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The Effect of Step Receive Training And Table Bounce Toward The Ability To Receive Sepak Takraw Atlet PSTI Kudus Regency

Muhammad Shokhibun Nuha[1A-E*], Ricko Irawan[2B-D], Alfiyatur Rohmania[3B-D]

[1,2,3] Universitas Negeri Semarang, Central Java, Indonesia

muhammadshokhibunnuha@students.unnes.ac.id[1*], rickoirawan@mail.unnes.ac.id[2], alfiyaturrohmania375@gmail.com[3]

ABSTRACT

This study aims to examine the effectiveness of two training methods, step receive and table bounce, in improving the first-ball receive ability of sepak takraw athletes in PSTI Kudus Regency. Using a quantitative experimental approach with a two-group pretest-posttest design, the study involved 20 male athletes aged 13–18 years, divided into two experimental groups and one control group. The experimental groups underwent 16 training sessions over four weeks, while the control group received no intervention. Data were collected through skill tests and analyzed using paired sample t-tests in SPSS. The results showed significant improvements in receiving skills: the step receive method increased performance by 38.72%, and the table bounce method by 30.77%, whereas the control group showed no significant change. These findings indicate that both methods are effective, with the step-receive method having a greater impact. This study highlights the importance of varied training techniques in enhancing athletes' technical skills and provides practical recommendations for coaches and players to optimize training programs.

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A. Conception and design of the study;
B. Acquisition of data;
C. Analysis and interpretation of data;
D. Manuscript preparation;
E. Obtaining funding

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INTRODUCTION

Sepak takraw is a sport where players use their feet, head, knees, and chest to hit a hollow rattan ball over a net (Dianawati et al., 2018). The game is known for its high skill level and acrobatic manoeuvres, making it both challenging and entertaining (Raharjo & Akhiruyanto, 2024). Every sport has basic techniques that athletes are required to master. Another opinion was expressed by Heriansyah & Suhartiwi (2021) that mastering basic techniques, such as serving, smashing, blocking, and receiving, is essential for athletes. In every number except hoop takraw, the game will start with a serve. Menerima servis adalah gerak kerja yang tidak kalah pentingnya. According to Yudanto & Pratama (2024), the receive, or first-ball control, is a critical skill in sepak takraw; a good receive

Muhammad Shokhibun Nuha[1A-E*], Ricko Irawan[2B-D], Alfiyatur Rohmania[3B-D]
muhammadshokhibunnuha@students.unnes.ac.id[1*]

allows teams to develop effective offensive strategies, while a poor receive can disadvantage the team (Hanafi, 2020). Ball reception, or 'receive', in sepak takraw is a technical fundamental that determines a team's success in controlling the dynamics of the game. One of the main reasons for defeat in sepak takraw is the lack of receiving skills (Ramadhan & Bulqini, 2018).

Consistent with the previous explanation, the receiver plays a crucial role in sepak takraw, necessitating targeted training to enhance athletes' proficiency. According to Wani et al. (2022), training is a deliberate process of refining an athlete's skills to achieve peak performance. Attaining success in sports demands effort and dedication through structured, measurable, and sustained training, which helps improve physical conditioning and elevate player performance (Irawan, 2017).

In sepak takraw, the step receive training is a methodical approach focusing on footwork and player positioning when receiving the ball. The objective is to enhance players' ability to anticipate the ball's direction and speed while refining foot coordination (footwork) to ensure optimal body positioning upon reception. Chiu et al. (2020) provide evidence that footwork correlates strongly with in-game performance. One receive training method employs a rebound table to direct the ball toward the receiver, aiming to sharpen reflexes, body movement reactions during first-ball receptions, and proper foot-to-ball contact.

The growth of sepak takraw in Indonesia has been remarkably rapid, with several regions actively developing the sport. Kudus Regency is one such area vigorously promoting sepak takraw. However, Kudus has yet to compete effectively with other regions, whether in junior-level competitions (e.g., POPDA for elementary, middle, and high school students) or senior tournaments like the 2023 Central Java PORPROV event. Systematic observation during internal match training sessions at the Kudus Indoor Tennis Stadium, involving athletes from the Kudus Regency PSTI sepak takraw team, revealed deficiencies in fundamental techniques. Most athletes struggled with receiving execution, particularly in foot movement and precise ball contact. Data from the initial first-ball receive test showed an average success rate of 44.8%, indicating a low proficiency level. Below are the preliminary test results for the first-ball receive:

