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SHOOTING ACCURACY OF SPORTS COACHING EDUCATION STUDENTS: GOALING GAME PRACTICE

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ABSTRACT

This study aimed to determine the effect of goal-setting game training and how effective it is in improving the shooting accuracy of extracurricular students at UPRI Sports Coaching Education. This study is an experimental design, involving two training groups throughout 16 meetings, one serving as a pretest and another as a posttest. We conducted this study for approximately one month to investigate the impact of goal-game training on the shooting accuracy of UPRI Sports Coaching Education students participating in extracurricular activities. The results demonstrated a significant impact of goal-setting game training on shooting accuracy, as evidenced by a statistical increase in the average pretest shooting accuracy from 25.80 points to 42.30 points for the treatment group and from 26.50 points to 33.20 points for the control group. The hypothesis test's significance value is less than 0.05. The conclusion is that goal-game training affects the shooting accuracy of extracurricular UPRI Sports Coaching Education students.

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1. INTRODUCTION

In various international competitions, football has become one of the sports that has brought pride to Indonesia (Ma'mun et al., 2022). For example, in SEA GAMES 2023, the Indonesian U-22 National Team won first place, while currently, the Indonesian U-23 National Team has won a ticket to compete in the 2024 Asian Cup. An achievement like this is certainly a peak of pride for the entire Indonesian nation. In addition to the national football team's growth, South Sulawesi demonstrates the progression of the football sport, from the tarkam-tarkam competition to the regional league 3 championship. Football is a meeting point between people from different backgrounds and origins, connecting all levels of politics, economics, culture, and religion as social beings (Carr et al., 2021; Woolsey, 2021).

Football is a sport that depends heavily on fair play, as it closely resembles physical contact, involving nearly all body parts in the ball's play (Astina, 2021; Roberts, 2021).

Two teams, each consisting of eleven players, compete in football, aiming to score by placing the ball into the opponent's goal while also defending their own goal to prevent the ball from conceding. Football is an attraction for everyone who likes this team sport (Bodet et al., 2020; Canter et al., 2024). Football fans always anticipate the spectacle of football competitions at both national and international levels. Based on various theories, we conclude that football involves 11 players per team, with a standard game duration of 2 x 45 minutes split into 2 halves. The game lasts 45 minutes in the first half and 45 minutes in the second; if the score remains unchanged, two 15-minute extra periods will ensue, followed by a knockout match to replace the group stage. One player, out of the 11 players, is responsible for safeguarding the goal to prevent any concessions, as the objective of this game is to advance the ball into the opponent's goal for victory. Only the goalkeeper can catch the ball with his hands, while players can use all parts of their bodies to play. The referee is the person who leads the field or controls the game's course. All referee decisions are final and cannot be challenged, meaning that players cannot challenge the referee's choice if it has been issued (Sudirman et al., 2022).

Accuracy is a movement technique that combines strength and accurate estimation to align with the planned and desired outcome (Siegle et al., 2013; Constantinou, A., & Fenton, 2017; Na et al., 2019). A person's ability to control free movement towards a target, such as a direct object that requires recognition, is known as accuracy. Kicking accuracy is an important component of football performance (Blair et al., 2020; Mappaompo et al., 2022). The technique is one of the elements that influences a football athlete's success, particularly shooting methods. We hope that an athlete can achieve the desired outcome with effective technique. At the end of their attack plan, football athletes must use shooting techniques to place the ball in the opponent's goal. Possessing excellent shooting skills increases the likelihood of winning a match (Brito Souza et al., 2020; Maneiro et al., 2020). The resulting shot has speed, ensuring that the ball travels straight in the intended direction. Additionally, the foot contact creates a smooth body angle and movement quality, preventing stiffness during the shooting technique (Afrizal, S., 2018). The ability to direct something to the intended target, such as an object hit, is known as accuracy. In football, accuracy and a kick have a close relationship. A football player with strong ball control and dribbling skills will be ineffective in a match if they lack the accuracy in their kicks to pass the ball to a teammate, and a successful final finish also necessitates high accuracy (Anam et al., 2021).

