



The Effectiveness of Applying Handball Shooting Skills Training Model to Improve Beginner Athlete Shooting Skills

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Abstract

This research uses quantitative methods. This study aims to determine the effectiveness of the application of the handball shooting skills training model to improve the shooting skills of novice athletes. The research design in this study was the one group control pretest-posttest. The research has been carried out in several handball sports clubs in Palembang, South Sumatera. Based on the results of the test of the effectiveness of the application of the handball shooting skills training model that has been carried out, the N-Gain Score test results obtained on the results of the shooting skills obtained by an average N-Gain Score for the experimental class of 86.88% with the "effective" category, the value N-Gain Score at least 68% and maximum N-Gain Score of 100%. Meanwhile, the average N-Gain Score for the control class is 25.63% with the "ineffective" category, the minimum N-Gain Score is 8.33% and the maximum N-Gain Score is 53.85%, so it can be concluded that the application of the development model is proven. So thus from the results of this study it is recommended to teachers, coaches and novice athletes to be able to use the product training model that has been developed by researchers as a reference in teaching, training and learning handball.

How to Cite

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INTRODUCTION

The development of sports progress in Indonesia is growing rapidly as seen from the many international championships held in Indonesia. This has also had a positive impact on the development of sports progress at the national level. The government tries to support athletes by providing training platforms from the regional and even national levels. One of the sports that has become a concern and favored by all people in Indonesia today is handball. The handball game played in ancient Greece is a sign of the creation of the modern handball sport (IHF, 2012). Handball in Indonesia is growing again after not being able to compete with the sports that are currently developing at that time, at this time the community has begun to open up to new sports that can give their characteristics, especially those that can make sports fun to watch. Handball sport is where two teams of seven players each with six players and one goalkeeper in each team try to get a ball into the opponent's goal. Handball is one of the most interesting game sports played by all groups. Because handball is a complex sports game (Mulyani & Sumarno, 2017). In principle, a handball game was created to make the human body able to move and carry out activities so that the burning occurs in the body. (Triwijayanto, 2013) explains that, «handball can be interpreted as a team game using the ball as a tool, which is played using one or both hands. The ball can be thrown, bounced, or shot. This game aims to get as many balls as possible into the opponent's goal and prevent the opposing team from getting the ball into their own goal ».

Supporting achievement in handball games players must have good speed, strength, endurance, and accuracy to support their appearance in the field (Ramadan, 2018). This is a concern in carrying out training for current handball athletes, the need for a training program, and coach coordination in carrying out the training properly. The handball athlete development program starts from coaching novice athletes in Indonesia, one of which is the province of South Sumatera in the city of Palembang. Based on Law of the Republic Number 3 of 2005 concerning the National Sports System (SKN), Chapter I Article (1), it is stated that the definition of achievement sports is sports that foster and develop sportsmen in a planned, tiered and sustainable manner through competitions to achieve achievements with support for sports science and technology (Undang-Undang, 2005). Thus, basic coaching is an important foundation as a basis for increasing

achievement in the handball sport.

Handball sports coaching in the Province of South Sumatra, especially in the city of Palembang, has been running quite well, however, various obstacles have been found to improve performance in handball, namely the training pattern that has not varied which causes athletes to be less motivated in training. The need for innovation and adding variety in handball training as well as analysis of the factors that affect success during field appearances. The basic technique in handball is the key in addition to the basic abilities it already has. Both will sustain a person's appearance in a match. In principle, coupled with a training process or repetition will produce basic player techniques that are expert and the highest level of players or high-level performance (Muhlisin & J.P, 2016). Skilled motor behavior relies on the brain learning both creases after the load force peak and reached its peak to control (Flanagan, J. R., Vetter, P., Johansson, R. S., & Wolpert, 2013). Skilled motor behavior relies on the brain studying the strength of the load to reach its peak to be controlled .