Table 1.
Observed Data on Athletes' Receiving Performance

No	Name	Receive		
		Good	Fail	Percentage
1	Azril Maulana	3	4	42%
2	Muhammad Aksel Feliciano	6	5	54%
3	Muhammad Davin Azmi Pratama	4	6	40%
4	Muhammad Dimas Maulana	5	7	41%
5	Muhammad Rehan Saputra	3	4	42%
6	Sefa Ardian	5	5	50%
Average Performance				**44,8%**

A study by Syah (2024) demonstrated that receiving skills can be improved through training methods, including a variation using tennis rackets. However, this study had

methodological limitations, such as: (1) the absence of a control group to compare intervention effects, and (2) the use of only one training variable. The present study addresses these limitations by incorporating two training method variables and adding a control group to compare the effects of training interventions.

Consistent with the previous discussion, the primary focus of this research is to examine the first-ball receive technique among athletes of the Indonesian Sepak Takraw Association (PSTI) in Kudus Regency. This study experimentally evaluates two training methods: step receive and table rebound. It investigates three key aspects of sepak takraw receive training: (1) the effectiveness of the step receive method, (2) the impact of table rebound training, and (3) the comparative significance of both methods for PSTI Kudus Regency athletes in 2025.

The study aims to determine the extent to which the application of these receive training methods—step receive and table rebound—enhances the receive skills of Kudus Regency sepak takraw athletes. Based on a theoretical review, three hypotheses are proposed: (1) the effectiveness of the step receive method, Step receive training improves receive ability, (2) table rebound training positively influences receive technique, and (3) there is a significant difference in effectiveness between the two methods.

METHODS

This study employs a quantitative approach using a two-group pretest-posttest experimental design. Specifically, the Matched-Subject Pretest-Posttest Control Group Design was implemented. This experimental design incorporates three key elements: (1) subject matching through the ABBA formula, (2) a control group, and (3) pre-test and post-test measurements. Consistent with Creswell & Creswell (2023), by matching participants based on key variables (age, pretest scores, playing position), researchers can enhance the precision of the experiment.

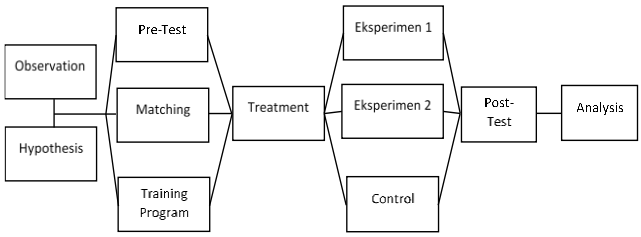
The sepak takraw first-ball receive (receive) skill test served as the primary data collection instrument in this study. The test protocol, previously developed and validated by researchers, demonstrated strong psychometric properties with validity = 0.79 and reliability = 0.97 (Mahardika et al., 2023). Mengukur kemampuan penerimaan bola pertama sebanyak 10 kali bola merupakan tujuan dari tes keterampilan. Pedoman Pelaksanaan Tes: The receiving skill assessment required athletes to successfully receive 10 consecutive service balls. The test administration followed these standardized procedures: (1) the server delivered random/varied serves, (2) each player attempted to receive 10 serves (3) Each receive was qualitatively evaluated, (4) a total score was calculated from all 10 receive attempts, and (5) the service shall be repeated if the ball gets caught on the net, goes out of the court, the service toss is not properly executed, or the ball touches the net and drops near it.

This study was conducted in a conducive environment at the Kudus Indoor Tennis Sports Arena. The research sample consisted of 20 sepak takraw athletes from PSTI

Muhammad Shokhibun Nuha[1A-E*], Ricko Irawan[2B-D], Alfiyatur Rohmania[3B-D]
muhammadshokhibunnuha@students.unnes.ac.id[1*]

Kudus Regency, selected from a population of 35 athletes. Male athletes aged 13 to 18 years were chosen as the research sample using purposive sampling. As stated by Andrade (2020), purposive sampling is a technique where the characteristics of the sample are determined based on the specific purpose of the study, rather than being selected randomly or non-randomly.

This study employed numerical data as the basis for statistical testing. The training was carried out over 16 sessions, four times per week, from May 2025 to June 2025. The collected data were processed using statistical formulas to test the hypotheses and draw conclusions. Data analysis in quantitative research requires the use of statistical formulas or statistical software (Kotronoulas et al., 2023). In this study, SPSS version 30 was used, starting with descriptive statistics, followed by assumption tests before hypothesis testing, including the *Shapiro-Wilk* test for normality, appropriate since the sample size is fewer than 50 participants and a homogeneity test. Subsequently, a paired samples t-test was conducted, followed by hypothesis testing.



