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Effect of Massed Practice and Distributed Practice Methods on the Accuracy of Backhand Short Service and Forehand Short Service in Badminton Games for the Students of Victory Badminton School Yogyakarta

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ABSTRACT: This research aims to determine: (1) the effect of the massed practice and distributed practice methods on the accuracy of backhand short service in the badminton game of the students of Victory Badminton School Yogyakarta, (2) the effect of the massed practice and distributed practice methods on the accuracy of forehand short service in the badminton game of the students of Victory Badminton School Yogyakarta, (3) which method has a more significant effect whether the massed practice and distributed practice training methods on the accuracy of backhand short service in the badminton game of the students of Victory Badminton School Yogyakarta, (4) which method has a more significant effect whether the massed practice and distributed practice training methods on the accuracy of forehand short service in the badminton game of the students of Victory Badminton School. The research method was an experimental method with a one group design, pretest-posttest design. The research population was 33 students of Victory Badminton School in Yogyakarta. The sampling technique used the purposive sampling. While the number of research samples were 20 adolescent students aged 13-15 years old. Collecting the data was conducted with the short service tests in badminton games. The data analysis with 2x2 analysis of variance.

Based on the results of processing and analysis, the following conclusions can be drawn: (1) the method, massed practice and distributed practice have a significant effect on the accuracy of the backhand short service in the badminton game of the students of Victory Badminton School Yogyakarta, with a calculation of t count at 3.36 and t table at 2.10. (2) the massed practice and distributed practice training methods have a significant effect on the accuracy of the backhand short service in the badminton game of the students of Victory Badminton School Yogyakarta with a t count at 2.84 and t table at 2.10. (3) The massed practice training method has a more significant effect than the distributed practice training method on the accuracy of backhand short service in the badminton game of the students of Victory Badminton School Yogyakarta, with the calculation results (15.84 > 12.60). (4) The massed practice training method has a more significant effect than the distributed practice training method on the accuracy of forehand short service in the badminton game of the students of Victory Badminton School Yogyakarta, with the calculation results (12.84 > 12.60).

KEYWORDS: Massed Practice Training Method, Distribution, Backhand Accuracy Results, Forehand Service in Game of Badminton.

INTRODUCTION

Badminton is a sport that is played using rackets, Arrange shuttlecock and net using a variety of hitting techniques ranging from relatively slow to very fast accompanied by feint movements. Badminton is played on a closed or open court and the playing field is a flat field, made of concrete, wood or carpet, marked with a line as the boundary of the field and limited by a net in the middle of the playing field. This game is individual, which can be played one person against one person, or two people against two people. The main task in the game of badminton aims to turn off the shuttlecock in the opponent's court area. In the game of badminton, as it is known, to get points in order to win the game requires basic things that must be developed in order to have skills in playing badminton, namely mastering various basic badminton techniques.

The basic techniques include: how to hold the racket (grip), pattern of steps or movement of the feet (footwork) to hitting techniques such as service, smash, dropshor, lob, netting, drives and so on. Of the various basic techniques used in badminton games, researchers are interested in discussing service. Service is a basic technique that must be mastered by badminton players, because service is the first shot that is made to start the game with the aim of getting points. (Prabandaru et al., 2020) "That

service hit was one of the shots taken to start a match, and a shot was done by flying a shuttlecock into the opponent's playing field in a diagonal direction". Therefore a badminton player is required to be able to master service techniques, if a player can serve well and can also direct the desired target service then the player has received the initial capital to win the game. A player who cannot serve properly will be fouled. Unfortunately, many coaches and players do not pay special attention to training and mastering this basic technique. We know that numbers or points in badminton games will not be created if players are not good at serving properly.

METHODS

The method used in this research is the experimental method. (Sugiyono, 2017) The experimental method is: The best research approach (method) is one that is efficient, valid, and reliable, so that the data can be used to solve problems. The population in this study were all 33 participants at the Victory Badminton School in Yogyakarta. The sampling technique used in this study was (purposive sampling). With the criteria for class participants aged 13-15 years who are proficient, using a selection or distribution method according to experts in the field of badminton games, (Komari, 2023) Participants carry out a test reflecting the shuttlecock against the wall using a racket for 30 seconds, students who score high or the participants who get rank 1 and 4 become one group, then those who get rank 2 and 3 become one group.

