



The Influence Of Plyometric Training On 50-Meter Freestyle Swimming Speed At Adyas Aquatics Club Sumedang

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Abstract

This study aims to determine the effect of plyometric training to increase 50 meter freestyle swimming speed at the Adyas Aquatik Sumedang club. Plyometric training is one of the important exercises to increase swimming speed for athletes. One Group Pre-test Post-test Design research method to determine differences before and after being given certain treatments. The sample used in this study using non probability sampling type purposive sampling or sampling technique with certain considerations, aged 12-14 years with a total of 12 athletes. Using the 50 meter speed test as an instrument in the study. The results of the normality test data processing produced a significant pretest of 0.267 while the posttest was 0.671. From this data it is interpreted that the normality test is normally distributed, because the significance is > 0.05 . The homogeneity test was carried out which resulted in a significance of 0.797. From these data it can be interpreted that the homogeneity test is homogeneous. Then the Paired Sample T-test was conducted to determine the effect produced with a value of 0.005. The study found that 50-meter freestyle swimming (after using plyometric training) increased more than the initial test. This shows that plyometric training can increase the speed of 50-meter freestyle swimming at the Adyas Aquatik Sumedang club.



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INTRODUCTION

Freestyle swimming is the style that was first used by swimmers in prehistoric times because this style is known to be efficient and effective, making the swimmers' movements faster. However, when observing the phenomena in the field, it is evident that there are many issues related to the strength of the arms and legs in freestyle swimming. What happens is that the freestyle swimming speed has not yet reached the optimal speed, or the expected time, due to insufficient training of leg and arm muscle strength in freestyle swimming, and additional training to improve speed. The need for additional weight training for the legs and arms, because muscles are a determining factor or one of the important aspects during freestyle swimming, (Yudha Prawira et al., 2021) as swimmers use their legs and arms to generate forward movement. Thus, the question arises whether the strength of the leg and arm muscles affects the speed of freestyle swimming.

Therefore, the research considers what the appropriate method is to train or improve speed results to be more optimal than before. (Rahman et al., 2023) Plyometric training is a form of land-based exercise chosen by the researcher to train or improve freestyle speed, so that athletes can achieve optimal speed during swimming and enhance their freestyle swimming speed during competitions. (Selpamira, 2022) Based on the identified problem, the researcher plans to conduct a study titled "The Effect of Plyometric Training on 50-Meter Freestyle Swimming Speed at Adyas Aquatic Club Sumedang." With this research, the study hopes to improve the freestyle speed of athletes at the Adyas Aquatic Club in Sumedang.

Plyometric exercises are also beneficial in improving coordination and neuromuscular efficiency. (Febri Herdion Alfio Ozon & Vera Septi Sistiasih, 2023) explain that this exercise involves a quick muscle stretch reflex, which can enhance the nervous system's response to muscle contractions. For example, squat jump exercises can help improve leg drive, which is very useful in swimming sports. By doing exercises regularly, athletes can improve their body endurance and stability, which ultimately contributes to more optimal sports performance.

Speed in sports is defined as a person's ability to perform a specific movement in a short amount of time. According to (Historian et al., 2024), speed involves important biomotor components, including movement frequency, explosiveness, and the muscle's ability to respond quickly to stimuli. In the context of sports, speed becomes one of the key elements to achieving optimal performance, especially in sports such as running, swimming, and martial arts.

Swimming is a water sport activity that involves body movements to float, glide, or move through water using various strokes, such as freestyle, breaststroke, backstroke, and butterfly. According to research by (Sudirjo & Sudrazat, 2024), swimming is not only a competitive sport but also part of recreational and health activities because it can improve muscle strength, cardiorespiratory capacity, and body flexibility. Swimming is known as one of the forms of exercise with minimal injury risk because it does not put direct pressure on the joints. (Swimming et al., 2025) In addition, regular training with the correct technique can improve physical endurance and enhance movement coordination. (Sudirjo et al., 2023) In swimming, there are four

strokes, with freestyle being the primary stroke that emerged in ancient times. In Assyria, the freestyle stroke is estimated to have emerged around the 10th century.

