrelated with each other from preparation, basic shooting techniques to running models in the field, and can improve shoot basketball at the student level. *Basketball is a stochastic high-intensity sport characterized by high aerobic and anaerobic demands, continuous changes of direction, accelerations and decelerations, jumps, sprints, contacts, and specific SKILL (http://www.jssm.org.2016).* The role of physical condition is the main capital and is supported by mastering basic techniques to become a basketball player. On the basis of the model that has been developed in the study includes the dominant physical exercise training in basketball.

6. CONCLUSION

This study aims to find out the effectiveness of under basketball shooting through the maxex training model on the men's basketball at IKIP Mataram teams. Based on the results of the study it can be concluded that there is the improvement in under basketball shoot results after being treated with shooting training. The result of research is creating model of shooting training in basketball games. Thus, the result of data analysis shows that the value of

t-test is 11,749 and t-table is 1,729 it means that t-test is higher than t-table (t-test > t-table). The data analysis shows that there is significant effect of shooting training in basketball games and can enhance the players' ability.

REFERENCES

Bompa, T. (2009). Periodization Theory and Methodlogy of Training. Bandung: Lubuk Agung.

Cole, B., & Panariello, R. (2016). Basketball Anatomy. USA. Human Kinetik: USA.

James, T., & Wahyuningtiyas, P. (2016). Pelatihan Olahraga "Pembinaan Prestasi Olahraga". Jakarta: Cerdas Jaya.

Korkmaz, C., & Karahan, M. (2012). A Comparative Study On The Physical fitness And Performance Of Male basketball Players In Different divisions. Nigde University Journal of Physical Education And Sport Sciences, 6, 16. Retrieved from https://pdfs.semanticscholar.org/1bf3/4dbb8056467617 db358ac29a77ac65863471.pdf

Kusnanik. (2016, September-Desember). Pelatihan Speed, Agility, and Quickness dan Plyometric. Jurnal Iptek Olahraga, Vol. 8, No. 3.

Kyranoudis, Nikolaidis, Ispirlidis, Galazoulas, A. and K. (2018). Acute effect of specific warm-up exercises on sprint performance after static and dynamic stretching in amateur soccer players. Journal of Physical Education and Sport, 18, 825–829. https://doi.org/10.7752/jpes.2018.02122

Lubis, J. (2013). Panduan Praktis Penyusunan Prigram Latihan. Retrieved from www.rajagrafindo.co.id: www.rajagrafindo.co.id

Neumann, D., & Hohnke, E. (2018). Practice using performance goals enhances basketball free throw accuracy when tested under competition in elite players. Journal of Human Sport and Exercise. Journal of Human Sport and Exercise, 13(2), 296–304. https://doi.org/https://doi.org/10.14198/jhse.2018.132.0 5

Stevanovic, Jelic, Milanovic, Filipovic, M. and S. (2019). Sport-Specific Warm-Up Attenuates Static Stretching-Induced Negative Effects on Vertical Jump But Not Neuromuscular Excitability in Basketball Players. Journal of Sports Science and Medicine, 282. Retrieved from http://www.jssm.org

Sukadianto, & Muluk. (2011). Pengantar Teori dan Metodologi Melatih Fisik. Bandung: CV Lubuk Agung.

Syahfruddin. (2011). Ilmu Kepelatihan Olahraga "Teori dan Aplikasinya dalam Pembinaan Olahraga. Padang: Universitas Negeri Padang.

Tangkudung, J., & Puspitorini, W. (2012). Kepelatihan Olahraga "Pembinaan Prestasi Olahraga". Jakarta: Cerdas Jaya.

Tangkudung, J., & Wahyunitiyas, P. (2016). Kepelatihan Olahraga "Pembinaan Prestasi Olahraga". Jakarta: Cerdas Jaya.