During the researcher's observations, there were problems when competing, namely, players often missed the target when shooting, competitors were excessively tired while playing, and decreased concentration in the middle of the round. This indicates that the physical and mental aspects of a football player's shooting technique are still developing (Syahara, 2020).

The purpose of this study, based on the conception and description above, is to determine the effect of goaltending game training and how effective it is in increasing shooting accuracy.

2. METHOD

This type of research is experimental, making changes to one or more variables and study their effects, namely changes that occur in other variables. The manipulated variable is referred to as the independent variable or cause variable, and the other variables it influences are referred to as dependent variables or effect variables. The main characteristic of experimental research is the existence of strict control over the research variables. Under strict control, we expect the independent variable to drive changes in the dependent variable, unaffected by other variables or factors. The study's objectives guided the use of a two-group pretest-post-research design, which involved an experiment on two groups receiving goal-setting training and a control group receiving no training. The study employed match ordinal pairing to divide the groups based on their respective ranks. This research was conducted by the University of Pejuang Republik Indonesia, Makassar City, which divided 20 students into two groups. We included 10 students in the experimental group and another 10 students in the control group.

This research design employs a pretest-postest method with a single group under control, using the following Figure 1 design:

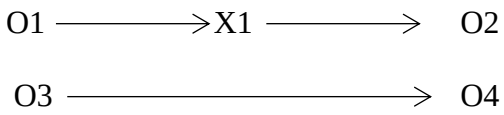

Figure 1. Research Design

Description:

O1: Pretest shooting experimental group
X1: Treatment 16 times goalling game training meetings
O2: Posttest shooting experimental group
O3: Pretest shooting control group
O4: Posttest shooting control group

To play goalling is to use a soccer ball with a target of an aqua bottle placed on the side of the goal. Students kick the ball to the target at 10 meters. If the ball hits the target, it gets 5 points; if it doesn't, it gets no points or 0. This game aims to help students grasp the concept of accuracy, preparing them for a game that focuses more on the material under study. Students divide into 4 groups, each comprising 5 students who alternately act as the kicker and the ball keeper behind the target. Students position themselves in a line, measured 10 meters away from the target. When the instructor or coach blows the whistle, students start kicking the ball to the target four times. Once you've completed the four rounds, alternate with students standing behind the target, and continue this pattern until you've completed the training program for 60 minutes per training session.

In Bobby Charlton's Shooting Test (Hargreaves, 2009), Six target areas divide the goal. Players take 10 kicks from 16 yards (14.6 meters). The affected target area determines the score (5, 4, 3, 2, 1 points). The maximum score is 50 points.

The data analysis technique employs a hypothesis test and a correlated sample t-test. Prior to conducting the hypothesis test, we conduct a prerequisite test that assesses the normality and homogeneity of the data. The decision to accept or reject the hypothesis is at a 5% significance level. We use SPSS 25.0 for Windows program to analyze the data.

3. RESULTS AND DISCUSSION

Results

Table 1. Descriptive Analysis

Descriptive Statistics

Variable	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
Pretest Goalling	10	13	21	34	258	25.80	3.795	14.400
Posttest Goalling	10	13	37	50	423	42.30	3.831	14.678
Pretest Control	10	12	22	34	265	26.50	4.353	18.944
Posttest Control	10	10	30	40	332	33.20	3.553	12.622

Table 1 above provides the explanation.

1. The treatment group of 10 students, who took the shooting accuracy test, found that the range was 13, the minimum value was 21, the maximum value was 34, the standard deviation was 3.795, and the variance was 14.400. The students achieved a total of 258 scores, with an average of 25.80.
2. After administering the shooting accuracy test to 10 students in the treatment group, the results showed a range of 13, a minimum value of 37, a maximum value of 50, a standard deviation of 3.831, and a variance of 14.678. The students received a total of 423 scores, with an average of 42.30.
3. After administering the shooting accuracy test to the control group of 10 students, the results showed a range of 12, a minimum value of 22, a maximum value of 34, a standard deviation of 4.353, and a variance of 18.944. The students received a total of 265 scores, with an average of 26.50.
4. After administering the shooting accuracy test to 10 students in the posttest control group, the results showed a range of 10, a minimum value of 30, a maximum value of 40, a standard deviation of 3.553, and a variance of 12.622. The students received a total of 332 scores, with an average of 33.20.

