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THE PRESSURE OF SMASH TRAINING USING THE DRILL METHOD FOR MALE ATHLETES' VOLLEYBALL SMASH SKILLS

Yasriuddin[1], Muhammad Nur[2], Moh. Rizky Gunawan[3*], Fahrizal[4], Muh. Adnan Hudain[5]
[1, 2, 3, 4, 5] Pendidikan Jasmani dan Olahraga, Universitas Negeri Makassar, Indonesia

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ABSTRACT

The objective of this research was to determine the effect of smash drill training on smash skills in PT CAS Makassar male athletes. The type of research used is experimental. We selected the research object through total sampling, and the sample comprised 10 individuals. Meanwhile, we processed the data using SPSS 25, which included descriptive analysis, normality tests, and independent sample t-tests. The research results revealed that the smash skills of male athletes in the PT CAS Makassar study highlight the effectiveness of smash drill training. Of smash drill The hypothesis test results, utilizing the independent sample t-test, confirm this; they yield a value of Tcount > Ttable, specifically 10.04 > 2.101. > 2.101. In addition, the average initial ability of 22.80 to 28.40 demonstrates the impact of smash drill training. The increase in the average ability of these athletes indicates that smash drill training enhances the smash skills of PT CAS Makassarmale athletes.

Corresponding Author:

Moh. Rizky Gunawan,
Pendidikan Jasmani dan Olahraga, Universitas Negeri Makassar, Indonesia.
Email: mohrizkygunawan1999@gmail.com

1. INTRODUCTION

Volleyball is a type of performance sport that is popular among the public (Pérez-Turpin et al., 2019). Early talent development is crucial for maximizing children's potential and achieving optimal performance in volleyball (Nawir et al., 2023). We hope to produce athletes who can achieve high levels of success by participating in volleyball clubs and receiving guidance and direction from competent coaches. Two teams play volleyball on each court, with a net separating them. The goal is to pass the ball over the net so that it touches the opponent's court floor and prevents them from doing the same. Each team can make three bounces to return the ball (excluding blocking) (Ruslan et al., 2021; Cantú-González et al., 2022).

There are several basic techniques in volleyball, such as serve, set-up, passing, block (dam), and smash (spike) (Putra et al., 2021; Ayuningtyas et al., 2022). Skill in applying these basic techniques is critical, because mastery of them can influence the outcome of a team's victory or defeat in a match. This is a crucial component, in addition to the

team's physical, tactical, and mental state (Trajkovic et al., 2017; Batez et al., 2021; Sgrò et al., 2021).

The smash technique is one of the most complicated techniques and involves complex movements (Arte et al., 2019; Giatsis et al., 2019). Therefore, it is important to train athletes' smash technique from the start, because at this stage they are vulnerable to movement errors. The coach must provide effective guidance to optimize the athlete's technique. If an athlete has been accustomed to incorrect smash movements for a long time (Buszard et al., 2017), correcting them will be difficult and can hinder achieving maximum performance (Sheppard & Newton, 2012; Mersmann et al., 2017). Success or failure in executing a smash often depends on using the correct technique. Therefore, applying technique correctly is a crucial process in smashing, because from a biomechanical perspective, this movement becomes more effective, efficient, and safe, making it easier to hit the ball (Fattahi & Sadeghi, 2014; Mahmuddin et al., 2024). The primary objective of each team's smash is to strike the ball towards the opponent's field in a manner that prevents the opponent from returning it. Usually, a combination of three touches a pass to the feeder, a feed to the attacker, and a spike towards the opponent's field can achieve this (Islam, 2019; Ahmadi et al., 2021).

Researchers joined a training session at the PT. CAS Makassar volleyball club to observe the athletes' smashing abilities. Upon observing the training execution, it became apparent that the club's smash training component dominated each meeting, surpassing other technical training. Physical training also prioritizes improving the quality of smash techniques, particularly by strengthening the abdominal muscles and enhancing leg and arm power. Athletes show a high interest in practicing smash techniques, considering it to be the starting point for their interest in volleyball (Ribeiro et al., 2022; Grosso et al., 2024). During the volleyball team's training session at PT. CAS Makassar, researchers observed that there were several obstacles in developing volleyball athletes' smash abilities. Some of the problems identified include the technique of stepping towards the ball, half-squatting position when jumping, palm contact with an open hand position, foot position when landing in a half-squat, and narrowed foot position (Kim, 2016; Sgrò et al., 2021; Ayuningtyas et al., 2022).

