

The Effect of Variable Distance and Moving Targets Training on Balasuga Academy Players' Passing Accuracy

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Keywords

Football; Passing Accuracy; Variable Distance Training; Moving Target Training

Abstract

This study examined the effect of variable distance and moving target training on football passing accuracy and compared it with conventional training. The study used an experimental method with a nonequivalent control group design. The sample consisted of 16 football school players divided into an experimental group and a control group using the ordinal pairing technique. The experimental group received variable distance and moving target training, while the control group followed conventional training. Passing accuracy was measured using a football passing accuracy test based on the football skills test developed by Subagyo Irianto. Data were collected through pretest and posttest measurements. Data analysis used descriptive statistics, normality tests, homogeneity tests, paired sample t tests, and independent sample t tests. The results show that variable distance and moving target training significantly improved passing accuracy with a t value of -9.029 and a significance value below 0.001. The analysis also shows a significant difference between the experimental and control groups with a t value of 3.870 and a significance value of 0.002. These results indicate that variable distance and moving target training are more effective than conventional training for improving football passing accuracy.

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INTRODUCTION

Football is a sports game that is very popular and played by various age groups in different countries. The game requires players to have basic technical skills, physical fitness, tactical understanding, and good teamwork (Supron et al., 2022). Mastery of basic techniques is an important component that affects a player's performance in matches. Basic techniques in football include passing, controlling, dribbling, shooting, and heading (Rahman & Padli, 2020). Passing is one of the most frequently used basic techniques in football. This technique is used to pass the ball to a teammate in order to maintain possession and build an effective attack. Good passing skills allow the team to organise their play more strategically and reduce errors in ball possession. Therefore, passing accuracy is an important skill that every football player must possess (Aulia et al., 2023).

Passing accuracy is influenced not only by a player's technical skills, but also by their ability to read game situations and make decisions (Marsuna et al., 2024). Players must be able to observe the positions of their teammates, the movements of opponents, and the available space before making a pass. Research by (Coutinho et al., 2023) shows that the level of decision-making in training can affect a football player's ball control and passing quality. Planned and systematic training is an important factor in improving players' technical skills. A well-structured training programme can help players develop their technical abilities optimally (Aprilianto et al., 2022). Proper training design can also enhance players' motor skills as well as perceptual abilities in football. Research shows that training design and coaching approaches play an important role in the learning process of football players' motor and cognitive skills (Bergmann et al., 2021). The use of varied training methods is one approach that can be applied to improve players' technical abilities. Training that involves changing tasks and game situations can help players adapt to dynamic game conditions. Research by (Clemente et al., 2021) shows that training variation can enhance the development of technical skills and tactical understanding in young football players. Forms of practice that can be used to improve passing skills are variable distance drills and moving target drills. These exercises combine variations in passing distance with changes in target position. Distance variation aims to train players in controlling the power of their kicks so that the ball can accurately reach the target (Siregar et al., 2026). Meanwhile, the changing position of the target requires players to adjust the direction of their passes quickly and accurately.

Previous research has shown that training with targets can improve football players' passing accuracy because players are trained to focus on a clear direction of the pass (Sawali, 2022). In addition, passing drills with stationary and moving targets have also been shown to improve football players' passing accuracy (Saputra et al., 2023). This indicates that the use of targets in training plays an important role in improving players' passing accuracy. In the process of youth football development, appropriate training methods are essential to enhance players' basic technical skills. Analysis of basic technical skills in football school players shows that these skills, particularly passing, still require improvement through more focused and systematic training programmes. Therefore, an effective training method is needed to improve the passing skills of youth football players.

Various training methods have been used in football development. However, research specifically examining variable distance drills and shifting targets as a form of passing technique training is still limited. Most studies focus more on game-based training or technical training with fixed targets. In fact, the combination of varying pass distances and changing target positions has the potential to enhance players' ability to simultaneously adjust the power and direction of passes. Training with such variations can also provide a training stimulus closer to actual game situations, requiring players to make quicker and more accurate movement adjustments. Based on the description, this study was conducted to analyse the effect of variable distance and moving target training on football passing accuracy in Football School players. This study focuses on two main aspects: to determine whether variable distance and moving target training can influence improvements in players' passing accuracy, and to determine whether there is a difference in effect between the group given variable distance and moving target training and the group given conventional training on the passing accuracy results of Balasuga football students school. Thus, this study is expected to provide

empirical information regarding the effectiveness of variable distance and moving target training as a training method to improve passing accuracy in youth football players.

METHODS

This study uses an experimental method with the aim of determining the effect of variable distance and moving target exercises on football passing accuracy. The research design used is a nonequivalent control group design, which is an experimental design involving an experimental group and a control group without a full randomisation process for the research subjects (Priadana & Sunarsi, 2021). In this design, both groups are given a pretest before the treatment and a posttest after the treatment. The experimental group was given treatment in the form of variable distance and moving target exercises, while the control group was given conventional training typically conducted in football training programmes.

The population in this study comprised all football school players who actively participated in training programmes. The research sample was determined using the purposive sampling technique, which is a sampling method based on certain considerations that align with the research objectives (Soesana et al., 2023). The research sample consisted of 16 players who were then divided into two research groups: the experimental group and the control group.

