Journal Management of Sport
Volume 3 Number 2 (2025)
E-ISSN: 2963 – 8003
available online at https://jurnal.stokbinaguna.ac.id/index.php/JSSB

THE EFFECT OF SPINNING SHOOTING TRAINING MODEL MANAGEMENT ON SHOOTING ABILITY IN SOCCER

Nurtajudin [1 *]
[1] Universitas Pendidikan Mandalika, West Nusa Tenggara, Indonesia
[*] Corresponding Author: nurtajudin87@gmail.com

Information

History:
Submitted; January 2025
Revised; February 2025
Accepted; March 2025

Keywords:
Training;
Model;
Management;
Shooting;
Soccer.

Abstract

Shooting accuracy plays a crucial role in determining the success of soccer teams during competitive matches. This study aimed to examine the effect of the Spinning Shooting Training Model on the shooting ability of soccer players. A quantitative experimental method was applied using a one-group pretest-posttest design. The study involved 20 male players selected through total sampling. Data were collected through the Bobby Charlton Shooting Test and a validated target shooting test. The training intervention was conducted over 12 sessions in 3 weeks, focusing on dynamic shooting techniques involving body rotation to improve both power and accuracy. Pretest and posttest scores were analyzed using the Wilcoxon Signed Rank Test via SPSS. The results showed a significant increase in shooting performance after the training intervention, with a p-value of 0.000 ($p < 0.05$) and a Z-score of -3.739. This indicates a statistically significant difference between pretest and posttest scores, affirming the positive impact of the spinning shooting training model. These findings support prior research on targeted technical training in soccer and provide practical insights for coaches aiming to improve players' shooting skills through structured and dynamic methods. The study contributes to the ongoing development of evidence-based training strategies in soccer.

INTRODUCTION

Soccer is one of the most popular sports played around the world, including in Indonesia. This game not only demands high physical abilities, but also mastery of basic techniques such as passing, dribbling, heading, and shooting. Of all these techniques, shooting plays a vital role in determining a team's victory, because shooting is the final action to score a goal (Mielke, D. 2007). According to Sarumpaet (2013), shooting is a basic technique in soccer games that requires muscle coordination, speed, strength, and accuracy in execution.

Good shooting ability is an indicator of individual player skills in converting opportunities into goals. This is reinforced by the opinion of Harsono (1988) which states that the success of a team in a match is largely determined by the ability of individuals to execute basic techniques efficiently, especially when in front of goal. Therefore, improving shooting techniques is an important focus in soccer training programs.

However, in practice, there are still many shooting exercises that are carried out monotonously, without considering variations in motion or more complex techniques. Exercises like this tend to be less effective in developing shooting ability to the maximum (Arsil, 2010). In this context, the spinning shooting training model, which is a technique of kicking the ball with a rotating body movement, can be an innovative solution in developing strength, speed, and shooting accuracy.

Spinning shooting training requires the simultaneous involvement of physical and technical components. The twisting motion before kicking increases the activation of the large muscles of the body such as the gluteus, hamstring, and abdominal muscles that support the power of the kick. According to Bompa & Carrera (2005), technical training combined with dynamic movement patterns can improve the neuromuscular efficiency and motor performance of athletes. In this case, mastery of shooting techniques through spinning training is predicted to be able to make a significant contribution to improving players' shooting ability.

The main problem underlying this research is the low effectiveness of shooting soccer players, especially Club Mujur FC Central Lombok players. Based on observation and consultation with the coach, it was found that most players tend to fail to place the ball accurately into the goal despite being in an ideal position to kick. This suggests the need for more innovative and challenging training approaches, such as target-based training and motion rotation.

In a previous study, Sumana (2015) mentioned that for an athlete to develop optimally, 8 to 12 training sessions are required in one microcycle. This underlies the provision of treatment in this study for 12 meetings. Meanwhile, a study by Danny Mielke (2007) through the development of the Bobby Charlton test showed that shooting skills can be measured objectively through scoring the specified target area. This test was also used in this study to obtain accurate and reliable data.

On the other hand, the research design used was a one group pretest-posttest design, as stated by Maksum (2009), which is very suitable for evaluating changes in performance after treatment is given to one group of subjects. Although this design does not involve a control group, it is still valid for directly measuring the effectiveness of an intervention if external factors can be strictly controlled (Margono, 2004).