The drill method is an activity of doing the same thing repeatedly, seriously, with the aim of strengthening an association or perfecting a skill so that it becomes permanent (Machado et al., 2021; Sugito, 2022). The drill or practice method serves as a teaching method that facilitates practice of previously acquired knowledge, aiming to cultivate a specific skill characteristic of drilling. This involves repeating activities to establish a strong association with the stimulus. The response intensifies, making the activity difficult to forget (Buszard et al., 2017).

Athletes believe that a successful smash is one that is powerful and sharp (Risma et al., 2021; Batez et al., 2021). However, the inclination to strike the ball forcefully and dive sharply may cause athletes to overlook effective smash movements, which should be efficient without excessive energy expenditure (Parlindungan et al., 2018; Mahmuddin et al., 2024). Failure to pay attention to this can hinder the achievement of maximum performance. To correct errors in the smash movement, coaches need to

evaluate each stage of the smash technique (Moreno Arroyo et al., 2016; Kerpe et al., 2024). This also applies to the PT. CAS Makassar volleyball club. Based on the previous discussion, the author is keen to investigate the impact of smash training using the drill method on the volleyball smash ability of male athletes at PT.CAS Makassar. This research will specifically focus on the influence of conventional and drill training methods, with the goal of making the discussion more focused and considering all of the author's limitations.

2. METHOD

This type of research is quantitative. This research uses a quasi-experimental method (quasi-experiment). Using statistics, we analyze numerical research data. We conducted the research at PT.CAS Makassar. We conducted this research using a pre-experimental research design, which included a one-group pretest-posttest. Researchers choose this design because it reveals cause and effect by involving a single group of subjects. We observed the subject group both before the intervention (pretest) and after it (posttest). We used a sample size of 20 athletes for this study. The training program will consist of 16 sessions. We will conduct the test using accurate and fundamental smashing techniques.

Smash a test instrument. Implementation steps

1. Tools Used
   a. A volleyball court of standard size, complete with poles and a net, with lines drawn to delimit the target scores.
   b. The pole measures 2.30 m.
   c. Volleyball
2. Test officer
   a. Test officer I (freely standing near the test taker area as a feeder).
   b. Test Officer II (standing not far from the target area, counting and recording test results)
3. Implementation
   a. The test participant stands on the attack line, while the feeder stands in the middle, close to the net, and throws the ball for the test participant to smash.
   b. Simultaneously, the test participant performs a smash, jumps, and aims for the highest target.
   c. Smash 6 times.
   d. If the ball isn't perfect, you can try again.
   e. We encourage participants to direct the ball to the highest-value target area.
4. Results recorder
   a. When the ball successfully lands on each target six times, we record the results.

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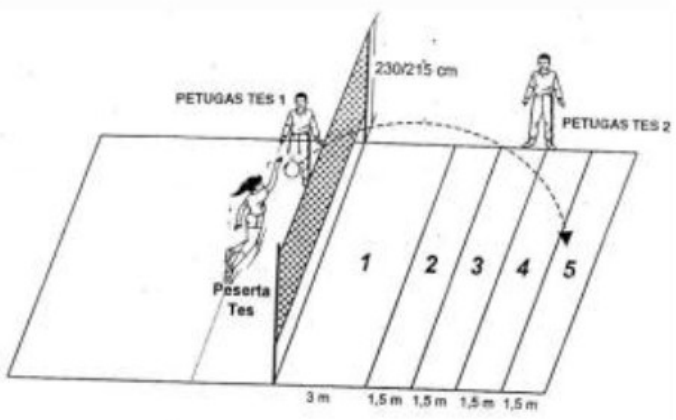

Figure 1. Smash Test Instrument

Prerequisite tests (normality and homogeneity) and hypothesis testing (the results of the initial and final tests, whether there are significant differences or not) are the data analysis techniques used. This hypothesis can be tested using the SPSS program.

3. RESULTS AND DISCUSSION

Results

Descriptive Analysis of Smash Skills

The data analysis used in this research included descriptive analysis, normality prerequisite tests, and hypothesis testing to determine whether there were any significant differences between the initial and final test results. The results of the descriptive analysis of athletes' smash skills are presented in Table 1.