Picture 1.
Research Procedure

RESULTS AND DISCUSSION

Result

This study examined the effects of first-ball receive (receive) training on n=20 athletes from PSTI Kudus Regency, divided into three groups: two experimental groups and one control group. The sample distribution was as follows. Experimental group I (n=8): Received step receive training method, experimental group II (n=8): Received table rebound training method and control group (n=4): Received no specialised training. Both training methods were implemented to enhance first-ball receive skills, while the control group served to verify treatment effects.

The normality test is used to determine whether the data are normally distributed. Based on the calculations presented in Table 2 below, it can be explained that the pre-test and post-test results for experiment I have significance values of 0.614 and 0.380, respectively, which are greater than 0.05. The pre-test and post-test results for experiment II show significance values of 0.176 and 0.483, while the control group shows values of 0.683 and 0.406—all of which are greater than 0.05. Therefore, all variables in this study fall into the category of normally distributed data, allowing the parametric testing to proceed. Hypothesis testing was thus conducted using the *Paired Samples T-test* to examine the differences between the pre- and post-test results:

Muhammad Shokhibun Nuha[1A-E*], Ricko Irawan[2B-D], Alfiyatur Rohmania[3B-D]
muhammadshokhibunnuha@students.unnes.ac.id[1*]

Table 2.
Normality Test

Tests of Normality	Group	Shapiro-Wilk		
		Statistic	df	Sig.
Test Results on Receiving Skill Performance	Pre-Test Step Receive	.940	8	.614
	Post-Test Step Receive	.914	8	.380
	Pre-Test Table Bounce	.877	8	.176
	Post-test Table Bounce	.926	8	.483
	Pre-Test Control	.945	4	.683
	Post-Test Control	.895	4	.406

Based on Table 3 below, the t-test result for the step receiving training is 9.944 > 2.365. The t-test result for the table rebound training is 14.967 > 2.365. It can be concluded that the calculated t-values are greater than the critical t-value, indicating that both training methods had a significant effect on the receiving ability of PSTI Kudus sepak takraw athletes. In contrast, the control group showed a calculated t-value smaller than the critical t-value, namely 0.522 < 3.182, which means there was no significant improvement in the control group's ability, as they did not receive any training intervention. This highlights the effect of the training programs as influential variables in this study.

Table 3.
T-Test Analysis of Pre-Test and Post-Test Results

Training method	T-count	T-tabel	Explanation
Step Receive	9.944	2.365	9.944 > 2.365 There is a difference
Table Bounce	14,967	2.365	14,967 > 2.365 There is a difference
Control Group	522	3.182	522 < 3.182 There is no difference

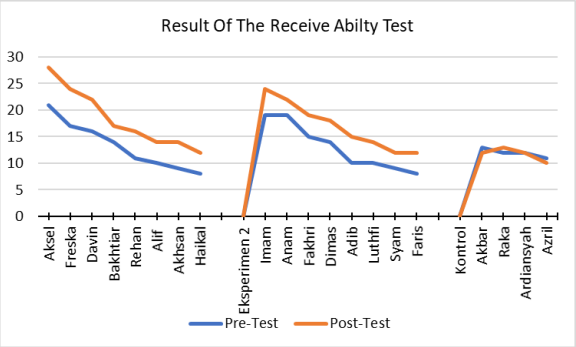
Based on Table 4 below, the percentage increase in Experimental Group I was 38.72%, while the percentage increase in Experimental Group II was 30.77%. It can be concluded that the training method that had a greater influence on the athletes' first-ball receiving ability in sepak takraw was that of Experimental Group I, which used the step receive training method.

Table 4.
Percentage Increase

Group	Mean Pre-Test	Mean Post-Test	Percentage
Step Receive	13.25	18.38	38,72%
Table Bounce	13.00	17.00	30,77%
Control Group	12.00	11.75	-2,08 (Decrease)

Based on the performance data chart on receiving ability below, experimental Group I, which used the step receive training method, showed that the athlete samples experienced an improvement in first-ball reception. Furthermore, in experimental Group II, which applied the table rebound training method, all athletes showed improvement in their first-ball reception performance. In contrast, the control group used as a comparison to measure the effect of the studied variable showed that each athlete tended not to experience a significant improvement in receiving ability.

