

**The Effect of Varied Training Methods  
on Underhand Passing Ability in Volleyball  
for Junior High School Students**

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**Abstract:** In the sport of volleyball, the purpose of this study is to investigate the impact that variation training has on lower passing skills. For this investigation, an experimental approach with a One Group Pretest-Posttest Design design was utilized. A lower passing abilities test was used in the research project to obtain data that was collected utilizing volleyball. The t-test is used to determine the level of significance of the pre-test and post-test of variation training on volleyball lower passing skills. The criteria for determining whether the data is significant are that the t count is more than or equal to the t table. The results of the research in this area are computed using the t-test. Based on the findings of the computation, it is known that the tcount is twenty-six point eighteen. After that, the findings are compared with the t table, which has a value of 2.05 ( $\alpha = 0.05$ ). It demonstrates that  $t \text{ count} \geq t \text{ table}$ ,  $20.68 \geq 1.76$  (significant). Based on these findings, it is possible to assert that the variation training approach influences the outcomes of volleyball lower passing skills among students attending SMP Negeri 16 Kupang.

**Keywords:** Training Methods, Underhand Passing, Volleyball, Junior High School, Students

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### **Introduction**

Every single person enjoys and prefers playing volleyball, making it one of the team sports that everyone enjoys. mainly due to the fact that volleyball games comprise sports that are not only entertaining but also do not require a significant amount of money, making them simple to do (Ek, Kowalski, and Jacobsson 2022). All that is required to play a game of volleyball is a group of friends, a ball, a net, and an empty lot that can be transformed into a field. After that, the game can be played. The sport of volleyball utilizes a variety of fundamental tactics that a player must become proficient in order to be successful (Rachmalia, Susilawati, and Lengkana 2022).

A degree of ability to perform a basic technique of playing volleyball in an effective and efficient manner is referred to as basic skills of playing volleyball. These skills are determined by speed, accuracy, shape, and the capacity to adjust. To pass down the wall, the ball must be bounced against the wall, and the body must be in a state of readiness to pass. The starting attitude of the player is to hold the ball with both hands facing the wall. The ball is then thrown or bounced against the wall, and the reflection is

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attempting to pass the target wall again. This process continues until the player is ready to pass. When feeding in pairs, the ball is thrown, then passed down to the opponent, and after the ball has been transferred down, the position stays the same, waiting for the ball to come from the opponent, then directed again, and so on (Naimatul Jamaliah 2020).

This is what (Anggara, Ari., Firdaus 2020) have to say about basic bola voli technique: "Basic bolavoli technique is the process of producing physical activity and proving practice as well as possible to complete a definite task in the sport of bolavoli games." According to (Esser 2019), a technique is a procedure that has been established based on practice, and its goal is to find a solution to a specific movement problem in the most cost-effective and practical way possible. Although many forms of lower passing exercises are typically only used during warm-ups or at the beginning of training, they are widely used in the form of lower passing exercises to the wall and in the form of lower passing exercises in pairs (Aditya, Helmi, and Usman 2024). In this case, the two forms of exercise are frequently learned by students both during physical education classes and during extracurricular activities. However, the form of exercise of lower passing exercises is sometimes only used as a warm-up and is not applied to technical exercises that specialize in learning lower passing exercises to improve volleyball lower passing skills. Volleyball extracurricular activities at SMP Negeri 16 Kupang are extracurricular activities that students find interesting, according to the findings of observations that were conducted (Prima and Kartiko 2021).

Researchers made the observation that when it came to volleyball games, particularly lower passes that were played at school and in extracurricular activities, there were still a significant number of students who performed lower passes that were less diverse and appeared monotonous, resulting in results that were not optimal (Silaban et al. 2024). Since they have learned, they have not been able to create unusual and intriguing training patterns without sacrificing the primary objective of the exercise itself. In addition, the position of both arms is excessively high when receiving the ball, both knees are not bent, and both arms are not tight (Alfiansyah Putra Karo Karo et al. 2024). The lack of passion for volleyball games is a result of the learning model that is being taught, which is less fascinating and more repetitive. As a result, instruction in volleyball is not as effective as it could be; hence, a physical education instructor needs to be proficient in a wide range of creative and new learning methods in order to pique the interest of students in learning (Sains, Nyak, and Langsa 2020).