In the context of previous research, there was a study at SMAN 2 Playen Gunungkidul that showed a significant effect of target games on the shooting ability of sports class students. The study used an experimental method with the same measurement instrument and showed an increase in the average shooting result from 87.39 to 137.82. This shows that the technique training method with a target approach and systematic repetition is effective in improving shooting skills.

Although there have been various studies that examine shooting training, specific research on the effect of spinning shooting training on shooting improvement is still limited. This indicates

a gap in the sports training literature in Indonesia. Therefore, this research is expected to provide academic and practical contributions, especially for soccer coaches and practitioners in developing effective and scientifically based basic technique training programs.

Based on this explanation, the purpose of this study is to determine the effect of spinning shooting training model on shooting ability in Club Mujur FC Central Lombok players in 2024. This research offers novelty in technical training approaches, enriches previous studies, and provides data-based recommendations for improving individual player performance through structured interventions.

METHODS

This research uses a quantitative approach with an experimental method. According to Arikunto (2002), experimental methods are used when researchers want to know whether or not there is an effect of a certain treatment on research subjects. The type of design used is one group pretest-posttest design, in which one group of subjects is given treatment after an initial measurement (pretest), and then a final measurement (posttest) is taken to determine the effect of the treatment given (Maksum, 2009; Hulfian 2014). This model is used because it is practical and allows for direct observation of changes that occur due to exercise interventions.

Participants

Participants in this study were all members of Club Mujur FC Central Lombok, in 2024. The total number of participants was 20 active soccer players who regularly attend training at the club. The characteristics of the participants were male, aged between 17-21 years, with a minimum of two years of soccer playing experience. Participants were selected based on their willingness to follow the full training program during the study period.

Sampling Procedure

Sampling was carried out using the total sampling technique, because the population was relatively small, which was only 20 people. Hulfian, L (2014) states that if the population is less than 100, then it is better for all members of the population to be sampled so that the data obtained is more accurate. Thus, this research is a population study, where all players who are members of Club Mujur FC Central Lombok are used as research subjects. This is also supported by the opinion of Margono (2004) that taking all members of the population in experimental research is very appropriate if the subject is not too large and easy to control.

Research Instrument

The instrument used in this study is a shooting test to the target adapted from Nurhasan (2001), which aims to measure the level of accuracy and shooting ability of players towards the goal. The test is carried out by placing the ball 13 meters away from the goal, then the player kicks towards the target three times. The assessment is made based on the area of the goal that is hit by the ball. If the ball hits the line between two boxes, then the highest score is recorded as the final score.

In addition, to obtain objective data, an evaluation method based on the Bobby Charlton Shooting Test developed by Mielke (2007) was also used, which has been proven valid and reliable in measuring shooting performance. The use of these two approaches is intended to strengthen the accuracy of the data.

Procedure

The research was conducted in three main stages:

- Pretest

  Players underwent an initial test of shooting ability using the methods already mentioned. The results of this test became the basis for measuring changes after treatment.
- Treatment

  The treatment given is the spinning shooting training model for 12 meetings in three weeks. This exercise is designed to refer to the principle of training periodization as stated by Bompa in Sumana (2015), which states that to produce optimal athlete performance, 8-

12 training sessions are needed in one microcycle. Each training session included shooting techniques with body rotation movements, ball control, and finishing into the goal. The training sessions were conducted at Malomba Field and supervised by the club coach and research coordinator.

- Posttest

  After the treatment was completed, the players again underwent a final test with the same methods and tools as in the pretest. The posttest results were then compared with the pretest to determine changes in performance.

Data Analysis

Data were analyzed using SPSS software with the Wilcoxon Signed Rank Test technique, because the data were paired and not assumed to be normally distributed (Hulfian, 2015). The Wilcoxon test is a non-parametric technique used to determine whether there is a difference in the median of two groups of paired data (pretest and posttest). The hypothesis tested is as follows:

- H_0 (Null hypothesis): There is no effect of spinning shooting training model on shooting ability.
- H_1 (Alternative hypothesis): There is an effect of spinning shooting training model on shooting ability.