Table 2. Kolmogorov Smirnov Normality Test

Group	Statistic	df	Sig.
Pretest Goaling	0,183	10	0,200*
Posttest Goaling	0,140	10	0,200*
Pretest Kontrol	0,235	10	0,126
Posttest Kontrol	0,232	10	0,135

Table 2 demonstrates that the normality test results above the sig value are greater than the P value of 0.05, indicating a normal distribution of the research data.

This study's hypothesis testing relies on empirical data gathered from field tests and measurements of the variables under investigation. We will then statistically process the data. This study's hypothesis testing used a paired sample test. Table 3 presents the following results of the hypothesis test.

Table 3. Paired Sample Test

Variable	Mean	t	df	Sig. (2-tailed)
Pretest Gooaling - Postest Goalling	16.500	-9.517	9	0.000
Pretest Kontrol - Postest Kontrol	6.700	-8.642	9	0.000

Table 3 above yields a significance level of less than 0.05. This indicates that both the treatment group and the control group exhibit equal effects on students' shooting accuracy during the pretest and posttest.

Discussion

The discussion of the research results is based on the results of the descriptive analysis, normality test, and paired T-test, as detailed in Table 3. Table 3 shows the results of the paired sample test comparing the pretest and posttest scores for two groups: the goal group and the control group. These results indicate a significant change in both groups after the intervention or a specific period of time. For the goal group, the mean difference between the pretest and posttest was 16,500. The t-value of -9.517, with a degree of freedom (df) of 9 and a significance (2-tailed) of 0.000, indicates that this difference is highly statistically significant. This is in line with the findings of Afrinaldi et al. (2021), who reported a significant increase in shooting accuracy after a structured training program.

The control group also showed a change, with a mean difference of 6,700 between the pretest and posttest. The t-value of -8.642 (df = 9) and significance of 0.000 indicate that this change is also statistically significant, although it is smaller than the goal group. The difference in the magnitude of change between the Goaling group (16,500) and the Control group (6,700) indicates that the Goaling intervention has a greater effect. This aligns with the findings of Sari & Nugraha (2022) study, which demonstrated that specific training significantly enhances shooting accuracy when compared to conventional training. In both groups, statistical significance ($p < 0.05$) indicates that the changes that occur are very likely not due to chance factors. However, the difference in the magnitude of the effect between the two groups suggests that the goal-setting method is more effective in improving performance. The study by Frikha et al. (2017) supports this, emphasizing the significance of specific training in enhancing kicking accuracy. The negative t-values in both groups (-9.517 and -8.642) indicate that the posttest scores are higher than the pretest, indicating an increase in performance after the intervention period. This is in accordance with the findings of Anam et al. (2021), who reported the effectiveness of game-based training in improving the technical skills of soccer players.

In both groups, the degree of freedom (df) 9 indicates that each group consists of 10 participants. This sample size is sufficient for statistical analysis, but future research

may consider a larger sample size to increase the generalizability of the results, as suggested by Anam et al. (2021). Overall, these results indicate that both the goal-setting method and the control method are effective in improving performance, but the goal-setting method shows higher effectiveness. This strengthens the argument that specific and structured training such as Goaling can be an effective method to improve shooting accuracy in soccer, in line with findings in recent literature in the field of sports science (Morgans et al., 2014; Fiorilli et al., 2020; Otte et al., 2023).

4. CONCLUSION

Based on the analysis and discussion results, it appears that goaltending game training affects increasing UPRI Sports Coaching Education students' shooting accuracy. This is demonstrated by the results for the goaltending training group, which increased shooting accuracy by 16.50 compared to the control group's 6.70 increase. In addition, the hypothesis test obtained a significance of less than 0.05. Therefore, both groups, namely the treatment group and the control group, have an equal effect on students' shooting accuracy when the pretest and posttest are carried out.

As a suggestion, the study's results can be a reference for learning for lecturers and students. In addition, further research suggests a wider scale.

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