Freestyle has become the main stroke in swimming because it is considered easy to apply to swimmers, as they can use this stroke easily and learn to swim more easily compared to using other swimming strokes. (Budiman, 2020) Freestyle is relatively easy to use because it is not bound by the existing rules like other swimming styles; it certainly involves body movements but with a more free approach. Backstroke, because the back is facing the water, with the chest and eyes above, makes it easier for someone to utilize their sense of sight.

But there are also drawbacks to this style because someone who uses this style cannot determine their direction since the swimmer is facing away or cannot see their destination. Butterfly stroke is often referred to as butterfly style, which involves swimming in the water like the movement of a butterfly in flight. According to Fx. Sugiyanto, (2010:36) the Dolphin style is swimming with both arms moving forward together above the water surface and returning backward simultaneously and symmetrically. The body must remain face down, and both shoulders parallel to the water surface.

All leg movements must be performed simultaneously and symmetrically. The leg movements are simultaneous upward and downward in a vertical plane. The Breaststroke is often also called the frog style, because the frog style swimming closely resembles the movement of a frog while swimming. (Manda Mely Garitny et al., 2023) Both hands must be pushed forward together from the chest area at or below the water surface, then spread to the sides and

brought back simultaneously and symmetrically. The body is face down and both shoulders are parallel to the water surface. Both legs are pulled together towards the body, knees bent and opened. After that, both legs are moved in a circular motion outward and then brought back together. All leg movements must be simultaneous, symmetrical, and on the same flat plane.

Previous studies on plyometric training include research by (Pratama, 2023), which concluded that the Plyometric Double Leg Speed Hop intervention is effective in improving freestyle swimming speed among swimmers at the Tirta Serayu Banjarnegara Club. There is also (Wicaksono et al., 2020) which shows that: (1) burpee exercises can increase leg muscle explosiveness by 6.92% and swimming speed by 4.55%, (2) box jump exercises increase leg muscle explosiveness by 8.13% and swimming speed by 3.53%, (3) box jump exercises are the most effective for improving leg muscle explosiveness and swimming speed in athletes of the Taman Tirta Bojonegoro swimming club. From this, it means that there is a significant effect after the analysis of the obtained data. Conclusion based on the results, this study concludes that there is an influence of plyometric training on the 25-meter breaststroke swimming speed. Next, from (Muhamad Fathuridak, 2023), the magnitude of the difference or the difference between the pretest and posttest between resistance band exercises and push-ups, resistance band exercises have a higher difference compared to push-ups. It can be concluded that resistance band exercises are better than push-up exercises.

Thus, the preliminary hypothesis in this study is that plyometric training has a positive impact on the improvement of 50-meter freestyle

swimming speed among athletes of the Adyas Aquatic Club Sumedang. Athletes who undergo a regular plyometric training program are expected to show significant improvements in their 50-meter freestyle swimming times compared to before the training, due to increased muscle strength, movement efficiency, and propulsion in the water.

METHODS

This study uses an experiment with a One Group Pretest-Posttest model, conducted with a pretest (before treatment) and subsequently the sample is given treatment in the form of plyometric exercises, and finally, the sample is given a posttest to measure the results of the treatment given in the exercises. (Ibrahim, Muhammad Buchori, 2023) This research will be conducted at the Adyas Aquatic Club in Sumedang, located in Padasuka Village, North Sumedang District, Sumedang Regency. Before starting the research, the researcher requested research permission from the head of the Adyas Aquatic Club Sumedang. This is done to obtain approval before administering treatment or intervention to the swimming athletes.

Participants

The research participants used in this study are swimming athletes. The sample participants include the characteristics of each athlete, especially their age. (Abdelmageed et al., 2020) Most of the wrestlers from Bandung Regency are between 12-14 years old, while most of the swimmers are male, with some female participants. The

education level is mostly junior high school.

Sampling Procedures

In data collection, the researcher needs to determine or establish the appropriate population and sample, which requires a good understanding of sampling, both in determining the number and in selecting which samples to take. (Amin et al., 2025) The population for this study consists of 40 members of the Adyas Aquatic Club in Sumedang. (S et al., 2024) The sampling used in this study was selected using non-probability sampling of the purposive sampling type or the sample determination technique with specific considerations. the consideration determined by the observation results on athletes who are active and inactive in participating in swimming training, within the age group of 12 to 14 years, therefore the total sample used in this study is 12 people.