Every sport requires a thorough understanding of every fundamental technique. Training is how one can master or develop their talents in a particular sport. As part of the training, the content will be presented in a step-by-step manner with the intention of ensuring that the exercise is adequately grasped (Nugroho et al. 2024). Each exercise that is performed must have a primary objective that serves as a point of reference for every trainee. Everyone who is participating in the training, as well as the trainer, works hard to ensure that the training goals are accomplished in the appropriate manner and within the allotted amount of time (Armstrong and VanHeest 2002).

According to (Rasyid and Aristrianto 2020), exercise is defined as "the realization or implementation of the material or forms of exercise that have been previously planned." The realization of material or forms of exercise is carried out repeatedly and with increasingly difficult demands in order to improve one's physical performance capabilities. (Sovensy, Supriyadi, and Suhdy 2019) provide an explanation of the many workouts that would be arranged under the framework of an exercise program. When putting together a workout routine, it is essential to pay close attention to the fundamentals of exercise as well as the variables that are associated with exercise. Training principles are things that a coach needs to be aware of in order to ensure that the training objectives are met in the manner that was anticipated, according to

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(Rachmalia, Susilawati, and Lengkana 2022). All the training principles are a component of all the concepts, and even though they are intended to serve a particular goal and are derived from a variety of understandings, they are presented and articulated in a manner that is distinct from one another. There are several concepts of training that are significant and may be applied to all sports. These principles include the multilateral principle, the principle of specialization, the individual principle, the principle of overload, taking into account gender variations, variety in training, and the development of training models (Naimatul Jamaliah 2020).

### **Method**

The research that is being conducted here is a quasi-experimental study. Arikunto (2006: 3) states that experimental research is a method that can be utilized to determine a causal relationship between two factors that are purposefully caused by the researcher. This is accomplished by minimizing or excluding other factors that may interfere with the intended outcome. There are two variables involved in this investigation; specifically, there is one independent variable and one dependent variable. The outcomes of volleyball lower passes made by students at SMP Negeri 16 Kupang are the dependent variable (Y) in this study, while the independent variable (X) in this investigation is variation training.

For this study, the research design that was utilized was a One Group Pretest-Posttest Design. In line with the viewpoint expressed by (Cahyono, Naheria, and Fauzi 2021), the reason for selecting this particular experimental design pattern is due to the fact that it is strongly connected to the issue that is being investigated. Both a pre-test (conducted before treatment) and a post-test (conducted after treatment) are included in this experimental design setup. It is therefore possible to have a more precise understanding of the outcomes of the treatment, as it is possible to compare the condition before treatment with the situation after treatment. As a result of this circumstance, it will be easier to obtain information that is unambiguous regarding the impact of the therapy that was administered to the sample. Based on the following, the research paradigm may be described:

In accordance with the definition provided by (Okpatrioka 2023), the research subject is defined as an item, thing, or person to whose data for research variables are associated and which are the subject of the investigation. One of the most important strategic roles in a study is played by the research subject. This is since the research subject contains the information regarding the variables that are observed by the research. In qualitative research, the individuals who supply information about the data that the researcher wants connected to the research that is being carried out are referred to as informants. Respondents or research subjects are also involved in qualitative research. This study included fifteen male students who participated in volleyball as an extracurricular activity.

### **Results & Discussion**

#### **Results**

According to the findings of the calculations and the analysis of the research data, the utilization of the variation training method influences the outcomes of volleyball lower passing skills in students who participate in extracurricular activities at SMP Negeri 16 Kupang. Among the students that participated in extracurricular activities at SMP Negeri 16 Kupang, the results demonstrated that the variation training approach had a negative impact on the passing skills observed in volleyball. After receiving the training method of variations in wall bounce passing, the average points obtained by students in passing decreased to 254.68. This indicates that the training method of variations in wall bounce

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passing can increase the results of lower passing skills by 4.84%. Previously, the average points obtained by students in passing were 254.68.

The results that were acquired from the variation training approach on the results of volleyball show that students who participate in extracurricular activities at SMP Negeri 16 Kupang have lower passing skills. Wall bouncepassing is a training approach that tends to generate effective passing techniques that are utilized when doing lower passes that are performed. Considering this, it may be deduced that the treatment has the effect of causing an increase in the number of individuals with lower passing skills.