Table 1. Athletes' Smash Skills

Descriptive Statistics								
	N	**Range**	**Minimum**	**Maximum**	**Sum**	**Mean**	**Std. Deviation**	**Variance**
Pretest (*Drilling Practice*)	10	4	21	25	228	22,80	1,398	1,956
Postest (*Drilling Practice*)	10	3	27	30	284	28,40	1,075	1,156

Table 1 above indicates that the data from the drill method training pretest, spanning 10 samples, falls within the range of 4, with the minimum value being 21 and the maximum value being 25. The standard deviation is 1.398 and the variance is 1.956, with a total of 228 smash points and an average smash point of 22.80.

Normality Test

Table 2. Normality Test of Athletes' Smash Skills

Tests of Normality			
Variable	**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**
Pretest (*Drilling Practice*)	0,907	10	0,263
Postest (*Drilling Practice*)	0,892	10	0,177

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Table 2 above reveals that during the pretest, the smash skill in the drill group achieved a Sig value of 0.265. This value exceeds the data requirements (Sig. > 0.05), indicating a normal distribution of the data. Similarly, during the posttest, the smash skill in the drill group achieved a Sig value of 0.177. This value also exceeds the data requirements (Sig. > 0.05), indicating a normal distribution of the data.

Hypothesis Testing

Table 3. Independent Samples Test of Athletes' Smash Skills

Independent Samples Test				
Variable	**t-test for Equality of Means**			
	t Hitung	**t Tabel**	**df**	**Sig. (2-tailed)**
Pretest-Postest Drilling Practice	10,04	2,101	18	0,000

Hypothesis testing uses a comparison of Tcount values and Ttable values. The Tcount value reaches 10.04, whereas the Ttable value stands at 2.101. This data satisfies the requirement that if the Tcount value surpasses the Ttable value (10.04 > 2.101), we can accept the hypothesis (Ha) that smash drill training enhances the smash skills of male athletes. The significance value also shows a value of 0.000, meaning that the value of 0.000 is smaller than α 0.05, so it can be interpreted that there is a significant influence between drill method training and improving the smash skills of athletes.

Discussion

The drill training method is a structured and repetitive training approach that aims to improve specific technical or tactical aspects of a sport. This study aims to improve volleyball players' smash technique and strength through drill training. Previous studies by PT CAS Makassar revealed that consistent use of the drill training method could significantly improve volleyball athletes' smash skills. By organizing drills that focus on smash technique, such as body position, racket angle, timing, and strength, athletes can effectively improve the precision and speed of their smashes.

Several previous studies have also supported these findings. For instance, Ahyu Cirana et al.'s 2021 research revealed that intensive drill training focusing on specific techniques like smashes can enhance the reaction speed and accuracy of athletes' movements during gameplay. Likewise, a study by Arif Rachman Alhakim (2021) shows that drill training that focuses on repeating technically correct movements can reduce errors and increase the consistency of athletes' performance.

The athlete's initial test average was 22.80 to 28.40, proving that there was an increase in smash skills. The athletes achieved this increase by repeating their hits, which enhanced their familiarity with the timing of their jumps. This increased confidence in their smashes led to several athletes achieving the highest score during the posttest.

The application of the drill training method to improve volleyball smash skills necessitates a systematic and measurable approach that encompasses not only physical aspects like strength and speed, but also mental aspects like accuracy and emotional control in match situations. This approach aims to improve PT CAS Makassar athletes' smash skills to unprecedented levels before implementing the drilling method. As a result, athletes who struggle to smash effectively in a match can use drill training as an alternative training method. The drill training method plays a crucial role in enhancing volleyball smash skills. Using this method in a structured manner can help athletes reach their maximum potential in the game, while also providing a strong foundation for the development of more sophisticated sports techniques and strategies.

4. CONCLUSION

Based on the data analysis and discussion results, it appears that drill method training has an influence on the smash skills of PT male athletes. CAS Makassar. The results of data processing on PT male athletes' smash skills illustrate this. The implementation of CAS Makassar demonstrates the impact of smash drill training. The hypothesis test results, utilizing the independent sample t-test, confirm this; they yield a value of Tcount > Ttable, specifically 10.04 > 2.101. In addition, the average initial ability, which ranges from 22.80 to 28.40, demonstrates the impact of smash drill training.

The results of this research can serve as a reference for future studies. In addition, the results of this research suggest that using the drill method for smash training has improved the volleyball smash ability of male athletes.

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