



The Effect of Variation Training on the Underhand Passing Ability of Volleyball Extracurricular Participants of SMP Negeri 1 Pematang Silimahuta Tigaraja in 2024.

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Abstract.

Background

The aim of this research is to determine the effect of variation training on the volleyball bottom passing ability of extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja in 2024. With a population and sample in this study of 15 students, the total number of extracurricular participants in volleyball at SMP Negeri 1 Pematang Silimahuta Tigaraja Year 2024.

Objectives

This research is an experimental study with a one group pretest and posttest design. The data collection technique for this research uses tests and measurements with the passing test instrument, while the data

Methods

analysis technique used is the t test. Based on data analysis, it was found that $t_{count} = 5.88$ while $t_{table} = 2.14$ and this means that there is an influence of variation training on the volleyball bottom passing

Result

ability of extracurricular students at SMA Negeri 2 Tapung. With this evidence that t_{count} is greater than t_{table} , it can be seen that there is an increase in the students' passing ability scores, where this

Conclusion

increase in ability can be seen from the high average posttest score (8.06) compared to the average pretest score (6.13).). With an increase in the top passing ability value of 31.48%. The conclusion of this study is that there is an influence of variation training on the ability of volleyball underhand passing in extracurricular activities at SMP Negeri 1 Pematang Silimahuta Tigaraja.

Keywords: Variation Drills, Underhand Passing Skills, Volleyball Game

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INTRODUCTION

Sport is an effort made by a person to achieve a healthy life that is balanced physically and spiritually in order to achieve health and balance within oneself, making the body have good strength and making the body stronger and full of energy that is capable of carrying out daily activities. In sports, a person who studies the sport with the goal of achieving success is called an athlete. Athletes themselves have someone who guides and supports them toward becoming champions, called a coach. The coach is responsible for guiding an athlete to become a champion and achieve success, ultimately leading to victory in a competition. Coaches have various methods to support their athletes' success. The training program provided by a coach is crucial and highly influential in supporting success.

Sports achievements can be achieved and formed well, influenced by several elements, one of which is the coach and his training program, so that athletes become more enthusiastic and varied in carrying out

training and the form of training carried out is in accordance with the needs required by an athlete towards success in the competition they participate in and becomes a guideline in carrying out activities.

One of the sports that is popular in society is volleyball, not only in society, volleyball games are also enjoyed by students at school, which makes schools require to create a forum to channel physical activities or useful activities to meet the needs of students at school well, as well as manage students' positive energy in a better direction. This forum is carried out outside of school hours to provide a place for students or activity participants according to their fields and expertise, this forum is called Extracurricular.

Extracurricular activities at school provide a place for students to develop and explore themselves to become better. One of the extracurricular activities at SMP Negeri 1 Pematang Silimahuta Tigaraja is volleyball. Volleyball itself is quite popular both within the community and at the school, with many boys and girls participating in the extracurricular activity. Numerous medals have been won in every championship, making the school even more famous for its volleyball extracurricular activities. The objectives of extracurricular activities indicate the objectives of each field of study given to students. The teaching and learning process is the core of school educational activities. The teaching and learning process is learning and teaching as a process can contain two meanings, namely a series of stages or phases in learning something and can also be a series of planning activities by teachers, implementation of activities to evaluation and follow-up programs (B. Suryosubroto, 2002: 19). The objectives of extracurricular activities Popi Sopiatur (2010: 98) argues that (a) to develop students' personalities who are physically and mentally healthy, pious to God Almighty, (b) have concern and responsibility for the social, cultural and natural environment around them, and (c) instill the nature of being a good citizen and responsibility through various positive activities under the responsibility of the school.

Volleyball is a team sport, with six players on each team responsible for defending and blocking the ball from entering the court or team area. With standard rules, volleyball is a game with basic techniques such as overhand passing, underhand passing, serving, and smashing, requiring players to participate in defending the court against the opposing team. This requires intelligence from players to play both physically and tactically. The physical and tactical aspects of volleyball players are inseparable, as the success of a volleyball match is determined by the athlete's or extracurricular participant's physical fitness during the match, as well as their ball control tactics. All of this can be achieved through training, enabling players to perform well and win.

