



The Effect of Training using Hand Paddles on the Speed of Freestyle Swimming in Beginners at the USC Club

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Abstract

This study aims to determine the effect of hand paddle training on freestyle swimming speed for beginners at the USC Club. This research is a quasi-experimental research, in this experimental research, the sample used was 20 people who were novice athletes in the USC club. The instrument used in this study was the 25 meter freestyle swimming test. Based on the results of research and discussion, it concludes that the effect of using a hand paddle on the speed of freestyle swimming for beginners in the club states that the final test with tcount 3.905 from the results of the t test, the test results tcount > ttable with a significant level = 0.05 with a value of ttable 1.734 means that there is a significant effect between training using hand paddles on the speed of freestyle swimming in beginner athletes at the USC club.



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INTRODUCTION

The term sport is found in Javanese, namely olahrogo. Olah means training oneself to become a skilled person, while rogo means body. So sport is a form of individual and community education that prioritizes physical movements carried out consciously and systematically towards a higher quality. What is meant by sport is all physical activities that are based on the spirit of exhausting oneself and others, which are carried out in a chivalrous manner so that sport is a means of improving the quality and expression of a nobler life with fellow humans. Sport has an important role in life, through sport it provides many benefits of having a good personality, high enthusiasm, discipline, honesty, physical and spiritual health and a strong mentality which will form a classy athlete (Saputra & Sutisyana, 2017). The main function of exercise is to keep the body healthy and ensure that the body's organs are still healthy. Exercise is important, because in a strong body there is a healthy soul. People's opinions certainly differ, but in general, sport, which is physical activity, is important to do in everyday life. In the beginning, sport was done only to fill free time, so sport was done with joy and relaxation. Sports are carried out informally in terms of the place of implementation, rules and time of activity.

Sports activities carried out by the community are not just an outlet for their hobby, but there are many functions that can be obtained from these sports activities, such as building character, improving physical and spiritual fitness and social relations between sports players, some even focus on becoming an athlete. Ideally, by realizing that sport is a necessity that can be an achievement especially for the younger generation, namely children and teenagers. There are

many sports that children and teenagers can pursue, one of which is swimming.

Through sport, you will get various expressions that are closely related to pleasant personal impressions as well as various expressions that are active, creative, innovative, skilled, have physical fitness, healthy living habits and have knowledge and understanding of human movement. According to (Novero et al., 2022) physical fitness is an ability that focuses on physiological functions, namely the ability of the heart, blood vessels, lungs and muscles to function at optimal efficiency. According to Najah (2019), swimming is a sport that is ideally popular with the public, because this sport is included in one of the student sports week categories at regional and national levels. By holding swimming competitions for students, achievements in non-academic fields are good and much sought after. Ideally, the Bengkulu City USC club has high motivation in swimming and continues to train to become a swimming athlete. The results of the research show that the hand paddle aid used during swimming training as a training aid can improve swimming performance. Because the use of this equipment can change physiological parameters and swimming kinematics. Hand paddle aids can hold between the fingers when making swimming strokes. The use of this equipment is used to help improve performance so that strokes are more efficient.

Sports achievements are basically the accumulative result of various aspects that support the achievement of these achievements, of course there are many areas that are influencing factors that create sports achievements themselves. Without training athletes will not be able to achieve the expected achievements. Training is an activity carried out systematically and repeatedly at a specified time to achieve certain goals.

Training is a conscious effort carried out continuously and systematically to improve the body's functional abilities in accordance with the performance demands of that sport. Exercise is carried out consciously to carry out physical activities with the aim of systematically improving performance which is carried out throughout the year with appropriate methods and clear targets.

Swimming is an activity that requires complex movements (Putri et al., 2021). To be able to swim well requires the ability to coordinate hand and leg movements as well as breathing in harmony. The physical condition component in swimming is very important in supporting swimming performance, especially freestyle swimming. Several components of physical condition are very supportive and need to be considered to carry out good movements, namely speed, strength, endurance and movement coordination.

Swimming is an individual sport that takes place in water or a swimming pool with international standard dimensions, namely 50 meters long and 25 meters wide and an average depth of 3 meters. According to Heru (2018) swimming is one of the sports that has the potential to win the most medals in a multi-event. To get maximum performance, several aspects are needed, namely technique, tactics, mental and physical. One part of improving the quality of human life is the development and development of sports, where the quality of sports is directed towards the physical and spiritual health of the community, and is aimed at forming character and personality, discipline and high sportsmanship. Apart from that, sporting achievements can arouse a high sense of nationality, so that sport has a vital role in forming the character of a nation. Swimming is a sport that can realize several of these goals, because swimming is not only intended for recreation or health

but also for achievements that raise the dignity of a nation. In swimming competitions, speed is the component that is assessed.

