



## Modification of Shooting Kits to Improve Shooting Accuracy in MBO Petanque Students Muhammadiyah Surakarta University

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### Abstract

This study aims to determine the effect of Modified Shooting Kits on Increase Shooting in MBO Petanque UMS Students. The practice of using modified shooting kits aims to make MBO petanque when running the training program become accustomed to throwing shots on the iron. The method used in this study uses an experimental method and uses a "one group pretest posttest design" design. The test instrument uses the shooting from the FIPJP rules with stations 1,2,3,4,5 and shooting ranging from 6 meters, 7 meters, 8 meters, and 9 meters. students of MBO Petanque UMS who are the subjects of this research. In taking the sample using the purposive sampling technique. Based on the t-test conducted, the data showed that the practice using modified shooting kits had a significant value of  $0.003 < 0.05$  so there was a significant effect of shooting using modified shooting kits accuracy shooting in MBO petanque UMS students. practice model shooting modification kits accuracy shooting of MBO petanque average of pretest average of posttest 17.60 shooting increase of 7.20 for the accuracy of the shooting game compared to before the practice.



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## INTRODUCTION

Petanque is a game that developed in ancient Greece in the 6th century BC in 1907. Jules Boule Lenior introduced this sport to be precise in the city of La Ciotat, France (Wijaya et al. 2021). Petanque is an old sport but it is still a new category of sport and every player must have good throwing accuracy to control the desired direction (Hidayat & Jariono 2021), (Jariono et al. 2021). In petanque itself, the main goal is to throw an iron ball toward a small wooden ball target as a target to get closer to the points achieved and the first step is to position the body in a circle with both legs in a circle (Hanief & Purnomo 2019). In this game, facilities or equipment are used, including iron balls with a diameter of 70 to 80 mm and a weight of 650 to 850 grams which are always carried during matches (Triadi & Nurhidayat 2021).

The type of throw that players use in playing, namely the pointing throw, is the most important type of throw to get points by bringing the iron ball closer to the wooden ball target to get closer and get points. In contrast to shooting, it is a type of throw that has the main function of keeping the opponent's iron ball away or throwing a wooden ball as far as possible (Isyani & Primayanti. 2020). The shooting ability of petanque players because it is very important in getting full points. If the shot still looks inadequate and weak, then the player will have difficulty getting maximum points. Petanque does not only compete in the shooting game category (Permadi & Nurhidayat, 2021). The distance of petanque games, especially shooting games, some provisions regulate, among others, the closest distance is 6 meters, 7 meters, 8 meters, 9 meters and every distance each player throws an iron ball, just one iron ball and then proceeds to the next distance. Based on the results of

observations that have been made to MBO petanque UMS students in each training session it is getting better, it's just that some players are getting lazy in practicing, and many players are starting to lose their training spirit. Players who train only come, warm up, program and play but don't want to add hours of independent practice. This little thing must be considered because it involves the passion of the players when practicing petanque. Lack of innovation in the application of training tools due to limited tools makes the training atmosphere monotonous, there is no attraction for players to practice using new tools. It is feared that concentration will decrease so that the accuracy of throwing, especially in shooting, will decrease drastically, if there is no improvement in the program that can maintain performance players will affect the outcome of the game.

Based on the results of the problems above from what the authors stated, the authors want the application of shooting using modified training aids to improve shooting skills, namely a modified shooting kit. Practice using shooting kits commonly used for shooting games makes players interesting when practicing. Many practice sites already have shooting equipment for practice, usually made of carpet or banners.

With such materials, mostly when used in practice, they are easily damaged when bored the carpet. So that the tool is rarely used, even if it is damaged there is no renewal. So a player who practices returns to the initial method, namely makeshift tools which can make them feel bored. A shooting kit is a tool used for shooting games. It has an elongated shape with a distance of 9 meters and there is 1 circle at the end for placing targets and 4 circles for the player's initial position when throwing bosi. The purpose of developing a shooting kit so that it is not

monotonous and overcomes the limitations of training tools so that players do not get bored, the authors modified the shooting kit using wood and rope. The modified form is elongated, namely the placement of a square wooden block with a length of 40 cm and a width of 9 cm near the target as a barrier. The wood is tied on the right and left sides with a distance of 10 cm each from the rope taken in the middle position. Then the rope is pulled along a distance of 10 meters, then the placement of the circle is at the closest distance of 3 meters to 9 meters.

