



# The Effect of Bouncing Ball Practice on The Volleyball Forepass Ability of Extracurricular Students Smp Negeri 1 Pasemah Air Muruh

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Iksan Alparizi\*, Dian Pujianto, Oddie Barnanda Rizky, Nurkadri, Abang Ismail bin Haji Abang Julhi

## Abstract:

This study seeks to assess how the bouncing ball training approach affects the bottom passing skills of students engaged in volleyball extracurricular activities at junior high school state 1 Pasemah Air Keruh. The research design follows a one-group pretest-posttest format, which does not involve a comparison group. The participants of this study comprised all students who actively chose to engage in this research until its conclusion, with a total of 16 children involved in volleyball extracurricular activities. The tools for this study consisted of tests and assessments based on the Brady method. The findings indicated that the bouncing ball training method positively influenced down-passing skills. When testing the hypothesis, the computed t value was 12.5, which exceeds the t table value of 1.746. This result leads to the rejection of the null hypothesis and the acceptance of the alternative hypothesis, signifying a notable advancement in bottom passing ability as a result of the bouncing ball training method.

**Keywords:** Bouncing Ball, Forearm Pass, Volleyball

## 1. INTRODUCTION

Physical education forms an essential component of schooling aimed at enhancing skills through physical activities, enabling students to attain health benefits and reach set educational targets, which consist of knowledge, competencies, and attitudes (Dlis, 2022). Volleyball constitutes a sport played between two rival teams with a ball being a primary instrument of the game. As noted by Wibowo & Drs. Suhadi, (2019), the sport involves various fundamental techniques that players must learn to be proficient. The essential techniques essential for every volleyball player include serving, passing, spiking, and blocking. Mastering these four foundational techniques is crucial for excelling in volleyball; however, demonstrating these skills is often more challenging than it may appear (Sulistiadinata, 2020).

To participate in volleyball effectively, it is essential to grasp the fundamental skills of the sport, particularly if you aim to attain favorable outcomes. Initially, the core skill of volleyball was relatively straightforward—passing. As noted by Ilham et al. (2019), passing is a crucial foundational movement in volleyball that every player needs to learn, as it is the technique used to handle an opponent's hit through the forepass method, utilizing the motion from the wrist to the elbow.

The common issue that arises is that insufficient diversity in training leads to students being unaccustomed to the fundamental motion of executing a bottom pass. To achieve optimal results in bottom passing, students must be aware of how to position their bodies properly according to the foundational movement of the bottom passing technique. This involves placing their legs shoulder-width apart, advancing one leg, and adopting a slightly crouched stance (Juniardi & Redno, 2019). Frequent challenges faced by students during a down pass include having their feet in alignment and keeping their bodies rigid instead of in a crouch, which hinders their ability to judge the ball's accuracy when performing a down pass, ultimately complicating acceptance by teammates. To develop a solid and correct foundational technique for downward passing, a focused practice session within a short timeframe is essential (Afriadi et al., 2024).

Insufficient skill in the bottom passing method will affect the progression of the match and the goals that can be attained, thus to address the challenges faced

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by the volleyball extracurricular participants of SMPN 1 Pasemah Air Keruh, the investigator aimed to offer a remedy through a range of drills incorporating a bounce ball with the expectation of enhancing the capability to execute underhand passing in volleyball at SMPN 1 Pasemah Air Kemur.

Purnomo Adi & Indarto (2021) describe a type of volleyball training involving a game of tennis or bouncing ball. In this activity, the ball must first hit the wall after crossing over the net before a downward pass is executed towards a teammate on the other side of the court, and this continues repeatedly. The purpose of this exercise is to enhance both the arm and body movements during passing, as well as to promote the skill of sending the ball high into the air. The approach taken in this research consists of practicing through a bouncing ball game since this mode of play encourages participants to be more engaged and energized during volleyball training sessions.

Examining the study by Subagio et al., (2022) titled, "The Impact of Circuit Training-Based Drill Passing Activities on Enhancing Passing Skills Among Female Volleyball Extracurricular Participants at SMP Negeri 10 Bengkulu City," the total number of research participants was 20 individuals. The findings suggest that circuit training-based drill passing activities have a notable effect on the improvement of passing skills for female volleyball extracurricular participants at SMP Negeri 10 Bengkulu City, as indicated by the experimental group  $t$  value (24.16) exceeding the  $t$  critical value (2.093). Furthermore, analysis of the average pretest and posttest scores revealed an increase, showing a difference of 8.7.