Hand paddles is one of various tools to increase arm strength. Use of hand paddles can increase and decrease stroke length. In addition, there was an increase in the duration of the push phase when hand paddles were used. This suggests that the use of hand paddles not only provides increased strength and aerobic performance, but can also have an effect on swimming kinematics. Hand paddles tend to increase stroke speed and length. One of the mistakes that many young/beginner swimmers make is opening or not keeping the fingers between the fingers open when performing the stroke technique in swimming. Meanwhile, coaches admit that they sometimes have difficulty in educating young/beginner swimmers to keep their fingers together while swimming. The density of the fingers can affect the thrust. Speed is the ability to carry out similar movements in succession in the shortest possible time, or the ability to cover a distance in the shortest time. Swimming speed itself is influenced by various factors, one of which is the process of using assistive devices during the training process. Speed in swimming is an achievement in swimming that can be developed optimally because essentially every human being has a competitive nature and competes to always excel.

The role of swimming clubs is very important in developing talent and in looking for seeds that have the potential to be developed to achieve maximum performance so that it can be said that clubs are a place for professional sportsmen. There are several swimming clubs in Bengkulu Province, one of which is the USC swimming club which was founded in 2017. The athletes in the USC club consist of several categories including beginners, pre-athletes and athletes. Based

on observations made by researchers, the group of pre-athletes and athletes at the USC club each already had personal swimming equipment, including equipment for training speed. Apart from that, the pre-athlete and athlete groups are already familiar with the existing training program, so they are already trained to train speed. Apart from allowing athletes to practice independently, pre-athlete and athlete group trainers pay close attention to their athletes' bad habits, by reminding their athletes to always maintain their sleep patterns. So, for the pre-athlete and athlete classes, speed training has been maximized, while the problem is that speed training which includes hand strokes has not been maximized for beginner athletes.

There are many mistakes that novice athletes often make, one of which is errors in hand stroke technique, for example when the fingers are not yet together. One of the factors that influences less than optimal hand stroke training is age. Most of the beginner classes are young children, therefore the trainer announces that the children are still not serious enough when practicing because the children still like to play around. The beginner group also does not have facilities that support arm stroke training, plus the children still have not managed their sleep patterns, therefore, more attention is needed from the trainer for the beginner class to control the athletes' bad habits. Based on the above background, researchers are interested in raising the research title "The Effect of Training Using Hand Paddles on Freestyle Swimming Speed in Beginner Athletes at the USC Club" to improve the quality of novice athletes at the USC Club. Researchers hope that this research can run smoothly and successfully, so that researchers can solve the problems in this title.

METHODS

This type of research is quantitative, with the research method used being the experimental method. The design used in this research was "The one group Pretest Posttest Design" or without a control group (Sukardi, 2015). The collection technique in this research uses tests. According to Nopiyanto & Pujianto (2021) a test is a series of questions or exercises as well as other tools used to measure skills. The instrument in this research is 25 meter freestyle swimming.

The data analysis technique in this research is that after the data has been collected, the next step is to analyze the data. Descriptive Analysis is used to describe the research results of each variable. Descriptive analysis can help describe the results of research data so that they are easier to understand. To analyze this data, researchers used a paired samples test, namely by comparing the results of the pretest and posttest. Before testing the hypothesis, first look for normality and homogeneity of the data. To get a decision to accept or reject the hypothesis at a significance level of 5%.

RESULT

After conducting a freestyle swimming speed test on novice athletes, data was obtained. The data obtained in this research is data that is the result of tests and measurements carried out in the swimming pool, namely training using hand paddles on freestyle swimming speed in beginner athletes at the USC club.

Table 1. Normality Test

Group	L_{hitung}	Etc	L_{tabel}	Criteria
Pretest	0.0887	20	0.192	Normal
Posttest	0.0639			Normal

The results of the Normality distribution test for the freestyle swimming time variable for the initial and final tests resulted in a normal distribution ($L_{count} = 0.0887$) for the initial time test, and a normal distribution ($L_{count} = 0.0639$) for the final time test. The table above shows that the results of the data normality test have a L_{count} score that is smaller than L_{table} with $n = 20$, while L_{table} at the significance level $\alpha = 0.05$ is 0.192.

Table 2. Homogeneity Test Calculation Results

Group	Dk(n-1)	Fcount	Ftable	Criteria
Experiment	19	1,101	4.18	Homogeneous

From the calculation above, the F_{count} value is 1.101, while the F_{table} value (attached) is at a significance level of 5% with $dk = (b), (n-1) = (20-1) = 19$, where 1 is the numerator and 19 is the denominator. 4.38 . $F_{count} < F_{table}$, namely $1.101 < 4.18$, this means that there is no difference in the variance of each variable or the variance value is homogeneous.