Materials and Apparatus

The research instrument used a 50-meter freestyle swimming speed test. (Siswa et al., n.d.) In the form of recorded times for freestyle swimming speed in athletes. Including the freestyle swimming test, the instruments used in this research are a swimming pool, stopwatch, and writing materials. The recorded results are the times taken by the athletes to cover 50m, using a stopwatch.

Procedures

In this initial stage, there are several activities starting from requesting permission from the Club or the Club Chairman to conduct research on swimming athletes by providing an official permission letter to reach an agreement and avoid obstacles during

the research. (Nugroho et al., 2021) At the time of obtaining permission, the researcher also outlines the activities that will be conducted in this study and clearly explains the research process. Then the research groups the athletes and prepares the objects for study.

For the implementation stage, it begins with conducting a pretest or initial test to obtain results regarding the athletes' speed, followed by a final test after the training. After conducting the initial test, it will be followed by the treatment or training phase, which will take place over 12 sessions. The experimental treatment was conducted over 12 sessions according to Juliantine(Fahrizqi et al., 2021), who stated that as an experiment to achieve good results, it can also be carried out with a training frequency of 3 days a week, with a minimum training duration of 4-6 weeks. After that, a post-test or final test is conducted to determine whether there has been an improvement or effect from the training that has been carried out. All the activities above were conducted to obtain quantitative data.

Design or Data Analysis

This research was conducted at the Adyas Aquatic Club in Sumedang with a sample of 12 people, starting with a pretest from 3:00 PM to 4:30 PM on Thursday, January 7, 2025, assisted by a coach with a freestyle swimming speed test. This was followed by the treatment process, which involved plyometric exercises, and finally, a posttest from 3:00 PM to 4:30 PM on Saturday, February 22, 2025, to observe the improvement in freestyle swimming speed using a swimming speed test instrument. After the data has been collected, data processing will be conducted by calculating the Normality

Test, Homogeneity Test, Hypothesis Test, R-Square Test, and obtaining the findings which indicate that there is an effect of plyometric training on freestyle swimming speed in swimming sports. The findings can be seen from the data below.

RESULT

The research data consists of two independent variables, namely the arm muscle strength variable (X1) and the waist muscle strength variable (X2), as well as the dependent variable, which is the throwing result (Y). In this section, the data from each variable that has been processed will be explained or represented, based on the mean, median, mode, and standard deviation. In addition, frequency distribution tables for each variable are also presented. (Pratama, 2023) Here are the details of the data processing results that have been carried out with the help of SPSS version .

Table 1. Test of Normality

	Kolmogorov-					
	Smirnov ^a			Shapiro-Wilk		
	Stat	df	Sig.	Stat	df	Sig.
Pre test	.206	12	.169	.918	12	.267
Posttest	.163	12	.200	.952	12	.671

Based on the table above from the normality test that has been conducted. It can be concluded that the data obtained from the 50 M freestyle swimming speed test shows that the pretest results have a

significance of $0.267 > 0.05$, while the posttest results have a significance of $0.671 > 0.05$. It can be said that the normality test data is normally distributed.

Table 2. Paired Samples Test

Paired Differences							Sig. (2-tailed)
95% Confidence Interval of the Difference							
Std. Error	Mean	Std. Deviation	Lower Bound	Upper Bound	t	f	
Mean	Std. Error	Mean	Lower Bound	Upper Bound	t	f	
Mean	Std. Error	Mean	Lower Bound	Upper Bound	t	f	
retes							
t -	147.3	145.0	1.86	55.18	239.4	3.51	
Postt	33	35	8	2	84	9	1 005
est							

Based on the table, it can be seen that the Sig. (2-tailed) value shows a result of $0.005 < 0.05$, which means that H_1 is accepted and H_0 is rejected. In this case, it can be concluded that there is "an influence of plyometric training to improve the 50 m freestyle swimming speed" accepted. Next, (Taktis, 2011) to determine the extent of the influence of plyometric training on improving the 50m freestyle swimming speed, an R-Square test will be conducted.

Based on the data analyzed from the pretest and posttest results, which show that plyometric training improves the speed of 50 m freestyle swimming, it can be concluded that plyometric training can be used for daily land training to enhance the speed of 50 m freestyle swimming.