Lower Passing is a pre-test

After going through the calculations, the percentage of the pre-test value of the lower passing results can be determined as follows, based on the data that has been collected from the pre-test that has a lower passing rate:

**Table 1.** Frequency Distribution of Volleyball Lower Passing Pre-Test

No.	Class Interval	F <sup>1</sup>	Percentage
1	0-4	3	30%
2	5-8	11	60%
3	9-12	1	10%
Total		15	100%

Lower Passing is a Post Test

After going through the calculations, the percentage of the post-test value of the lower passing results may be produced as follows. This is based on the data that has been collected from the post-test for those with lower passing scores:

**Table 2.** Frequency Distribution of Volleyball Lower Passing Post-Test

No.	Class Interval	F <sup>1</sup>	Percentage
1	9-12	1	10%
2	13-16	11	60%
3	17-20	3	30%
Total		15	100%

## Discussion

The results of this study indicate that the use of variation training methods has an influence on the results of lower passing skills in volleyball for students who take part in extracurricular activities at SMP Negeri 16 Kupang. Based on the data analysis conducted, it was found that the variation training method applied had a negative impact on students' lower passing ability. This can be seen from the decrease in the average passing score after being given the variation training method. Before being given the variation training method, the average passing score obtained by students was 254.68. After being given variation training with the wall bounce passing method, the average passing score decreased to 254.68. This decrease shows that the variation training method used is not fully effective in improving students' lower passing skills.

However, despite the decrease in passing results, the wall bounce passing method still has potential in training basic lower passing skills in volleyball. Wall bounce passing is an exercise technique that emphasizes ball control and more accurate passing techniques, although the results in this study have not shown a significant improvement in students' skills. Analysis of the pre-test data showed that before being given the variation training method, the distribution of students' lower passing scores was quite diverse. In the pre-test distribution, 3 students (30%) had passing scores in the 0-4 range, 11 students (60%) in the 5-8 range, and only 1 student (10%) scored 9-12. This shows that most students have lower passing skills that still need to be improved.

After the variation training method was applied, the post-test results showed a change in the distribution of students' lower passing scores. A total of 1 student (10%) obtained scores in the 9-12 range, 11 students (60%) obtained scores in the 13-16 range, and 3 students (30%) achieved scores of 17-20. This shows a shift in values towards a higher direction after being given the variation training method. From the comparison of pre-test and post-test results, there is a change in the distribution pattern of lower passing scores. Most students who were previously in the low score category experienced an increase in scores after participating in variation training. However, this improvement is not significant enough to state that the variation training method is very effective in improving lower passing skills.

One possible cause of the lack of effectiveness of this variation training method is the lack of adjustment to the students' initial skill level. If students still have less strong basic skills, the variation training method may become too complex and difficult to implement effectively. Therefore, a more systematic approach is needed in designing training methods that are appropriate to the students' skill level. In addition, another factor that may affect the results of the study is the duration of the exercises given. If the duration of practice is too short, students may not have enough time to master the techniques taught through the variation method. Therefore, further research needs to be conducted to see the impact of the variation training method over a longer period.

The variation training method, although not showing optimal results in this study, still has benefits in training various aspects of lower passing skills. By making modifications in the way it is applied, this method can still be an alternative in learning volleyball skills among students. It is also necessary to combine other training methods that are more suitable for the characteristics of students. For example, combining variation training with basic training that focuses more on basic lower passing techniques before moving on to more complex methods such as wall bounce passing.

Overall, the results of this study provide insight that variation training methods in volleyball lower passing can influence students' skills, but its effectiveness still depends on various factors such as initial skill level, duration of training, and teaching methods used. Therefore, further research is needed to explore more optimal methods. By understanding the results of this study, sports coaches and teachers can be more selective in choosing the most appropriate training methods for students. Thus, the goal of improving lower passing skills in volleyball can be more easily achieved with a more targeted and systematic approach.

### **Conclusion**

Considering the findings of the research, the analysis, and the debate, it is possible to draw several conclusions that are in line with the issues that were investigated in this study. The following is a list of the conclusions: It is known that the tcount is 20.68, which is derived from the results of the calculation. After that, the findings are compared with the t table, which has a value of 2.05 ( $\alpha = 0.05$ ). It demonstrates that  $t \text{ count} \geq t \text{ table}$ ,  $20.68 \geq 1.76$  (significant). Based on these findings, it is possible to assert that the variation training approach influences the outcomes of volleyball lower passing skills among students who participate in extracurricular activities at SMP Negeri 16 Kupang.