Muhammad Shokhibun Nuha[1A-E*], Ricko Irawan[2B-D], Alfiyatur Rohmania[3B-D]
muhammadshokhibunnuha@students.unnes.ac.id[1*]



Picture 2.
Results of the Reading Ability Test

Discussion

Ball reception, or "receive," in sepak takraw is a fundamental technical skill that determines a team's success in managing the dynamics of the game. Receiving is critically important, as an effective receiver facilitates the opportunity to score points (Putri & Bulqini, 2019). This skill requires the player's ability to respond to the opponent's serve with accuracy and strategy, transforming the initial momentum into a calculated and efficient counterattack (Fataha et al., 2025). According to Yudanto & Pratama (2024) Further characterise the receive as the primary ball-control action following service reception, requiring exacting precision to ensure optimal ball placement for subsequent plays. Their research confirms that effective reception directly correlates with enhanced offensive opportunities and overall team performance. From these statements, it can be concluded that the essence of receiving is not merely a reactive act, but an art of converting a defensive situation into a smart and strategic offensive construction. Players are expected not only to receive the ball but also to transform that moment into a potential and threatening attack initiation against the opposing team.

Training using the step receive and table rebound methods is part of several exercises aimed at improving receiving ability. The step receive training method is carried out as follows: (1) two players face each other at a certain distance, (2) one player throws or kicks the ball toward their partner, (3) the ball is directed with varying directions and speeds, and (4) the receiving player performs the step receive movement according to the direction of the incoming ball while attempting to control it. The receive training using the table rebound method is conducted as follows: (1) the athlete faces the coach, (2) the ball is thrown and bounced off the table to be directed to the receiver with variations in power and direction, (3) the first-ball receiver prepares to receive the rebound, and (4) the ball is lifted as accurately and effectively as possible.

The step receive method has proven to be more effective as it dynamically trains footwork and full-body coordination. According to Bompa & Buzzichelli (2019), exercises involving specific movements with variations in direction and speed can improve athletes' motor skills, including accuracy and reaction speed. This aligns with the findings of Gabbett (2016), who concluded that agility- and footwork-based training significantly enhances athletic performance in sports that require quick responses, such

Muhammad Shokhibun Nuha[1A-E*], Ricko Irawan[2B-D], Alfiyatur Rohmania[3B-D]
muhammadshokhibunnuha@students.unnes.ac.id[1*]

as sepak takraw. Additionally, the step receive method teaches athletes to read the direction of the ball and adjust their body positioning more effectively. This skill is crucial in sepak takraw, as a good receiver determines the fluidity of a team's offensive play. Therefore, the 38.72% improvement observed in experimental group I indicates that this training method enhances not only technical skills but also athletes' cognitive ability to anticipate ball movement.

Although not as effective as the step receive method, the table rebound method still produced a positive impact, with a 30.77% improvement. This training emphasizes the accuracy of foot contact and reflexes in receiving the ball. According to Jeffreys (2021), training with assistive tools such as a rebound table can improve foot-eye coordination and reaction speed, especially in scenarios requiring quick responses. However, the limitation of this method lies in its lack of movement variation compared to the step receive method. Research by Haff & Triplett (2016) suggests that training with assistive tools tends to be repetitive and does not adequately develop an athlete's adaptability to dynamic game situations. This explains why the improvement in experimental group II was lower than that in experimental group I.

The absence of significant improvement in the control group substantiates the argument that targeted training interventions are essential for enhancing athletes' technical skills. These findings align precisely with the training periodization theory proposed by Williams et al. (2017), which posits that routine training lacking systematic variation and progressive overload fails to optimize athlete development. The control group, which only performed conventional training without a specific method, demonstrated that skill improvement requires a more structured approach.

Based on these findings, coaches are advised to prioritize the step receive method in training programs, as it has been proven more effective in improving receiving ability. However, the table rebound method can still be utilized as a variation to train reflexes and accuracy. A combination of both methods may help prevent boredom and provide more comprehensive training stimulation (Wolff et al., 2023). In addition, coaches should pay attention to the principle of progressive overload when designing training programs, gradually increasing the intensity and complexity of exercises (Nóbrega et al., 2024). This approach ensures that athletes continue to experience adaptation and performance improvement.

CONCLUSION

The step receive method is more effective than table bounce in improving receive skills in sepak takraw. Structured and specific training is essential for significant performance gains. Coaches should integrate step receive as a primary training method, supplemented by table bounce for variety. These findings contribute to the development of sepak takraw training programs, particularly in enhancing first-ball receiving skills.

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