People who used to be active in physical activities began to shift to laziness in doing physical activities. The culture of being active in moving becomes lazy to move (Pujiyanto, 2019). From the research that has been carried out, many students can do bottom passing exercises with a variety of bouncing balls quite well but are still not proficient while doing forearm pass when playing on the field. This is due to the difference in ball speed during practice and playing. Because of playing, the speed and difficulty when passing the ball increase because the opponent also does not want the ball they are directed to be received easily.

From the issues identified in the volleyball extracurricular participants at SMPN 1 Pasemah Air Keruh, the researcher aims to offer a remedy through a range of drills utilizing a bouncing ball, with the

objective of enhancing the skill of forearm passing in volleyball for students at SMPN 1 Pasemah Air Kemur. Considering the context that has been outlined, the researcher formulated the question: "What Impact Does Bounce Ball Training Have on the Volleyball Passing Proficiency Among Extracurricular Volleyball Students at SMPN 1 Pasemah Air Kemur?"

## 2. MATERIAL AND METHOD

This study employs a Quasi Experimental Design approach, specifically utilizing the One-Group Pretest-Posttest Design. The participants in this research were extracurricular students from SMPN 1 Pasemah Air Kemur, starting with a pretest or initial assessment, followed by treatment, and concluding with a posttest or final assessment. The method of data collection for this research involved testing. As noted by Septikasari et al. (2023), a test consists of a series of questions or tasks, among other tools, which serve to evaluate capabilities. In this research, the total population included 32 individuals, and purposeful sampling was implemented. Sugiyono (2020) described that "purposive sampling is a technique that involves specific criteria" such as selecting students who have no issues, are active, and can engage in the research until its completion. Consequently, the resulting sample from this technique amounted to 16 individuals. Prior to the treatment, the group underwent a pretest to evaluate the overall condition and stability of the group ahead of the intervention. If the pretest outcomes reveal significant variability, it indicates that the group is unstable, uncertain, and inconsistent. Once the group's condition is clearly understood through the posttest, the treatment is introduced; according to the experimental method, this treatment needs to be conducted for 16 sessions (Rachman et al., 2018). The treatment was conducted 16 times, occurring three times a week over a period of six weeks.

This study was conducted between April 16 and May 28, 2024, at the volleyball facility located in SMPN 1 Keban Jati Village, in the Pasemah Air Keruh District of the Empat Lawang Regency in South Sumatra Province. The analysis of technical data for this research employs a hypothesis examination. Prior to conducting the hypothesis examination, prerequisite tests must be performed. Before proceeding to the  $t$ -test, the researcher must ensure that the data being analyzed is normally distributed; to do this, a normality test and a homogeneity test are required (Surani, 2024).



### 3. RESULT AND DISCUSSION

The pretest (initial test) with the Brady volley test are carried out by passing to the target, that has been

determined for 60 seconds, and the ball that hit the target is counted as valid, if it successfully bounces the ball but does not hit the target is not counted. The results of Brady's pretest are as follows:

**Table 1.** Frequency Distribution of Passing Ability Pretest Results

No.	Interval	Category	Frequency	Percentage
1.	>21	Very good	0	0%
2.	13-20	Good	8	50%
3.	3-12	Enough	8	50%
4.	<2	Less	0	0%

According to table 1, the "initial assessment" revealed that there were no students classified as "very good" in their forearm passing skills. The number of students in the "good" category was 8, the "sufficient" category also had 8 students, while none fell into the "poor" category. Following the initial assessment, which involved a sample of 16 students, the results emerged as follows: Average score = 11.18, Standard deviation

= 3.46, the highest score recorded was 18, and the lowest was 5.

After a series of 16 training sessions, a final assessment (posttest) was administered to evaluate any potential impact of the exercises on the students' passing skills. To observe the descriptive percentages of the posttest results, refer to table 2 shown below:

**Table 2.** Posttest Frequency Distribution of Passing Ability Through Brady Test

No	terval	Category	Frequency	Percentage
1.	>21	Very good	4	25%
2.	13-20	Good	12	75%
3.	3-12	Enough	0	0%
4.	<2	Less	0	0%

According to Table 2, the outcomes of the final evaluation indicate that among students classified as "very good," there are 4 individuals; in the "good" classification, there are 12; in the "moderate" group, none are present; and similarly, the "less" category also has zero individuals. Following

the conclusion of the treatment, a posttest, known as the brady test, is administered. Consequently, the results from a participant group of 16 students reveal the following statistics: average score is 19.37, standard deviation is 4.44, the highest achieved score is 28, and the lowest recorded score is 14.