Why in this modification the circle is placed closest to a distance of 3 meters. Because to train accuracy at close range first and this tool can be used for beginners and all ages. The advantage of this tool is that it is efficient when carried everywhere and can be adjusted according to a standard distance program, which is from 6 to 9 meters. The goal after implementing the tool modification as a shooting method is expected to have a positive impact on maintaining the shooting of UMS petanque players. The benefit of the research to be carried out is to provide information or reference sources to coaches and players as a variation or innovation of training to improve shooting skills with the help of modified tools. Not only that, what is expected from this research can be information material and further research studies for coaches or petanque to improve the achievement of champion targets.

## METHODS

This research method uses quasi-experimental research, namely, the sample used is not quarantined first. The purpose of experimental research is to prove ideas or ideas and procedures to determine whether it affects the results or not

(Cahyanto & Hidayat, 2012). Using experimental research to determine the relationship between the cause and effect of the independent variable and the dependent variable. Experimental research is research conducted strictly to determine the cause and effect between variables.

The research plan used is "One Groups Pretest-Posttest Design" which means an experimental activity by giving treatment (pretest) to the subject and ends with a test that aims to determine the effect of the treatment (posttest). practice shooting using modified shooting kits to increase the shooting accuracy of athletes' petanque UMS to prove the hypothesis about whether or not there is an effect of the exercise that has been carried out. So that research can be proven faster because it can be seen and assessed before exercise or after exercise.

## Participants

MBO Petanque UMS students in the category of active students and included in the criteria for the research sample consisted of 15 men as the research sample. The research was conducted in the petanque field of the Muhammadiyah University of Surakarta.

## Sampling Procedures

The sampling technique used the purposive sampling technique. technique Purposive sampling is a technique used by researchers if researchers have certain considerations in taking samples for certain purposes. In determining the sample for this study, the researchers provided the following conditions: (1) already registered as a member of the MBO Petanque Sports Education FKIP UMS, (2) active during training with the MBO Petanque Sports Education FKIP UMS. From the above criteria, 15 people MBO petanque UMS met the requirements.

## Materials and Apparatus

Data collection techniques in this study used tests on samples that had been selected and had not received treatment or pretest ( $0_1$ ). If you already get the results from the pretest, then treatment or treatment (X) is carried out, namely shooting with modification of shooting kits. So after doing it a few times the exercise was then given another test, namely the posttest ( $0_2$ ) accuracy shooting So from the statement above, we get 2 results from the pretest and posttest, then the data is analyzed to be compared to find out how much influence is obtained from shooting modification shooting kits.

## Procedures

The procedures in this study were: (1) the researcher conducted a pretest to determine the ability to shoot accurately, and (2) after the pretest, then the sample was trained using modified shooting kits for 6 weeks for 3 meetings in 1 week which were treated 3 times every afternoon with the duration of the exercise is 120 minutes, and (3) after the research is carried out, a posttest is then carried out, to determine the increase in the results of shooting accuracy using shooting games.

## Design or Data Analysis

Analysis of the data used in this study is to use the t-test at a significance level = 0.05 to determine the difference in the effect between the accuracy of shooting pretest and post-test. Overall, this data analysis uses SPSS version 23.

## RESULT

### 1. Data Description

MBO This research is to find out the Modification of Shooting Kits to Improve Shooting Students Petanque

UMS In the research conducted there are subjects, namely MBO Petanque UMS students with a sample of 15 people. implementation of this research begins by taking a pretest or initial test on February 21, 2022, and ends by taking a post-test or final test on March 30, 2022. Then the data is processed using statistical analysis of the SPSS version 23 application which is shown in the attachment and summary. overall research data is presented in tabular form. The following are the results of the study:

**Table 1.** Description Ability Statistics  
Pretest Shooting and Posttest

Variable	N	Mean	Median	SD	Max	Min
pre-test	15	10.40	11.00	4.453	22	3
post-test	15	17.60	16.00	9.202	39	4

From the table data above, it can be described the level of shooting game in the initial test or pretest with an average of 10.40, a mean value of 11.00, and a standard deviation of 4.453. The highest score is 22 and the lowest value is 3. Meanwhile, during the post-test or final shooting game average score is 17.60, the mean is 16.00, and the standard deviation is 9.202. The highest value is 39 and the lowest value is 4.