RESEARCH RESULT

A. Description of Research Result Data

Table 1. Backhand short Test Result Data Massed Practice group service

No	Name	Test Result		
		Pre-test	Post-test	Gain
1	Agung Budi S	24	29	5
2	Aryo Pradipta	23	26	3
3	Gilang Naufal A	22	27	5
4	Fachri Rizky	26	29	3
5	Radento Mandra	25	30	5
6	Dhanis Bima	22	26	4
7	Aktar Fadilah	23	28	5
8	Fadil Hermawan	24	27	3
9	Rizal Maulana	25	29	4
10	Intan Nasuha	24	28	4
Amount		238	279	41
Mean		23,8	27,9	4.1

From the table above it is known that for the pre-test for the mass practice group with a sample of 10, a total of 238 was obtained, the average was 23.8 and for the post-test for the mass practice group with a sample of 10, a total of 279 was obtained, the average was 27,9. The difference in the massed practice group with a sample of 10 resulted in a total of 41, the average being 4.1

Table 2. Distributed Practice Group Backhand Short Service Test Results Data

No	Name	Tes Result		
		Pre-test	Post-test	Gain
1	Budi Prasetya A	24	26	2
2	Ardian Saputra	25	28	3
3	Ihsan Nurrahman	25	27	2
4	Ardi Firmansyah	23	27	4
5	Rizky Dwi Prakoso	25	28	3
6	Satria Dafa R	24	26	2
7	Anwar Mulyana	22	25	3
8	Andi Afrianto	24	27	3
9	Agus Arianto	23	26	3
10	Najwa Chairunnisa	24	28	4
Amount		239	268	29

Mean	23,9	26,8	2.9

From the table above it is known that for the pre-test of the distributed practice group with a sample of 10, a total of 239 was obtained, the average was 23.9 and for the post-test with a sample of 10, a total of 268 was obtained, the average was 26.8 . The difference in the mass practice group was 29, the average was 2.9

Table 3. **Data on Forehand Short Service Test Results for the Massed Practice Group**

No	Name	Test Result		
		Pre-test	Post-test	Gain
1	Agung Budi S	22	26	4
2	Aryo Pradita	25	28	3
3	Gilang Naufal A	23	26	3
4	Fachrii Rizky	22	26	4
5	Radento Mandra	26	28	2
6	Dhanis Bima	23	27	4
7	Aktar Fadilah	24	28	4
8	Fadil Hermawan	25	29	4
9	Rizal Maulana	23	28	5
10	Intan Nasuha	24	27	3
Amount		237	273	36
Mean		23,7	27,3	3.6

From the table above it is known that for the pre-test for the mass practice group with a sample of 10, a total of 237 was obtained, the average was 23.7 and for the post-test for the massed practice group with a sample of 10, a total of 273 was obtained, the average was 27, 3. The difference between the massed practice groups was 36. The average was 3.6

Table 4. **Data on Forehand Short Service Test Results for the Distributed Practice Group**

No	Name	Test Result		
		Pre-test	Post-test	Gain
1	Budi Prasetya A	23	27	4
2	Ardian Saputra	25	27	2
3	Ihsan Nurrahman	22	25	3
4	Ardi Firmansyah	24	26	2
5	Rizky Dwi Prakoso	22	25	3
6	Satria Dafa R	24	26	2
7	Anwar Mulyana	25	28	3
8	Andi Afrianto	22	25	3
9	Agus Arianto	24	28	4
10	Najwa Chairunnisa	24	27	3
Amount		235	264	29
Mean		23,5	26,4	2.9

From the table above it is known that for the pre-test of the distributed practice group with a sample of 10, a total of 235 was obtained, the average was 23.5 and for the post-test with a sample of 10, a total of 264 was obtained, the average was 26.4 . The difference in the distributed practice groups is 29, the average is 2.9

B. Results of Hypothesis Consent

1. **Backhand Short Service**

For the influence of the massed practice training method with the distributed practice method on the accuracy of the results of backhand short service in the badminton game of the victory yogyakarta badminton school participants. The following summarizes the results of the two-way similarity test (two-party test) listed in the table below.