Table 3. T-Test Calculation Results

Group	Etc (n-1)	Qcount	Qtable	Criteria
Experiment	19	3,905	1,734	There is Influence

The results of the t test on physical fitness show that physical fitness has a significant influence with t_{count} for time speed $> t_{table}$, namely $3.905 > 1.734$, so the data is in the H_0 rejection area. The t_{table} is in the H_0 rejection area, so H_a can be accepted.

DISCUSSION

(Harsono, 2016) Speed has several factors, namely: heredity, reaction time, ability to overcome external resistance,

technique, concentration, enthusiasm and muscle elasticity. Apart from increasing swimming speed, this hand paddle can also increase explosive power.

Speed in swimming is very necessary because the quicker you reach the finish the more you become a champion. So in this case the researchers conducted research using a tool, namely a hand paddle, to determine the effect of swimming speed on athletes when given training using a tool using a hand paddle during training. This hand paddle is used for athletes to place on the palms of their hands to complete the training program (Kurniawan & Sifaq, 2018). Hand paddle is a disc made of plastic that is used on the palms of swimming athletes. This tool will be attached to the back of the hand using a rope that has high elasticity (Yohanes & Marsudi, 2021). This tool is highly recommended for good and stable strokes. This tool can help beginner athletes in the process of learning to swim. When using this hand paddle, athletes who have low arm muscle strength are suitable for certain ages and have different goals. Based on research that has been carried out, it shows that the speed of 20 people in freestyle swimming, in the initial measurement, the longest time was 24 seconds and the fastest time was 17 seconds, while the average time achieved was 20.25 seconds. The final measurement of the longest time was 22 seconds and the fastest time was 14 seconds, while the average time achieved was 16.7 seconds. Based on the results of research that has been carried out, the average value of freestyle swimming time achieved before treatment and after treatment has increased. This means that the treatment given by researchers can be said to be successful and freestyle swimming training using hand paddles had a good effect, the intensity increased over the 16 meetings. So that the speed of time becomes faster, the circuit also has the

effect of training muscle strength, endurance, agility and balance.

From the results of measuring the time in the freestyle swimming treatment using a hand paddle, it can be seen how much the athlete's time changes. And based on the results of hypothesis testing that had been carried out previously, it was stated that H_0 was rejected and H_a was accepted so that there was an influence of training using hand paddles on freestyle swimming speed in novice athletes at the USC club. It can be concluded that the more often you do this exercise, the faster your time will be. According to Kusumawati, (2017) said that "training is a process or stated in other words, a period of time that lasts for several years, until the athlete or compulsory sport reaches a high standard of performance.

The preparation of a training program has a big influence on the process and results of the training. When the training process is carried out with a good program and is correct, you will get results from the training. The characteristics of training according to (Mylsidayu & Kurniawan, 2015): A process of achieving a better level of ability to exercise, which requires a certain amount of time and precise and careful planning. The training process must be regular and progressive, meaning that it is carried out steadily, progressively and continuously (continuously), training material is given from easy to difficult, from simple to more difficult (complex) and from light to heavy. Every face-to-face meeting/training session must have goals and objectives. Training material must contain theoretical and practical material so that understanding and mastery of skills becomes relatively permanent. Using a certain method, namely the most effective method which is planned in stages taking into account the factors of

difficulty, complexity of movement, and emphasis on training targets.

Based on the results obtained, it can be concluded that the hand paddle aid can help increase freestyle swimming speed in beginner athletes at the USC club, apart from that it can help with knowledge about what the hand paddle aid is and its use in relation to freestyle swimming speed. In swimming, speed is needed to become a winner, therefore swimming aids are needed so that swimming speed can be increased. This speed can also be increased by using practice. The results in this study are in line with the opinion of (Kurniawan & Sifaq, 2018) that the hand paddle can be able to improve arm muscle strength.

CONCLUSION

Based on the research results obtained by data analysis and hypothesis testing, it can be concluded that there is a significant influence of hand paddle aids on freestyle swimming speed in beginner athletes at the USC Club. Based on the influence of using hand paddles, there is an influence on freestyle swimming speed on novice athletes at the USC Club with the calculated T test effect of 3.905. Based on the results of research that has been carried out, the average value of freestyle swimming time achieved, the average value of the initial measurement is 20.25 seconds. Meanwhile, the average final measurement value was 16.7 seconds. It can be concluded that hand paddle aids can help increase freestyle swimming speed in novice athletes at the USC club.

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