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THE EFFECT OF SWIMMING LEARNING METHODS ON PHYSICAL CONDITION IN CHILDREN

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Abstract

Swimming requires buoyancy. Swimming skills depend on a child's passion of sports. Aquatic sports can boost kids' self-esteem and adaptability. This study examines how different swimming education methods affect 8-year-olds' physical health. Experimental methods are used in this work. All 30 youngsters in the study are 8 years old. This study uses complete sampling, which includes the entire population. Data was collected using the 6-minute walk test, balancing test, thrust test, standing broad jump test, grip strength test, muscle strength test, speed test, and flexibility test. The study findings' assumptions are met by an audit test with a 5% significance level. To meet analytical requirements, the normality, difference, and percentage of improvement tests are performed. This study found a statistically significant association between swimming instructional methods and 8-year-olds' physical fitness. This study examines the utilization of the swimming learning method as a means for knowledge acquisition among 8-year-old children, leading to improved physical fitness outcomes with heightened efficacy.

Keywords: Method, Learning, Swimming, Physical Condition

Yüzme öğrenme yöntemlerinin çocuklarda fiziksel kondisyona etkisi

Öz

Yüzmek kaldırma kuvveti gerektirir. Yüzme becerileri çocuğun spor tutkusuna bağlıdır. Su sporları çocukların özgüvenini ve uyum yeteneğini artırabilir. Bu çalışma, farklı yüzme eğitimi yöntemlerinin 8 yaşındaki çocukların fiziksel sağlığını nasıl etkilediğini incelemektedir. Bu çalışmada deneysel yöntemler kullanılmıştır. Çalışmaya katılan 30 gencin tamamı 8 yaşındadır. Bu çalışmada evrenin tamamını içeren tam örnekleme yöntemi kullanılmıştır. Veriler 6 dakika yürüme testi, denge testi, itme testi, ayakta geniş atlama testi, kavrama gücü testi, kas gücü testi, hız testi ve esneklik testi kullanılarak toplanmıştır. Çalışma bulgularının varsayımları %5 anlamlılık düzeyinde bir denetim testi ile karşılanmıştır. Analitik gereklilikleri karşılamak için normallik, fark ve gelişim yüzdesi testleri yapılmıştır. Bu çalışma, yüzme öğretim yöntemleri ile 8 yaşındaki çocukların fiziksel uygunlukları arasında istatistiksel olarak anlamlı bir ilişki bulmuştur. Yüzme öğrenme yöntemi grubunun nihai test sonuçları, 161.3268'in %5 anlamlılık düzeyinde 2.045'i aştığını göstermektedir.

Anahtar Kelimeler: Yöntem, Öğrenme, Yüzme, Fiziksel Kondisyon

INTRODUCTION

Sport is a fundamental component of an individual's recreational activities, providing an avenue for engaging in competitive endeavors. Moreover, it is a sustainable element of societal culture, within the confines of its evolution (Sociology of Sport, 2018). Swimming is a sporting development that is being implemented as part of an endeavor to enhance the overall well-being of individuals within a community, with a particular focus on their physical and spiritual health. Swimming is an activity in which individuals engage in buoyancy on the surface of water (Quagliarotti et al., 2021). The swimming industry has encountered challenges in terms of innovation and the evolution of training methodologies. The swimming technique employed in this study is the Halliwick method. Swimming programs encompass the utilization of the Halliwick approach and swimming workouts commonly employed in individuals with normal health conditions (Burhaein et al., 2023; Rezki et al., 2022). Swimming necessitates certain physiological conditions, hence necessitating more refined physical development. According to (Burhaein et al., 2023) the essential components of physical prerequisites for swimming encompass muscle strength, flexibility, agility, balance, coordination, and cardiovascular fitness.

According to (Nováková & Čechovská, 2019), the investigation into the domain of swimming revealed that the essential physical prerequisites for engaging in this activity encompass muscle strength, flexibility, agility, balance, coordination, and cardiovascular fitness. In the present investigation, the investigators employed various components of physical fitness, namely cardiorespiratory endurance, balance, agility, power, strength, speed, and flexibility (Adegoju et al., 2021). The success orientation of children can be attributed to their capacity to outperform their opponents, but those who prioritize skill mastery are driven by the happiness derived from engaging in athletic activities (Hussain et al., 2022).