The underhand pass is a crucial technique in volleyball, allowing long balls from the opposing team to be quickly intercepted with an underhand pass. Therefore, volleyball players must master the basic underhand pass technique to maintain their position on the court. The training sessions should be varied to prevent players from becoming bored, allowing them to easily manage and defend the ball, and attack the opposing team to achieve the desired victory.

However, recently, there has been a decline in the performance of the volleyball extracurricular activity at SMP Negeri 1 Pematang Silimahuta Tigaraja, resulting in a decline in performance due to several factors. These factors include a change in coaches, resulting in an inadequate training program, a lack of intensity, and a lack of focused training variety. Researchers and coaches collaborated to find solutions to these problems and find effective solutions to improve the volleyball extracurricular activity at SMP Negeri 1 Pematang Silimahuta Tigaraja, ensuring a superior and more effective training program tailored to the needs of the volleyball extracurricular activity. Volleyball requires teamwork, with each team possessing both physical and tactical abilities and skills, both in controlling the ball and attacking the opposing team. This must be achieved collaboratively.

One of the needs analysis findings among volleyball extracurricular participants is mastery of basic volleyball tactics and techniques. Therefore, more intensive training and a variety of exercises are necessary. A well-designed training program is equally important. In this study, volleyball extracurricular activities at SMP Negeri 1 Pematang Silimahuta Tigaraja focused more on underhand passing exercises to better align skill development in volleyball matches. Based on the background and needs analysis discussed in the problem described above, the research entitled "The Effect of Varied Training on Volleyball Underhand Passing Skills of Extracurricular Participants at SMP Negeri 1 Pematang Silimahuta Tigaraja in 2024" is expected to influence the volleyball passing skills of extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja in 2024.

METHOD

Research Design

This research used an experimental research method. An experimental method is defined as a systematic method aimed at determining the influence of one variable on another by providing specific treatment and strict control within a given condition. The research design used was a pre-experimental one-group pre-test-posttest design. This design involves one group being given a pre-test (O), a treatment (X), and a post-test. The success of the treatment is determined by comparing the pre-test and post-test scores. In a pre-experimental one-group pre-test-post-test study, the first step is to determine the sample to be used as the research sample and group them into one research class. The next step is to administer a pre-test to measure volleyball underhand passing ability.

Table 1. Desain one group pre-test post-test
Sumber : (John Creswell, 2010: 172)

O1	X	O2
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Keterangan :

O1 : Pre- test

O2 : Post- test

X : treatment

The treatment used in this study used a playful approach. Sukadiyanto explained that increased training would have an optimal impact if conducted for 8 weeks, with results reaching 50%. However, due to time and cost constraints, the study will be conducted for 1 month and 1 week (5 weeks). Participants will receive 10 sessions of treatment during that month.

Participant

This research was conducted in Medan, Indonesia, The population of this study is the total number of participants in the Volleyball Underhand Passing extracurricular at SMP Negeri 1 Pematang Silimahuta Tigaraja. The sample used in this study was a total of 25 people using the total sampling technique.

Data Analysis

Mansyur (2008: 248) describes data analysis as the activity of organizing, sorting, grouping, coding, and categorizing data so that working hypotheses can be identified and formulated based on the data.

1. Description of Research Results

To describe the pre-test and post-test results, the following formula is used: $\frac{\text{Nilai max} - \text{Nilai min}}{1 + 3,3 \log N}$

2. Prerequisite Analysis Test

Before conducting a hypothesis test, a prerequisite test is conducted. The prerequisite test consists of a normality test and a data homogeneity test.

3. Hypothesis Testing

Once the data is collected, the next step is to analyze it. The data analysis technique for analyzing experimental data using a pre-test-post-test design is the t-test. According to Suharsimi (2005: 395), the t-test formula for the pre-test-post-test design is as follows:

$$\text{Where: } t = \frac{\sqrt{\frac{\sum (D^2)}{N}}}{\frac{\sum D}{N}}$$

t = t value for correlated samples

D = (difference), the difference between the initial and final test scores for each individual

D = mean of the difference values (mean of D) D² = square of D

N = number of research subjects

To determine whether the research hypothesis is accepted or rejected, the calculated t value is compared with the t table at the 5% level. If the calculated t value is greater than the t table, there is a significant or meaningful difference in the study. Therefore, the null hypothesis (H0) is rejected and the working hypothesis is accepted (Ha).