Table 3. R-Square Test Result

	R	Adjusted	Std.
	Squar	R Square	Error of
	e		the
			Estimate
	.918 ^a	.843	.827
			151.581

The results in the table show that the R Square value is 0.843, which means that the influence of the independent variable on the dependent variable is $0.843 \times 100\% = 84.3\%$. Thus, there is a significant influence of plyometric training in improving the 50 m freestyle swimming speed by 84.3%. The remaining 15.7% is the contribution from other variables

Tables & Figures

Table 4. Table title

No	Items	Description
1	Normalitas	Normality
2	Hipotesis	Related
3	R-Square	Related



Fig 1. Graphic Result

DISCUSSION

From the results of this research, the data processing results will be discussed, aiming to answer the previously formulated problem statement. (Nurmala et al., 2024) The main issue faced in this research is the significant lack of leg and arm strength, which results in the freestyle swimming speed not reaching the optimal speed or expected time. Additionally, there is a lack of leg and arm muscle strength training during freestyle swimming among the Adyas Aquatic Sumedang athletes. (Utamayasa, 2020) This condition can hinder the training process. Therefore, this study provides

treatment in the form of plyometric exercises to improve freestyle swimming speed.

This research is in line with the theory. The study conducted by (Historian et al., 2024) shows that plyometrics combined with land-based muscle endurance training can improve propulsion efficiency in water, which directly contributes to increased swimming speed. (Gusnelia et al., 2022) The speed of freestyle swimming is influenced by various biomechanical factors, including the strength of the arm and leg muscles, movement coordination, and propulsion efficiency in the water. (Keolahragaan et al., n.d.) The problems faced by athletes at the Adyas Aquatic Club in Sumedang indicate that suboptimal muscle strength, particularly in the legs and arms, is the main factor hindering the improvement of swimming speed. The lack of specific training to strengthen those muscles results in low propulsion while swimming, causing the 50-meter freestyle time to not yet meet the expected target. Therefore, a training intervention is needed that can enhance explosiveness and movement efficiency in the water.

Plyometric exercises are an explosive training method designed to enhance muscle power through a cycle of rapid stretching and contraction. A study by (Lengkana et al., 2020) shows that the combination of plyometric exercises with land-based muscle endurance training can enhance propulsion efficiency, which directly impacts swimming speed improvement. Plyometrics can improve acceleration at the start, the effectiveness

of the kick during the propulsion phase, and optimize the coordination of movement between the upper and lower body. These findings are in line with the research by (Sudirjo et al., 2019), which revealed that plyometric training programs.

With the systematic implementation of plyometric training, it is hoped that the athletes of Adyas Aquatic Sumedang can experience a significant increase in freestyle swimming speed. (Ramadhan & Badruzaman, 2016) The increase in propulsion due to the strengthening of the leg and arm muscles will optimize energy efficiency in every swimming movement. In addition, this exercise also has the potential to improve swimming technique by enhancing stability and body control while swimming. Therefore, the results of this study can serve as a recommendation for coaches and athletes to adopt plyometric training as part of a training program aimed at improving overall swimming performance.

CONCLUSION

Based on the results of data processing and analysis findings conducted for this research, the conclusion is that plyometric training on freestyle swimming speed in swimming sports is valid, as evidenced by the different initial and final tests. (Isnanta, 2024) In other words, there is an improvement between the initial and final tests, reinforced by the data processing that has been tested with the results of plyometric training on 50-meter freestyle swimming speed. There is an influence of plyometric training on the speed of 50-meter freestyle swimming. With an average swimming speed of 50

meters from 33.51 seconds in the Pre Test to 32.04 seconds in the Post Test. The significant influence of Plyometric training on the results of the 50-meter freestyle swimming. With the influence of plyometric training in significantly improving the speed of 50m freestyle swimming by 84.3%. The remaining 15.7% is the contribution from other variables. This finding indicates that the intervention has successfully improved swimming speed.