The division of research groups was carried out using the ordinal pairing technique. This technique was conducted by ranking all samples based on the results of the initial test (pretest) from the highest to the lowest score. After that, the samples were paired consecutively and then divided into two groups alternately so that the initial abilities of both groups were relatively balanced. The ordinal pairing method is used to reduce the initial ability differences between the experimental group and the control group, making the research results more objective. The research instrument used was a football passing accuracy test. This test is used to measure the players' ability to pass the ball accurately to a predetermined target.

The test instruments used refer to the football skill test developed by (Irianto, 1995). In the test implementation, players pass the ball towards a target with a certain number of attempts and the score is obtained from the number of successful hits on the target. Data collection was carried out in two stages, namely pretest and posttest. The pretest was conducted before the treatment to determine the players' initial passing accuracy skills. After the pretest, the experimental group was given variable distance and moving target exercises during the designed training programme. The training programme was conducted in 12 sessions. After all treatments were provided, a posttest was conducted to determine the improvement in the players' passing accuracy skills. Data analysis in this study was carried out through several stages. The first stage was the normality test to determine whether the research data were normally distributed.

The second stage is the homogeneity test to determine the similarity of variances between groups. The next stage involves hypothesis testing using the t-test to examine the effect of variable distance training and moving targets on football passing accuracy, as well as to explore the differences in effects between the experimental group and the control group (Mukhyi, 2023).

RESULT AND DISCUSSION

Descriptive statistics are used to provide an overview of the pretest and posttest scores of passing accuracy in the experimental and control groups.

Table 1. Descriptive Statistic

Groups	Min	Max	Mean	Std Deviasi
Pre-Ex	4	8	5.63	1.188
Post-Ex	7	9	8.00	0.756
Pre-Con	4	7	5.63	1.061
Post-Con	5	8	6.38	0.916

Based on **Table 1**, it is known that the average pretest score of the experimental group was 5.63 and increased to 8.00 on the posttest after being given treatment in the form of variable distance and moving target exercises. In the control group, the average pretest score was 5.63 and increased to 6.38 on the posttest after receiving conventional training. These results indicate that both groups experienced an improvement in passing accuracy after participating in the training programme. However, the improvement in the experimental group was higher compared to the control group.

Table 2. Normality Test

Groups	Statistic	df	Sig
Pre-Ex	0.892	8	0.245
Post-Ex	0.849	8	0.093
Pre-Con	0.912	8	0.366
Post-Con	0.906	8	0.324

A normality test was conducted to determine whether the research data were normally distributed or not. The normality test was carried out using the Shapiro-Wilk test because the number of research samples was less than 50. Based on the results of the normality test, it was found that all significance values were greater than 0.05, so it can be concluded that the research data were normally distributed. Thus, the research data meet the requirements for parametric statistical analysis.

Table 3. Homogeneity Test

Variable	Lavene Statistic	df1	df2	Sig
Pass Result	0.716	1	14	0.412

A homogeneity test was conducted to determine whether the variance between the experimental group and the control group was similar. The results of the homogeneity test showed a significance value of 0.412. This value is greater than 0.05, so it can be concluded that the data variance between the experimental group and the control group is homogeneous.

Table 4. Paired Sample T-Test

Variable	MD	t count	df	Sig(2-Tailed)
Pre-Post	-2.375	-9.029	7	< 0.001

Based on the results of the paired sample t-test, the calculated t value was -9.029 with a significance value of <0.001. This significance value is less than 0.05, so it can be concluded that there is a significant effect of variable distance training and moving targets on football passing accuracy.

Table 5. Independent Sample T-Test

Variable	t count	df	Sig(2-Tailed)	MD
Pass Result	3.870	14	0.002	1.625

The test results showed a t-value of 3.870 with a significance level of 0.002. This value is less than 0.05, so it can be concluded that there is a significant difference in the effect between variable distance and moving target training and conventional training on football passing accuracy.

CONCLUSION

The research results indicate that variable distance and moving target training significantly affect the improvement of football players' passing accuracy. This is reflected in the increase in the average score of the experimental group from 5.63 in the pretest to 8.00 in the posttest. The results of the paired sample t-test also showed a significance value of <0.001, indicating that the training provided was able to significantly improve passing accuracy skills. The results of the independent sample t-test showed a significant difference in effect between the experimental group and the control group with a significance value of 0.002. This shows that the variable distance and moving target training method is more effective than conventional training in improving the passing accuracy of football players. The research results show that distance-changing drills train players to adjust their kicking power according to the target distance, while moving-target drills train players to correctly adjust the direction of their passes. Combining these two types of drills helps players improve movement coordination, concentration, and accuracy in passing. These findings are in line with the research by Sawali (2022), which states that practising with a target can increase football players' passing accuracy. In addition, research by Saputra et al. (2023) also shows that passing drills with a moving target can improve players' passing accuracy. Other studies also indicate that training variations in football can enhance players' technical skills as well as their ability to adapt actions to the game situation (Clemente et al., 2021). Thus, practices involving varying distances and changing targets can help players develop their passing technique more effectively. Based on these research findings, it can be concluded that training with changing distances and moving targets is an effective method for improving football players' passing accuracy compared to conventional training.

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