### **References**

- Aditya, Rinaldi, Bobby Helmi, and Khairul Usman. 2024. "Jurnal Pengabdian Kepada Masyarakat." 4: 316–27.
- Alfiansyah Putra Karo Karo, Alan et al. 2024. "Jurnal Pengabdian Kepada Masyarakat." 5: 81–86.
- Anggara, Ari., Firdaus, Kamal. 2020. "Tingkat Kondisi Fisik Atlet Bola Voli Putra Padang

- Adios Kota Padang.” *Jurnal JPDO* 3(5): 1–23.  
<http://jpdo.ppj.unp.ac.id/index.php/jpdo/article/view/523/205>.
- Armstrong, Lawrence E, and Jaci L VanHeest. 2002. “The Unknown Mechanism of the Overtraining Syndrome.” *Sports Medicine* 32(3): 185–209. doi:10.2165/00007256-200232030-00003.
- Cahyono, Didik, Naheria Naheria, and Muhammad Sukron Fauzi. 2021. “Pelatihan Pengolahan Data Penelitian Berbasis Software JASP Dan SPSS Bagi Mahasiswa FKIP Universitas Mulawarman Kalimantan Timur.” *Jurnal Abdi Masyarakat Indonesia* 1(2): 421–26. doi:10.54082/jamsi.141.
- Ek, Anna, Jan Kowalski, and Jenny Jacobsson. 2022. “Training in Spikes and Number of Training Hours Correlate to Injury Incidence in Youth Athletics (Track and Field): A Prospective 52-Week Study.” *Journal of Science and Medicine in Sport* 25(2): 122–28. doi:10.1016/j.jsams.2021.09.006.
- Esser, Balkis Ratu NL. 2019. “Pencapaian Prestasi Olahraga Bola Voli Melalui Pembinaan.” *JUPE: Jurnal Pendidikan Mandala* 4(4): 169–74. doi:10.58258/jupe.v4i4.926.
- Naimatul Jamaliah. 2020. “Peningkatan Hasil Belajar Passing Bawah Bola Voli Melalui Torgamba Kabupaten Labuhan Batu Selatan Model Pbbt Dan Pbkl Siswa Kelas Viii Smpn 1.” *Riyadhoh: Jurnal Pendidikan Olahraga* 3(2): 2. <https://ojs.uniska-bjm.ac.id/index.php/riyadhohjournal/article/view/3197/2501>.
- Nugroho, Agung et al. 2024. “Jurnal Pengabdian Kepada Masyarakat.” 4(February).
- Okpatrioka. 2023. “Research And Development (R & D) Penelitian Yang Inovatif Dalam Pendidikan.” *Jurnal Pendidikan, Bahasa dan Budaya* 1(1): 86–100.
- Prima, Pera, and Dwi Cahyo Kartiko. 2021. “Survei Kondisi Fisik Atlet Pada Berbagai Cabang Olahraga.” *Jurnal Pendidikan Olahraga dan Kesehatan* 9(1): 161–70. <https://ejournal.unesa.ac.id/index.php/jurnal-pendidikn-jasmani/issue/archive>.
- Rachmalia, Dhea Safitri, Dewi Susilawati, and Anggi Setia Lengkana. 2022. “Profil Kondisi Fisik Atlet Bola Voli Pada Klub Tectona Kota Bandung.” *Journal of SPORT (Sport, Physical Education, Organization, Recreation, and Training)* 6(2): 91–100. doi:10.37058/sport.v6i2.6375.
- Rasyid, Willadi, and Rio Aristrianto. 2020. “Tinjauan Kondisi Fisik Pemain Bola Voli SMA Negeri 1 Lembah Melintang Kabupaten Pasaman Barat.” *Jurnal Pendidikan Olahraga* 3(5): 1–6.
- Sains, Universitas, Cut Nyak, and Dhien Langsa. 2020. “Menggunakan Media Modifikasi Pada Siswa Kelas Vii Smp Negeri Improve Service Learning Outcomes Volley Ball Using Modification Media in Class Vii Students of State 8Th Middle State Academic Year 2019 / 2020.” : 49–54.
- Silaban, Daniel Parulian et al. 2024. “Jurnal Pengabdian Kepada Masyarakat.” 4: 371–79.
- Sovensi, Ever, Muhammad Supriyadi, and Muhammad Suhdy. 2019. “Kondisi Fisik Pemain Bola Voli Klub Di Kota Lubuklinggau.” *Gelanggang Olahraga: Jurnal Pendidikan Jasmani dan Olahraga (JPJO)* 2(2): 13–25. doi:10.31539/jpjo.v2i2.697.