The utilization of water activities in sports programs for children can contribute to the enhancement of self-concept and the promotion of adaptive behavior in children. Aquatic activities have been found to have a positive impact on children, particularly in terms of their social development. These activities provide a safe and secure environment for children to interact with others, fostering feelings of safety and confidence in the water. It is worth noting that older individuals also highlight the social benefits of engaging in aquatic activities (Bobrishchev et al., 2022). The attainment of human quality, with a focus on enhancing both physical and spiritual well-being, necessitates a substantial investment of time and a protracted developmental trajectory. It is not feasible to expedite or fabricate this process within a brief timeframe. Consequently, the cultivation of human quality commences throughout the formative years, particularly in childhood.

The functional capacities of children, particularly in the domain of gross motor skills, can be observed from an early stage of development (Pitetti et al., 2017). Large children refer to those who fall within the age range of 6 to 10 years. The developmental trajectory of motor and cognitive skills has a parallel pattern, characterized by an accelerated growth phase occurring between the ages of 5 and 10 years (Musculus et al., 2021). In the age range of 6 to 12 years, children exhibit notable advancements in physical development, particularly in the realm of bio motor components.

These components encompass various aspects such as strength, flexibility, endurance, power, and other bio motor abilities. This study employs a sample of participants consisting of youngsters at the age of 8 years. The objective of this study is to investigate the impact of different swimming instructional approaches on the physical fitness of individuals, particularly focusing on the behavior and skill development of 8-year-old children who are exposed to swimming pools.

RESEARCH METHOD

The research design employed in this study is a Pretest-Posttest Design. The research design is formulated based on the available data, and the use of statistical tests is necessary to ascertain the presence of significant changes between the pretest and posttest measurements, specifically in terms of improvement, which serves as the dependent variable (Little et al., 2020). The user's text lacks academic language and structure. It needs to be rewritten to adhere to the variable R represents a random value.

The pre-test refers to the initial physical condition test. The swimming learning method is a form of treatment. The post-test refers to the last physical condition test. The participants in this study consist of male individuals who are 8 years old and are currently enrolled in primary school. Written agreement was obtained from the parents of the children as well as the elementary school, granting permission for their children's participation in this study.

The physical condition tests outlined by (Hussain et al., 2022) were conducted to assess the physical measurements of children. First, the 6-minute walking test is a commonly used assessment tool in clinical and research settings to evaluate an individual's functional capacity and endurance. The objective of this examination is to ascertain the value of VO2peak. Second, the balance test is a method used to assess an individual's ability to maintain equilibrium and stability. Third, the measurement of balance is conducted by assessing an individual's ability to maintain equilibrium while standing on both their left and right foot, with both eyes open and closed. Fourth, the thrust test was conducted. The objective of this assessment is to ascertain the level of lower limb strength and power. Fifth, the grip strength test is a method used to assess an individual's muscular strength and endurance in the hand and forearm muscles. The instrument

employed for the purpose is a hand dynamometer, which is utilized to quantify grip strength. Sixth, the assessment of muscular strength involves the measurement of shoulder flexibility, specifically for the right and left shoulders, as well as knee extension for both the right and left knees.

The purpose of this experiment is to measure and analyze the speed of a certain process or system. In order to assess the level of flexibility in the sit and reach exercise, two tests were employed: the lateral flexion test, which measures the flexibility of the body in both right and left directions, and the hyperextension test, which evaluates the extent to which the body can be extended beyond its normal range of motion. The Halliwick method is employed for the implementation of swimming instructional techniques. The swimming skills learning methodology was developed by James McMill, an instructor at the school attended by Halliwick's daughter in Southgate, London.

The search results provide insights into the principles of swimming, including buoyancy, balance, and body position. Buoyancy is a foundational principle that enables a swimmer to float in the water, even when not moving. It is influenced by factors such as body composition, fat composition, and lung capacity. Balance and body position are essential for efficient swimming, requiring total control of the head, torso, and limbs, and maintaining length by keeping the body and limbs long to facilitate efficient movement in the water. Additionally, the importance of breath control and the development of swimming skills in children are highlighted, emphasizing the need for proper training techniques and exercises to enhance swimming abilities.

The learning methodology employed in this context is founded upon the scientific concepts of hydrodynamics and body mechanics. According to (Lal & Kishore, 2020), it was determined that this particular instructional approach is suitable for individuals of all age groups, including those with disabilities, as well as those who are in a state of optimal health. According to (Nováková & Čechovská, 2019), the swimming learning approach was determined to be suitable for individuals of all ages, including those with disabilities, as well as those who are in good physical condition.

The swimming instructional approach consists of four distinct phases, which are as follows: (1) acclimation to the aquatic environment, (2) rotational movements, (3) mastery of movement control in water, and (4) fluid locomotion in water. The swimming training program spanned duration of 8 weeks, with sessions occurring three times a week and lasting for 60 minutes each. Data was collected prior to and following an 8-week training period.