The basic technique of handball is the form and pattern of handball, which can be said to be a modification of soccer and basketball games (Sumarsono et al., 2019). Handball game consists of several basic techniques such as warming-up, dribbling, passing, shooting, positioning, attacking exercise, defencing exercise, and fast-break exercise, but only three basic techniques are used in games, including; (1) dribbling technique, namely the player's effort to bring the ball closer to the opponent's defense by bouncing the ball to the floor, (2) passing technique, which is an attempt to give the ball to a friend using one or two hands, (3) shooting technique or shooting the ball into the goal (E. Susanto, 2017). One of the basic techniques that greatly affect victory during a match performance is shooting skills. (Sutrisna et al., 2018) argue that “skills are used to describe the motor movements of a person who has achieved excellence in his activities. An athlete who is considered skilled often has the qualities of coordination, ability, control and efficiency of movement ». Movement skills are supported by motor skills as a capacity of a person related to the implementation of physical abilities to be able to carry out a movement (Widiastuti, 2011). According to (H. Susanto, 2019) revealed that «In a learning process, skills are designed as a learning communication process to change student behavior to be fast, and precise in doing or facing something». While shooting is the main technique that must be mastered by every

athlete in handball. As explained by (Sungkono & Siantoro, 2020) «shooting is the movement of taking a direct shot towards the opponents goal and will determine victory». Therefore, this shooting technique needs to be mastered by every handball player because this shooting can be done by every player who gets the opportunity to do it. Handball player can master good shooting techniques, it takes a lot of of shooting skill training models. Therefore, the researcher will test the effectiveness of the application of the handball shooting skill training models so that later it can be applied as an exercise models that can improve the shooting skills of novice athletes.

METHOD

This research uses quantitative methods. The purpose of this research is to determine the effectiveness of the application of the handball shooting skills training model to improve the shooting skills of novice athletes. The research design in this study was the one group control pretest-posttest. In this design, two groups were randomly selected and then given a pretest to determine the difference in the initial state between the experimental group and the control group. A good pretest result is if the value of the experimental group is not significantly different (Hidayat, 2012).

This research was conducted in 3 (three) Palembang South Sumatera handball sports clubs including; 1) SMA Tridharma Palembang, 2) SMAN 8 Palembang, and 3) SMA Pusri Palembang. Sampling was done by purposive sampling. Purposive sampling is a sample taken based on research needs, meaning that each individual taken from the population is chosen deliberately based on certain considerations (Notoatmodjo, 2003). With the number of test subjects totaling 60 subjects (30 for the experimental class and 30 for the control class). The test tool for this effectiveness test is a test made by researchers and has been justified by experts. The test is testee standing 7 (seven) meters from goal and then a testee throws the ball towards the goals that has been numbered, each testee is given 3 chances. Every chance testee takes 5 shots. The value taken is the total value of the given chance

RESULTS AND DISCUSSION

Based on the data taken through the handball shooting skills test, the following is a **Table 1** of the results of the shooting skills of the control and experimental groups:

Table 1. Data Pretest - Posttest Control and Experiment groups

Name	Control Class		Name	Experimental Class	
	Pre-test	Post-test		Pre-test	Post-test
X1	17	23	X1	15	40
X2	20	31	X2	19	39
X3	15	25	X3	21	37
X4	22	26	X4	18	35
X5	17	31	X5	19	37
X6	14	27	X6	14	39
X7	14	19	X7	17	43
X8	19	25	X8	20	40
X9	18	21	X9	18	43
X10	17	23	X10	16	41
X11	16	24	X11	14	43
X12	15	26	X12	14	38
X13	19	31	X13	19	37
X14	20	28	X14	17	42
X15	18	27	X15	18	40
X16	19	21	X16	16	42
X17	21	26	X17	19	40
X18	18	26	X18	20	41
X19	19	23	X19	20	38
X20	14	22	X20	17	41
X21	17	25	X21	19	38
X22	20	22	X22	15	40
X23	18	22	X23	19	41
X24	19	24	X24	20	39
X25	20	22	X25	15	42
X26	21	24	X26	19	38
X27	18	21	X27	20	41
X28	19	22	X28	19	40
X29	19	25	X29	19	39
X30	16	22	X30	14	40
Average	17,97	24,74	Average	18,00	39,80