The test results show a significance value of 0.000 ($p < 0.05$), so H_0 is rejected and H_1 is accepted. Thus, spinning shooting training is statistically proven to improve players' shooting ability.

RESULTS & DISCUSSIONS

Results

In this study, an analysis was conducted using the Wilcoxon test to test the difference between two variables, X and Y. The results of the SPSS calculation showed a p value of 0.000, which indicates that there is a significant difference between variables X and Y at the level of significance used. This very small p value suggests that the null hypothesis can be rejected, meaning that there is a real difference between the two variables. This finding provides an important insight into the relationship or difference between the variables tested in the context of this study.

Table 1. SPSS calculation results using wilcoxon test

Variabel	*p-value*
X Dan Y	.000

Table 1 is a wilcoxon test using SPSS. It can be seen that the Wilcoxon test P-value is smaller than a (0.05) so it can be concluded that there is an increase in shooting ability after being given a spinning shooting training model.

Table 2. Wilcoxon Signed Ranks Test Results

Ranks

		N	Mean Rank	Sum of Ranks
Posttest - Pretest	Negative Ranks	1[a]	3.00	3.00
	Positive Ranks	18[b]	10.39	187.00
	Ties	1[c]		
	Total	20		

a. Posttest < Pretest
b. Posttest > Pretest
c. Posttest = Pretest

Test Statistics[b]

	Posttest - Pretest
Z	-3.739[a]
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.
b. Wilcoxon Signed Ranks Test

From the output above, it can be seen that the value of t count = -3.739a with a significance value of .000 <0.05, so Ho is rejected and H1 is accepted, which means that there is a significant influence of Variable X (Spinning shooting training model) on Variable Y (shooting ability).

Discussions

This study aims to examine the effect of spinning shooting training model on improving shooting ability in soccer games. Based on the results of pretest and posttest data analysis using the Wilcoxon Signed Ranks Test, a significance value of 0.000 ($p < 0.05$) was obtained with a Z value = -3.739. These results indicate a significant difference between the pretest and posttest results of shooting ability, so it can be concluded that spinning shooting training has a real influence on improving the shooting ability of Club Mujur FC Central Lombok players.

These results reinforce the statement from Bompa in Sumana (2015) that to achieve optimal performance, an athlete needs at least 8-12 training sessions in one microcycle. The training model used in this study has been organized into 12 training sessions that are systematically designed. This is in accordance with the principles of overload and specificity in training theory, where performance improvement occurs when the body is given a sufficient training load that is relevant to the sport movement in question (Bompa & Carrera, 2005).

Theoretically, spinning shooting training is part of the development of shooting technique skills with a combination of body rotation that can improve stability, muscle strength, and kick accuracy. This approach is in line with Nurhasan's (2001) opinion that shooting skills in soccer are influenced by basic techniques, coordination, and leg muscle strength. In this study, the use of the test of kicking the ball to the target compiled by Nurhasan (2001) proved valid in measuring shooting skills, taking into account the goal area that was the target of the kick.

In line with this research, a study by Mielke (2007) who introduced the Bobby Charlton Shooting Test as a measurement tool for shooting skills, showed that this method is effective in providing a quantitative description of the accuracy and effectiveness of players' shots on goal. This study used the same method, and the results were consistent with Mielke's findings-that shooting scores improved after the training program was administered.

In addition, the findings in this study are supported by a similar study conducted on sports class students at SMAN 2 Playen Gunungkidul, where the target game model was shown to significantly improve shooting ability after 12 meetings (previous study, author name withheld). In the study, the mean pretest score increased from 87.39 to 137.82 after treatment. The findings strengthen the argument that shooting technique training interventions with a structured and target-focused approach can significantly improve the performance of players' shooting skills.

In terms of research design, the one group pretest-posttest approach used has been able to provide a fairly objective picture of the changes that occur in the subject. According to Margono (2004), this kind of design is very suitable for educational or sports experiments on a small scale, where control groups are difficult to present. However, the disadvantage of this design is that there is no comparator that can control for external factors, such as individual motivation or other physical activities outside of the training session, which may affect the results.