This study also requires percentage improvement data to determine the progress of extracurricular participants after underhand passing training using the play method. The formula used is as follows:

$$\text{Percentage improvement} = \frac{\text{Mean different}}{\text{Mean}} \times 100\%$$

These results will serve as a reference for future similar research. Thus, the abilities of extracurricular participants will be monitored through the research data.

RESULTS AND DISCUSSION

Results

After conducting an underhand passing test on volleyball extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja, before the underhand passing variation training program was implemented, the pretest data obtained were 15 with the highest score and 2 with the lowest. The mean or average score was 6.13, and the standard deviation was 2.49, with a sample size of 15 students. The pretest data was then distributed among five classes with class intervals of 3. In the first class, within the 2-4 range, there were 6 students (40%), in the second class, within the 5-7 range, there were 6 students (40%). In the third class, within the 8-10 range, there was 1 student (6.66%), in the fourth class, within the 11-13 range, there were 0 students (0%). In the fifth class, within the 14-16 range, there were 2 students (13.33%). For more details, see the following table:

Table 2. Distribusi Frekuensi pretes Passing Bawah Bola Voli

No	Interval	frekuensi	Frekuensi relative
1	2 - 4	6	40%
2	5 - 7	6	40%
3	8 - 10	1	6,66%
4	11 -13	0	0%
5	14 - 16	2	13,33%
Jumlah		15	100%

Then the pre-test results data contained in the frequency distribution table in table 3 can be seen in the form of the following histogram graph:

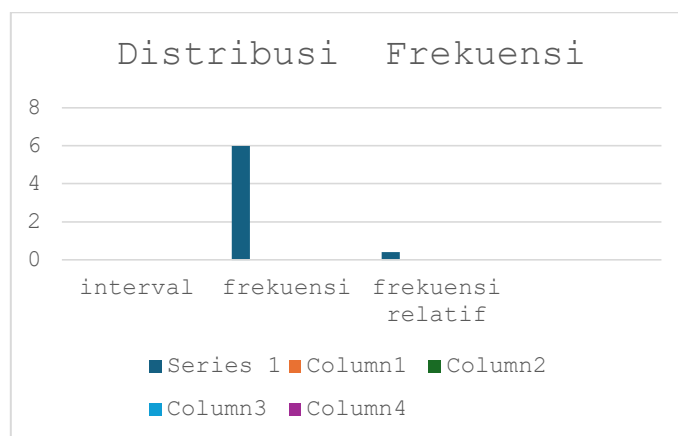


Figure 1. Histogram of the Frequency Distribution of Pretest Data

After conducting a post-test on volleyball underhand passing on extracurricular participants of SMP Negeri 1 Pematang Silimahuta Tigaraja, namely after implementing the underhand passing variation training program, the data obtained showed that the highest score was 18 and the lowest score was 4. The mean or average value was 8.06 and the standard deviation or standard deviation value of the data was 2.86 with a sample size of 15.

Then the post-test data was distributed with a total of 5 classes with a class interval length of 3, namely in the first interval class in the range of 4-6 there were 3 people or 20% in the second class in the range of 7-9 there were 10 people or 66.6% in the third interval class in the range of 10-12 there was 1 person or 6.66% in the fourth interval class in the range of 13-15 there were 0 people or 0% in the fifth interval class in the range of 16-17 there was 1 person or 6.66%. For more details, it can be seen in the following table:

Tabel 4. Distribusi Frekuensi Data Pos Tes Passing Bawah Bola Voli

No	Interval	Frekuensi	Frekuensi Relatif
1	4 - 6	3	20%
2	7 - 9	10	66,66%
3	10 - 12	1	6,66%
4	13 - 15	0	0%
5	16 - 18	1	6,66%
	Jumlah	15	100%

Then the post-test results data are presented in the frequency distribution table in the table above in the form of the following histogram graph:

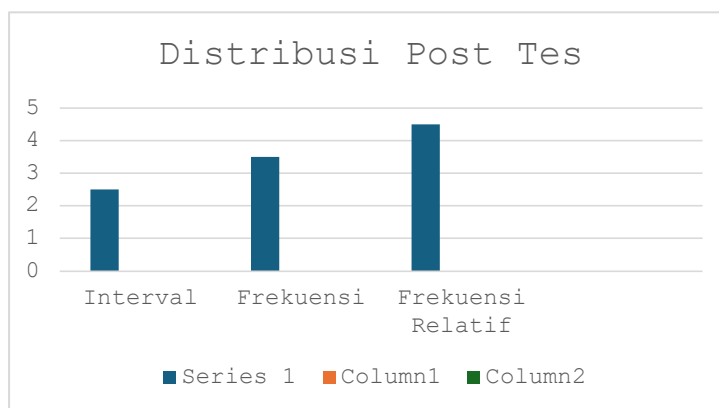


Figure 3. Histogram of the Frequency Distribution of Posttest Data

During the pretest, the volleyball passing test results for extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja showed a mean score of 6.13. After the implementation of the underhand passing variation training, the posttest yielded a mean score of 8.06. This data indicates that the extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja improved compared to before the training with the implementation of the underhand passing variation training.

This was further evidenced by the t-test, which yielded $t\text{-count} = 5.88$ and $t\text{-table} = 2.15$. This indicates that the variation training had an effect on the underhand passing ability of the volleyball extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja. The evidence that $t\text{-count}$ is greater than $t\text{-table}$ indicates an increase in the passing ability of the students. Where the increase in ability can be done from the high average post-test score of 8.06 from the average pre-test score of 6.13 from the data it can be seen that there was an increase in ability after the lower pass was carried out by 31.48%.

Discussion

After conducting research that began with data collection and processing, which ultimately served as a benchmark for discussing the research results, the following was found: there was an effect of variation training on the volleyball underhand passing ability of extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja with an increase of 31.48%.

In volleyball, underhand passing is crucial when an opposing team attacks. In this case, a volleyball player must deflect the ball given by the opponent using underhand passing and sometimes also to counterattack by giving a pass to a teammate to do a smash. This is in line with the definition of passing according to Yunus (2016:89) that doing something to achieve a certain goal effectively and efficiently in accordance with applicable regulations to achieve optimal results. Underhand passing is a basic technique for playing the ball using both hands, namely contacting the ball with both forearms. Underhand passing is a passing technique often used to receive serves and smashes.

In this assessment, the application of variation training to the volleyball underhand passing skills of extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja has had a positive impact on the progress of the extracurricular participants' abilities. The influence of variation training on the volleyball underhand passing skills of extracurricular participants is proven through the results of the study showing $t = 5.88$, which is greater than t table - 2.14. This indicates there is a significant influence of various variation training, so it can familiarize extracurricular participants in performing underhand passing techniques. Furthermore, the variation training provided can provide an enjoyable training atmosphere and make extracurricular participants happy and willing to participate in the underhand passing training provided, so this variation training can improve the abilities of extracurricular participants to be better. As explained by Emerald (2017), 35 exercise variations are a key component needed to stimulate adjustments in the training response. According to research findings, there were obstacles in the implementation of the study, but the researchers were able to overcome them. These obstacles include:

1. Time constraints; no students showed up on the first day of data collection.
2. At the beginning of the training, students lacked discipline in performing variations in volleyball underhand passing. This resulted in delays in the training schedule.
3. The study explained the procedures for implementing variation exercises, but some students still performed the movements incorrectly.

CONCLUSION

Based on the results of data analysis, it can be concluded that there is an influence of variation training on the underhand passing ability of extracurricular participants at SMP Negeri 1 Pematang Silimahuta Tigaraja with $Thitung = 5.88 > Ttabel = 2.14$ and there is an increase in the underhand passing ability value of 31.48%.

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AUTHOR CONTRIBUTION STATEMENT

This research was conceptualized and designed by JHONRYAN RUMAHORBO, who developed the research objectives and methodology, managed data collection, coordinated with participants, and supervised fieldwork at STOK Bina Guna Medan. Devi catur winata performed data analysis, interpreted the findings, and contributed significantly to the preparation of the manuscript. All authors participated in the revision of the manuscript, approved the final version for submission, and take full responsibility for the integrity and accuracy of the work.

CONFLICT OF INTEREST AND FUNDING

The authors declare no conflict of interest related to the conduct, authorship, or publication of this study.

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