Based on the data from the **Table 1** handball shooting skills above, the data normality test was then carried out with the Kolmogorov-Smirnov test and the Shapiro-Wilk test. The test results show that the results of the shooting skills show the significance value (sig.) For all data, namely the Kolmogorov-Smirnov test and the Shapiro-Wilk test > 0.05, so it can be concluded that

the research data is normally distributed. Then the t-test is carried out. Obtained the mean score of the results of the test shooting skills in the post-test group of the experimental class was 39.80 and the standard deviation was 1,990, while the average results of the shooting skills test in the control group class were 24.47 and the standard deviation was 3.071. Then obtained the value of $t = 4.683$ and the value of Sig. (2-tailed) or p-value = $0.000 < 0.05$ or H_0 is rejected. So thus there is a significant increase in the results of the shooting skills of novice athletes in the handball sport after being given a handball shooting skill training model. Furthermor.

The N-gain score test is a way of calculating the difference between the pretest-posttest scores of the control group and the experimental group. Based on the results of the N-Gain Score test on the results of shooting skills, the average N-Gain Score for the experimental class is 86.88%, is "Effective" category with a minimum N-Gain Score of 68% and a maximum N-Gain Score of 100. %. Meanwhile, the average N-Gain Score for the control class was 25.63%, is "ineffective" category with a minimum N-Gain Score of 8.33% and a maximum N-Gain Score of 53.85%. Thus, the use of an "effective" handball shooting skill training model can improve the shooting skills of novice athletes. This is in line with the results of research from (Juditya & Aprila, 2018) which revealed that "The application of an animation-based jigsaw model can improve basic shooting skills in soccer games". In addition, another study from (Mashur, 2017) concluded the results of his research that "The model is a basketball shooting practice through a combination of effective approaches to improve the shooting ability of basketball players". And the research results from (Sugiarto & Wijaya, 2019) also concluded that "Freethrow shooting practice using BEEF can improve basketball shooting skills for beginners".

The results showed that the handball shooting skills training model can improve the shooting skills of novice athletes with the acquisition of $t = 4.683$ and Sig. (2-tailed) or p-value = $0.000 < 0.05$. This result is in line with research from (Lusiana, 2015) which states that "A good throwing ability team in winning a match". In addition, (from a player will have a significant impact on the Pratama, 2016) in his research explained that "shooting the ball is also a skill that must be possessed by every player". In principle, handball is a team sport that uses the ball as a tool to play with one or two hands. In handball games, each player is required to be able to master various ba-

sic handball skills.

In a game or handball match, there are two teams in the game, and each team must try to shoot the ball at the opponent's goal which is protected by the goalkeeper. Each team consists of 7 players, including 1 goalkeeper and 6 defensive and offensive players. This handball game aims to get as many balls as possible into the opponent's goal to score goals and prevent the opposing team from shooting the ball into the goal itself. Handball games have various basic techniques which are one of the main factors that determine whether a team wins or loses in a game. Regarding this, research from (Budi et al., 2019) states that "Mastery of basic technical skills aims to support the ability to play handball well as shown by the standard assessment of handball playing skills". This handball game is played with a very fast, dynamic rhythm, with spectacular tactics and techniques (very interesting) from the players, then ends with a fast, hard, and precise shooting action. So shooting skills in the game of handball are very important for every player to master and do well.

CONCLUSION

Based on the results research of the application of the handball shooting skills training model that has been carried out, and it has been proven effective so that it can improve the shooting skills of novice athletes. So thus from the results of this study, it is recommended to teachers, coaches, and novice athletes to be able to use the product training model that has been developed by researchers as a reference in teaching, training, or learning handball.

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