REFERENCES

- Abdelmageed, M. I., Abdelmoneim, A. H., Mustafa, M. I., Elfadol, N. M., Murshed, N. S., Shantier, S. W., & Makhawi, A. M. (2020). Design of a Multiepitope-Based Peptide Vaccine against the e Protein of Human COVID-19: An Immunoinformatics Approach. *BioMed Research International*, 2020. <https://doi.org/10.1155/2020/26832> 86
- Amin, R., Asnaldi, A., Sepriani, R., & Kunci, K. (2025). *Tinjauan Sarana dan Prasarana Pendidikan Jasmani Olahraga dan Kesehatan (PJOK) Di Sekolah Menengah Pertama (SMP) Se- Kecamatan Simpang Alahan Mati (Simpati) Kabupaten Pasaman*. 8(1), 261–271.
- Budiman, A. (2020). Latihan power otot lengan untuk kecepatan push dalam olahraga hockey. *Jpoe*, 2(2), 163–171. <https://doi.org/10.37742/jpoe.v2i2.54>
- Fahrizqi, E. B., Gumantan, A., & Yuliandra, R. (2021). Pengaruh latihan sirkuit terhadap kekuatan tubuh bagian atas unit kegiatan mahasiswa olahraga panahan. *Multilateral : Jurnal Pendidikan Jasmani Dan Olahraga*, 20(1), 43. <https://doi.org/10.20527/multilatera.l.v20i1.9207>
- Febri Herdion Alfio Ozon, & Vera Septi Sistiasih. (2023). Pengaruh Latihan Plyometric Standing Jump Terhadap Peningkatan Vertical Jump Pemain Bola Voli Tunas Harapan Ponorogo. *JURNAL ILMIAH PENJAS (Penelitian, Pendidikan Dan Pengajaran)*, 9(1), 133–145. <https://doi.org/10.36728/jip.v9i1.2439>
- Gusnelia, S., Hermanzoni, H., Umar, U., & Setiawan, Y. (2022). Pengaruh Latihan Pliometrik Terhadap Peningkatan Daya Ledak Otot Tungkai Atlet Taekwondo Dojang Kodim 03/04 Agam Bukittinggi. *Jurnal Patriot*, 4(1), 81–94. <https://doi.org/10.24036/patriot.v4i1.793>
- Historian, R., Susilawati, D., & Mulyanto, R. (2024). *Kinestetik : Jurnal Ilmiah Pendidikan Jasmani The Effect of Hand Paddle and Push Up Exercises to Increase Swimming Speed in Children Aged 11-12 Years*. 8(1), 57–64.
- Ibrahim, Muhammad Buchori, D. (2023). *Metode Penelitian Berbagai Bidang Keilmuan (Panduan & Referensi)*. <https://books.google.com/books?hl=en&lr=&id=OCW2EAAQBAJ&oi=fnd&pg=PP1&dq=metode+penelitian+campuran&ots=XqNXCWppa8&sig=vd-PFXG63FBzf0trpLWt9FGYfbY>
- Isnanta, R. (2024). Analisis Tingkat Kebugaran Fisik Mahasiswa Pendidikan Olahraga Melalui Latihan Weight Training. *Prima Magistra: Jurnal Ilmiah Kependidikan*, 5(1), 31–37. <https://doi.org/10.37478/jpm.v5i1.3321>
- Keolahragaan, S. I., Olahraga, F. I.,