### 2. Normality Test

In normality testing using the Shapiro-Wilk test. This test will test the hypothesis of a sample that comes from a normally distributed population to accept or reject the hypothesis by comparing the significant value with 0.05. If the hypothesis accepts the criteria for a significant value greater than 0.05, if it does not meet the criteria, the hypothesis is not normally distributed or is rejected.

**Table 2.** Results of normality test analysis

No	Variable	Sig	Conclusion
1	Pre Test	0,110 > 0,05	Normal
2	Post Test	0,369 > 0,05	Normal

From the table above, the P values of all variables are greater than 0.05 so the hypothesis stating that the sample from the population is normally distributed is accepted. The information states that the variable data in this study can be analyzed using parametric statistics.

### 3. Homogeneity Test

This test will test the hypothesis that the variance of the variables is the same, to accept or reject the hypothesis by comparing the significant value of more than 0.05. The results of the homogeneity test can be seen in the table below.

**Table 3.** Results of Homogeneity Test Analysis

Variable	Value Significance	Conclusion
Shooting	0,026 > 0,05	Homogenous

From the calculation results obtained, a significant value > 0.05 means that the sample variance is homogeneous, then the hypothesis stating the variance of the existing variables is the same or accepted. Therefore, it can be concluded that the population variance is homogeneous.

### 4. Hypothesis Test

To determine whether or not there is an effect of modifying shooting kits' accuracy shooting on MBO petanque UMS students. So hypothesis testing is carried out using a paired t-test which is presented in the table below.

**Table 4.** T . Test Analysis Results

Variable	Pret est	Post test	Sig	Conclu sion
Shooting	10.40	17.60	0.003 < 0,05	Signific ance

Based on the table above, the statistical analysis of paired samples t-test practice shooting modification shooting kits has a significant value of  $0.003 < 0.05$  so it can be interpreted that there is a significant effect of shooting using modified shooting kits on improving the shooting game of MBO petanque UMS students.

When viewed from the average pretest -test average post of 17.60, it can be concluded that shooting using modified shooting kits accuracy shooting in MBO petanque UMS students.

## DISCUSSION

Based on the results of the T-test, shooting practice using shooting kit modification has a significant value of  $0.003 < 0.05$ , which means that there is a significant effect on the results of shooting practice using modified shooting kits on the accuracy level of shooting games for MBO Petanque UMS students. From the results of the exercise, when viewed based on the average pretest score of 10.40 and the post-test average of 17.60, these results indicate that the exercise provided an increase of 7.20 for the accuracy of shooting games compared to before the exercise.

The shooting practice using shooting kits has a significant effect on the accuracy of the shooting game because MBO students are given a trajectory and a wooden obstacle as a throwing reference so that MBO Petanque students are forced to make perfect throws, namely the ball on target which is called ball to ball.

Based on the results of this study, which were almost similar, were conducted by (Al-Khusaini & Nurhidayat, 2021) who researched the Effects of Implementing Shooting Exercises Using Barriers on Increasing the Shooting Ability of UMS Petanque Athletes. The result of this study is that the practice of using barriers can improve shooting game skills.

## CONCLUSION

Based on the research results obtained from data analysis and hypothesis testing, it was concluded that there was a significant effect of shooting with modification of shooting kits accuracy shooting in MBO petanque UMS students. The results of the statistical analysis of paired samples t-test practice shooting modification shooting kits have a significant value of  $0.003 < 0.05$ , which means that there is a significant effect when viewed from the average pretest average of posttest 17.60, namely an increase of 7.20. So it can be concluded that shooting with modified shooting kits can increase the accuracy of shooting games for MBO petanque UMS students when compared to before being given training with modified shooting kits.

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