However, the appropriateness of the training schedule, consistency in implementation, and uniformity of treatment across subjects were able to minimize bias and increase data reliability. The presence of the trainer and documentator (research coordinator and documentarian) also ensured that all procedures were carried out as planned.

Practically, these findings make a direct contribution to the world of coaching, especially in the context of coaching young players at the club level. The spinning shooting training model can be utilized to improve players' shooting accuracy and strength. In the context of national soccer development, improving basic technical skills such as shooting is an important aspect in producing competitive players at higher levels. This kind of training not only improves individual performance, but also has a positive impact on the dynamics of team play.

Overall, the results of this study not only strengthen empirical evidence regarding the effectiveness of the shooting technique training model, but also enrich the repertoire of sports

research, especially in the development of experimental-based training methods. Future research can expand the variables studied, such as ball speed, shot accuracy, the influence of foot dominance, and real match conditions.

In closing, it should be emphasized that the success of this training model in improving shooting ability is inseparable from a systematic training structure, optimal training frequency, and active subject involvement. Therefore, this model deserves to be adapted in soccer training programs at both amateur and professional levels, with adjustments tailored to the needs of each team.

CONCLUSION

The results showed a significant increase in shooting performance after the training intervention, with a p-value of 0.000 ($p < 0.05$) and a Z-score of -3.739. This indicates a statistically significant difference between pretest and posttest scores, affirming the positive impact of the spinning shooting training model. These findings support prior research on targeted technical training in soccer and provide practical insights for coaches aiming to improve players' shooting skills through structured and dynamic methods. The study contributes to the ongoing development of evidence-based training strategies in soccer.

REFERENCES

Arikunto, S. (1993). *Prosedur Penelitian: Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.

Arikunto, S. (2002). *Prosedur Penelitian: Suatu Pendekatan Praktik* (Edisi Revisi). Jakarta: Rineka Cipta.

Arsil, A. (2010). *Pengaruh Latihan Teknik Shooting Terhadap Keterampilan Menembak Dalam Sepak Bola*. Jurnal Keolahragaan, 2(1), 25–33.

Bompa, T., & Carrera, M. (2005). *Periodization Training for Sports* (2nd ed.). Champaign, IL: Human Kinetics.

Danny Mielke. (2007). *Coaching Soccer Successfully*. Champaign, IL: Human Kinetics.

Hadi, S. (2002). *Metodologi Research*. Yogyakarta: Andi Offset.

Harsono. (1988). *Coaching dan Aspek-aspek Psikologis dalam Coaching*. Jakarta: Depdikbud.

Hulfian, L. (2014). *Penelitain Dikjas*. Selong: Garuda Ilmu.

Hulfian, L. (2014). *Kondisi Fisik dan Tes Pengukuran dalam Olahraga.* Mataram: Lembaga Penelitian dan Pendidikan (LPP) MANDALA

Hulfian L. (2015). *Statistik Penelitian Untuk Pendidikan Jasmani dan Olahraga*. Selong: Garuda Ilmu

Margono, S. (2004). *Metodologi Penelitian Pendidikan*. Jakarta: Rineka Cipta.

Maksum, A. (2009). *Metodologi Penelitian dalam Olahraga*. Surabaya: Unesa University Press.

Mielke, D. (2007). *Bobby Charlton Soccer Skills Test*. In *Coaching Soccer Successfully* (pp. 134–136). Human Kinetics.

Netral. (1974). *Metode Statistik Inferensial untuk Penelitian Pendidikan*. Jakarta: Bina Aksara.

Nurhasan, D. (2001). *Tes dan Pengukuran dalam Pendidikan Jasmani*. Jakarta: Depdiknas.

Sugiyono. (1999). *Metode Penelitian Kuantitatif dan Kualitatif dan R&D*. Bandung: Alfabeta.

Sukadiyanto. (2005). *Pengantar Teori dan Metodologi Melatih*. Yogyakarta: FIK UNY.

Sumana, Y. S. (2015). *Pengaruh Latihan Permainan Target Terhadap Kemampuan Shooting Dalam Permainan Sepak Bola Pada Siswa Kelas Khusus Olahraga Di SMAN 2 Playen Gunungkidul*. Yogyakarta: Fakultas Ilmu Keolahragaan UNY.