- Surabaya, U. N., Keolahragaan, S. I., Olahraga, F. I., & Surabaya, U. N. (n.d.). *PENGARUH PELATIHAN JUMP TO BOX TERHADAP KEMAMPUAN TRACK START CABANG OLAHRAGA RENANG KLUB TIRTA MULYA SC . NGANJUK Andun Sudijandoko*.
- Lengkana, A. S., Rahman, A. A., Alif, M. N., Mulya, G., & Priana, A. (2020). *Static and Dynamic Balance Learning in Primary School Students*. 8(6), 469–476. <https://doi.org/10.13189/saj.2020.080620>
- Manda Mely Garitny, Ezra Bernadus Wijaya, & Wahyuni, D. T. (2023). Pengaruh Latihan Plyometric Double Leg Speed Hop Terhadap Peningkatan Kecepatan Berenang Gaya Bebas Pada Atlet Renang Usia 9 - 14 Tahun. *Indonesian Journal of Physiotherapy*, 3(1), 18–25. <https://doi.org/10.52019/ijpt.v3i1.6202>
- Nugroho, R. A., Yuliandra, R., Gumantan, A., & Mahfud, I. (2021). Pengaruh Latihan Leg Press dan Squat Thrust Terhadap Peningkatan Power Tungkai Atlet Bola Voli. *Jendela Olahraga*, 6(2), 40–49. <https://doi.org/10.26877/jo.v6i2.7391>
- Nurmala, S., Sidik, D. Z., Kusdinar, Y., Pitriani, P., & Kunci, K. (2024). *Journal of Sport Coaching and Physical Education Aquatic Plyometric Training (APT) terhadap Peningkatkan Tinggi Loncatan Spike pada Pemain Bola Voli*. 9(2), 106–112.
- Pratama, R. S. (2023). *Jurnal Keolahragaan The impact of hexagon drill on the agility of junior men ' s tennis players*. 11(1), 33–40.
- Rahman, F., Ramadhan, A. B., Kurniawan, A., & Puspitaningrum, D. A. (2023). Pengaruh Latihan Plyometric terhadap Peningkatan Vertical Jump pada Pemain Basket. *Jurnal Kesehatan Vokasional*, 8(1), 28. <https://doi.org/10.22146/jkesvo.75286>
- Ramadhan, M. G., & Badruzaman, ., (2016). Pengembangan Instrumen Pengukur Kecepatan Renang Gaya Bebas 50 Meter Berbasis Microcontroller Arduino Uno. *Jurnal Terapan Ilmu Keolahragaan*, 1(2), 1. <https://doi.org/10.17509/jtikor.v1i2.2646>
- S, L. F. N., Siregar, N. M., & Lubis, J. (2024). *Kinestetik : Jurnal Ilmiah Pendidikan Jasmani The Effect of SAQ Training (Speed , Agility , and Quickness) and Balance on Yeop Chagi Taekwondo Kicking Skills*. 8(3), 536–548.
- Selpamira, & R. (2022). Analisis Kecemasan Pada Atlet Dalam Olahraga Renang. *Jurnal Kesehatan Olahraga*, 10(03), 31–40.
- Siswa, B., Mengikuti, D., & Lari, P. (n.d.). 1 , 2 , 3. 211, 381–390.
- Sudirjo, E., & Sudrazat, A. (2024). *Bagaimana Intervensi Gaya Hidup Aktif melalui Aktifitas Fisik pada Anak ? Sebuah Tinjauan Sistematis*. 10(1), 109–123.
- Sudirjo, E., Susilawati, D., Lengkana, A. S., Alif, M. N., Indonesia, U. P., Tubuh, K., & Dasar, S. (2019). *MENTORING AND TRAINING OF BODY BALANCE ON PRIMARY*. 18(1), 93–101.
- Sukabumi, U. M., Syamsudin, J. R., No, S. H., & Sukabumi, K. (2023). *No Title*. 15–22.
- Swimming, F. S., Mandalawati, T. K., Lisdiantoro, G., Prasetyo, Y. B., & Bildhonny, F. (2025). *Kinestetik : Jurnal Ilmiah Pendidikan Jasmani*. 9(1), 1–9.
- Taktis, M. P. (2011). *MENINGKATKAN*

- GERAK DASAR DRIBBLING DALAM PEMBELAJARAN SEPAK BOLA MELALUI PENDEKATAN TAKTIS (Penelitian Tindakan Kelas Pada Siswa Kelas V SDN Cimanggung IV Kabupaten Sumedang) Opa Amaruloh (Email: 411–420.*
- Utamayasa, I. G. D. (2020). Efek Latihan Multiple Box Jump Terhadap Peningkatan Power Otot Tungkai. *Jurnal Pendidikan Kesehatan Rekreasi*, 6(1), 1–8.
- Wicaksono, T., Setia, W., Putri, K., Bojonegoro, K., Nahdlatul, U., & Sunan, U. (2020). *Pengaruh Latihan Burpee dan Box Jump terhadap Daya Ledak Otot Tungkai dan Kecepatan Renang 50 Meter Gaya Bebas*. 5(2), 39–47.
- Yudha Prawira, A., Prabowo, E., & Febrianto, F. (2021). Model Pembelajaran Olahraga Renang Anak Usia Dini: Literature Review. *Jurnal Educatio FKIP UNMA*, 7(2), 300–308.
<https://doi.org/10.31949/educatio.v7i2.995>