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t-Count	t-Table	Conclusion
3,36	2,10	Rejected

The statistical hypothesis proposed for the similarity test of the two means (two parties) is as follows: Ho : $-t_1 - \frac{1}{2}a < t < t_1 - \frac{1}{2}a$(located in the reception area) means that there is no influence between the massed practice method and the distributed practice method on the accuracy of the backhand short service in the badminton game of Victory Badminton School participants Yogyakarta. Hi : $-t_1 - \frac{1}{2}a < t > t_1 - \frac{1}{2}a$(outside the reception area) means there is influence between massed practice and the distributed practice method on the accuracy of backhand short service in the badminton game of victory yogyakarta badminton school participants. Criteria Accept Ho If $-t_1 - \frac{1}{2}a < t < t_1 - \frac{1}{2}a$ with dk ($n_1 + n_2$ 2) in other cases hypothesis is rejected. From the table above, we get a t-table with (0,05) and dk $n_1 + n_2$ -2 we get $t_1 - \frac{1}{2}a$= 2,10 and thitung =3,36 so the tang value is in the rejection area, this means that Hi is rejected and the conclusion is there is an influence between the massed practice training method and the distributed practice method on the results of the accuracy of backhand short service in the badminton game of victory Yogyakarta badminton school participants.

Table of Results of the Analysis of the Similarity of Two Averages (paired scores) results of backhand service with the massed practice and distributed practice methods in badminton games.

Sample group	t-Count	t-Table	Conclusion
Massed practice	15,18	2,26	Rejected
Distributed practice	12,60	2,26	Rejected

From the results of testing the data in the table, the t-count of the mass practice method (15.18) is greater than the t-table (2.26). while the results of the distributed practice method obtained (12.60) are greater than t-table (2.26). The test criterion is to accept Ho if ⩾ t-table at a significance level of 0,05 with dk $n_1 + n_2$ -2. In this case the two training methods ⩾ t-table meaning that t-count is in the area of acceptance of Ho, so the conclusion is that Ho is rejected so that the exercise massed practice and method exercise distributed practice makes an impact.

2. **Forehand Short Service**

To determine the influence of massed practice and distributed practice methods on the accuracy of forehand short service in the badminton game of Victory Yogyakarta Badminton School participants. The following summarizes the results of the two-way similarity test (two-party test) listed in the table below.

t-Count	t-Table	Conclusion
2,84	2,10	Rejected

The statistical hypothesis proposed for the similarity test of two means (two sides) is as follows: Ho : $-t_1 - \frac{1}{2}a < t < t_1 - \frac{1}{2}a$ (located in the reception area) means that there is no influence between the massed practice method and the distributed practice method on the accuracy of the short forehand service in the badminton game of Victory Yogyakarta Badminton School participants Hi : $-t_1 - \frac{1}{2}a < t > t_1 - \frac{1}{2}a$(outside the reception area) means that there is a significant influence between massed practice and the distributed practice method on the accuracy of the short forehand service in the badminton game of Victory Badminton School participants yogyakarta. Criteria Accept Ho if $-t_1 - \frac{1}{2}a < t < t_1 - \frac{1}{2}a$ with dk ($n_1 + n_2$ 2) in other cases the hypothesis is rejected. From the above table, a table with (0,05) and dk $n_1 + n_2$ -2 is obtained $t_1 - \frac{1}{2}a$= 2,10 and t-count =2,84 thus the value of tcount is in the rejection area, this means that Hi is rejected and The conclusion is that there is an influence between the massed practice training method and the distributed practice method on the results of the accuracy of the Forehand short service in the badminton game of Victory Yogyakarta Badminton School participants

The results of the analysis of the similarity of the two averages (paired scores) for the results of the short service forehand with the method of massed practice and distributed practice of the game badminton.