RESULT AND DISCUSSION

Result

After participating in an 8-week swimming instructional program, significant enhancements were seen in many domains of physical fitness, encompassing cardiorespiratory endurance, balance, agility, power, strength, speed, and flexibility. Numerous studies have provided evidence indicating that children exhibit a notable inclination towards water subsequent to the adoption of swimming teaching methodologies. Swimming lessons not only teach important water safety skills but also provide children with physical and developmental benefits. Swimming is a low-impact exercise that can help improve cardiovascular health, strength, and endurance. It can also help children develop coordination, balance, confidence, and social skills (Linnerud, 2023). After the introduction of the swimming instructional method, a notable rise in the occurrence of stereotyped movements was found in a group of 8-year-old children. These movements included turning, swinging, and delayed echolalia.

Some popular methods for teaching infant swimming include the "roll and float" method, which teaches babies how to get on their backs and float if they feel threatened or scared. This method is popularized by Infant Swim Resource and focuses on multiple swimming skills, general fitness, learning safety, and bonding with parents (Mom, 2012). However, it is essential to note that each child learns at their own pace, and the teaching methods should be tailored to their individual needs and abilities.

Based on the information provided in the source pertaining to data processing, The results of the hypothesis testing reveal a statistically significant disparity between the pre and post-tests in the swimming learning method group ($t = 161.3268$, $p < 0.05$), above the critical value of 2.045. This discovery suggests a significant discrepancy in the test results at the beginning and conclusion of the swimming learning intervention for the group. A significant gap can be observed among various groups employing distinct swimming learning methods, hence prompting the need to calculate the extent of the disparity in the percentage of physical fitness improvement within each swimming learning technique group.

The swimming teaching program demonstrates a significant increase of 35.564% in physical fitness levels. This study examines the utilization of the swimming learning method as a means for knowledge acquisition among 8-year-old children, leading to improved physical fitness outcomes with heightened efficacy. The primary factor influencing the enhancement of physical fitness is the element that assumes a prominent role. The utilization of a proficient swimming teaching methodology has the potential to promote improved physical fitness results. Based on the results of the difference test analysis, it can be deduced that the main findings of

this study suggest a notable impact of the swimming learning method on the improvement of physical fitness.

Discussion

The impact of a swimming instructional program on various domains of physical fitness, including cardiorespiratory endurance, balance, agility, power, strength, speed, and flexibility. The program was found to be effective in improving these aspects of physical fitness in children. Additionally, the paragraph highlights the significance of swimming lessons in teaching water safety skills and providing children with physical and developmental benefits. However, it also mentions that some children may exhibit stereotyped movements after participating in the program.

The paragraph also discusses the "roll and float" method, which is a popular method for teaching infant swimming. This method focuses on multiple swimming skills, general fitness, learning safety, and bonding with parents. The paragraph emphasizes that each child learns at their own pace, and teaching methods should be tailored to their individual needs and abilities.

The paragraph concludes by discussing the results of a hypothesis testing that revealed a statistically significant disparity between pre and post-test results in the swimming learning method group. This suggests a significant improvement in physical fitness levels among the group. The study also examines the utilization of the swimming learning method as a means for knowledge acquisition among 8-year-old children, leading to improved physical fitness outcomes with heightened efficacy. The primary factor influencing the enhancement of physical fitness is the element that assumes a prominent role. The utilization of a proficient swimming teaching methodology has the potential to promote improved physical fitness results.

CONCLUSION

The findings of the present investigation suggest that there is a statistically significant relationship between different swimming instructional approaches and the physical fitness of 8-year-old children. Based on these findings, the following recommendations are proposed for educators, instructors, and mentors. To enhance the physical well-being of 8-year-old children, it is essential to incorporate regular exercise into swimming instruction as a means of fostering socialization. Educators, trainers, and coaches should initiate the process by identifying suitable strategies to enhance the physical condition of 8-year-old children. Given the objective of enhancing the physical condition of 8-year-old children, it is imperative to identify a physical learning strategy that may optimize learning efficiency.

Educators, instructors, and mentors specializing in physical fitness instruction may employ swimming instructional techniques tailored for children who are 8 years old. Future

researchers seeking to replicate this work may consider employing a larger sample size and extending the duration of data collection. The search results provide various insights into the importance of buoyancy, balance, and body position in swimming, as well as the significance of regular exercise and proper training techniques for children. It is essential to incorporate these principles into swimming instruction to enhance the physical fitness and well-being of children.

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