**Table 3.** Results of Normality Test Calculation

Group	$L_{hitung}$	Dk	$L_{tabel}$	Criterion
Pretest	0,1131	16	0,213	Normal
Posttest	0,1940			Normal

Referring to Table 3, the results reveal that the assessment of normality utilizing Lilliefors shows that the pretest value of  $L_{hitung}$  is 0.1131,

while the posttest registers at 0.1940, which is less than or equal to 0.213; consequently, both the pretest and posttest datasets exhibit a normal distribution.

**Table 4.** Homogeneity Test Calculation Results

Group	Dk (n-1)	F <sub>cal</sub>	F <sub>table</sub>	Criterion
Eksperimen	15	1,6	2,35	Homogeneous

According to Table 4, the findings from the homogeneity test calculated through the F-test

indicate that F<sub>cal</sub> is less than F<sub>table</sub>, specifically 0.6 compared to 2.35 for F<sub>table</sub>. This suggests that the



variance of the data is homogeneous.

To examine the hypothesis, a t-test was performed on the outcomes of the volleyball bottom passing to

determine the impact of the bounce ball practice method on the ability to execute downward passes. The outcomes of the t-test calculations are shown in the following table:

**Table 5.** Results of t-test calculation

Group	Dk (n-1)	Calculation	Table	Criterion
Eksperimen	15	12,5	1,746	There is Influence

According to Table 1.5, the outcome from the t-test computation yielded a t statistic of 12.5, which exceeds the t critical value of 1.746, leading to the acceptance of the alternative hypothesis. Consequently, it can be concluded that bouncing ball exercises have an impact on the passing skills of students participating in the volleyball extracurricular program at SMP Negeri 1 Pasemah Air Kemur.

Following the examination of the t-test conducted, several conclusions can be drawn regarding the influence of bouncing ball practice on students' ability to execute lower passes. The employment of the bouncing ball as a measurement tool in this research is intended to provide students with numerous physical activities focused on transferring the ball to their hands, which promotes the development of their skills. Initially, the t-test is applied to assess if a notable difference exists in the performance outcomes prior to and following the training concerning students' ability to make lower passes, and it subsequently continues to evaluate the percentage increase in performance after training. Activities outside the standard curriculum within schools serve as an outlet for students to express their untapped talents and preferences (Yhunanda & Sholeh, 2020).

The talents of students should be showcased through afternoon extracurricular activities, allowing participants to gain experience while achieving success both academically and beyond. From the above conclusion, several recommendations can be made. For coaches, this serves as a way to assess success in volleyball training, particularly focusing on the skill of passing. It can also act as a guide to offer a diverse range of training for the foundational passing techniques required by athletes. For players, they should develop the essential skills that enhance their passing capabilities. For future researchers, it is important to consider the quantity of samples in relation to the timing of the research, along with the expenses involved and the health of the sampled individuals, as these elements have a significant

impact.

#### 4. CONCLUSION

From the findings of the research conducted, one can deduce that the practice of bouncing balls has a notable impact on enhancing the forearm passing skills in volleyball among the extracurricular participants of SMP Negeri 1 Pasemah Air Kemur. This confirms the validity of the experimental data where the t count of the group was found to be 12.5, which is greater than the t table figure of 1.746. Furthermore, the comparison between the average scores of the pretest and posttest indicated an improvement, showing a difference of 8.19.

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#### AUTHOR INFORMATION

##### Authors

Iksan Alparizi, Universitas Bengkulu, Indonesia  
 <https://orcid.org/0009-0009-3157-1512>  
 Email: [iksanalparizi0512@gmail.com](mailto:iksanalparizi0512@gmail.com)

Dian Pujianto, Universitas Bengkulu, Indonesia  
 <https://orcid.org/0000-0001-8653-1010>  
 Email: [dianpujianto@unib.ac.id](mailto:dianpujianto@unib.ac.id)

Oddie Barnanda Rizky, Universitas Bengkulu, Indonesia  
 <https://orcid.org/0000-0002-9592-3865>  
 Email: [oddiebarnandarizky@unib.ac.id](mailto:oddiebarnandarizky@unib.ac.id)



Nurkadri, Universitas Negeri Medan, Indonesia

<https://orcid.org/0000-0001-7943-8985>

Email: nurkadri@unimed.ac.id

Abang Ismail Bin Haji Abang Julhi, Universiti Kebangsaan Malaysia, Malaysia

<https://orcid.org/0009-0005-1209-7051>

Email: abang20-01@epembelajaran.edu.my

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