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Sample group	t-Count	t-Table	Conclusion
Massed practice	13,84	2,26	Rejected
Distributed practice	12,60	2,26	Rejected

From the results of testing the data in the table, the t-count of the mass practice method (13.84) is greater than the t-table (2.26), while the results of the distributed practice method are obtained (12.60) greater than the t-table (2 , 26). The test criterion is to accept Ho if the t-table is at a significant level of 0.05 with dkn_1 + n_2 -2. In this case the two training methods > t-table, meaning that t-count is in the area of acceptance of Ho, so in conclusion Ho is rejected so that the massed practice training method and the distributed practice training method have an effect.

DISCUSSION

Age Badminton is a game sport that is individual, can be done by one person against one person or two people against two people. This game requires a racket as a tool to hit the shuttlecock as an object, which is hit back and forth over the net and falls on the opponent's playing field. Service is one of the basic techniques in the game of badminton, short service can be done in the forehand or backhand position. This study intends to determine the accuracy of backhand short service and forehand short service. Service aims to force the opponent to not be able to carry out attacks. In addition, the opponent is forced to be in a defensive position so that he can attack first. To improve service accuracy in badminton games, training must be carried out systematically and continuously, so the right training method is needed. (Suhendro, 2007) "Exercise methods that can be developed to improve technical skills include massed practice and distributed practice". Meanwhile, the distributed practice method is (Suhendro, 2007) that, "Distributed practice is the principle of deep turn regulation exercises where training time arrangements are held with regular rest periods alternately". Differences in the Effect of Massed Practice and Distributed Practice Methods on the Accuracy of Backhand and Forehand Short Service in Badminton Games. Based on the results of processing and analysis, the following conclusions can be drawn: group A (backhand short service) which was given the treatment of the massed practice training method gave a greater influence compared to group B (backhand short service) which was given the treatment of the distributed practice training method with differences results (15.18 > 12.60). Group A (forehand short service) which was given the treatment of the mass practice training method gave a greater effect compared to group B (forehand short service) which was given the treatment of the distributed practice method with different results (13.84> 12.60). Based on the hypothesis testing, it shows that there is a significant difference in the effect of the massed practice and distributed practice methods on the accuracy of service in the badminton game of Victory Yogyakarta badminton school participants. In the group of participants who were treated with the mass practice training method, they had an increase in the accuracy of the short service accuracy compared to the group of students who are treated with the distributed practice training method. The massed practice training method has a better effect on increasing the accuracy of short service in badminton games, because the massed practice training method requires continuous repetition of movements. (Ming, 2015) badminton skills must be practiced constantly (with repetitive hitting) for players to maintain acceptable levels of performance. By repeating the service continuously. then participants will be more sensitive and able to feel good service done. In addition, through repeated services, it will increase the self-control of the participants. Participants will be able to feel the movements being carried out and will have a better feeling. While in terms of memory system. Mass practice method is a long term memory system. This means that skills that are performed continuously will be stored in memory longer, so that students will have a consistent concept of service movements Meanwhile, the distributed practice training method is a skill exercise interspersed with rest between practice sessions. This will have an impact on decreasing skills, so that the skills learned will take longer to master. Judging from the information process and memory system. short service training distributed practice methods including short term memory system or short term memory. Short term memory is a processing of information that is received in a short time and can be lost quickly because of the length of time or frequent breaks between exercises.

CONCLUSION

Based on the results of data processing and score analysis between Backhand Short service and Forehand Short Service Exercises in badminton games through the massed practice training method and the distributed practice training method, the following conclusions are obtained:

1. The massed practice and distributed practice training methods have a significant influence on the accuracy of the backhand short service in the badminton game of the victory yogyakarta badminton school participants.

2. The massed practice and distributed practice training methods have a significant effect on the accuracy of forehand short service in the badminton game of Victory Yogyakarta badminton school participants.
3. The massed practice training method has a more significant and distributed effect practice on the accuracy of backhand short service in participant badminton games victory badminton school yogyakarta.
4. The massed practice training method has a more significant effect than distributed practice on the accuracy of forehand short service in the badminton game of Victory Yogyakarta Badminton School participants.

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