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Physical assessment in selecting young talents in swimming

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Abstract:

The article investigates the significance of assessing physical development in selecting young swimming talents, particularly in Algeria, aged 11-13. It underscores the importance of merging sports with sciences, particularly in swimming, to enhance training methods and identify swimmers with high physical performance. The research addresses the role of physical evaluation in talent selection and explores related hypotheses.

Two previous studies are referenced, emphasizing the need for standardized assessments over anecdotal observations in selecting athletes. The study outlines research procedures, emphasizing physical and morphological measurements conducted on a sample of 74 swimmers across nine teams.

Findings indicate that morphological indicators and physical assessments, including tests for strength, endurance, flexibility, and speed, are crucial in selecting talented swimmers. The study concludes that a scientific approach to talent selection, considering both physical and morphological aspects, is essential for coaches to identify and train potential champion swimmers effectively.

Recommendations include enhancing coaches' knowledge, streamlining selection processes, and fostering collaboration among sporting bodies to ensure systematic and scientific talent selection.

Keywords: Swimming; Talent selection; Morphological indicators; Young swimmers.

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1. INTRODUCTION

In recent years, the sports field has witnessed great development across its various specializations, and specialists attribute this development to the connection of this field with various other sciences.

The sport of swimming comes to keep pace with technological development and uses its sciences to find effective methods and methods in the field of training that are appropriate to the time and place to reach the swimmer to the highest levels of physical performance. The importance of the topic lies in the fact that it will highlight the real picture that must be relied upon during the process of selecting swimmers, which is the evaluation of the physical aspect, which is clearly one of the most important foundations and pillars that the coach must rely on in the selection process to be able to control the various intervening variables related to the process, which enables him to choose swimmers with physical abilities appropriate for the activity practiced, Given the importance of this topic, we decided to conduct this research based on the following problem:

• Does assessing physical development have a role in selecting young swimming talents?

2. Questions Partial:

• For physical tests and for measurements Does anthropometrics have a sufficient role in selecting young talents in swimming?

• Is physical development considered a complementary indicator to the process of selecting juniors?

3. Hypothesis:

The success of the process of selecting emerging swimmers is based mainly on the initial assessment of basic physical characteristics as well as morphological indicators.

a. Partial hypotheses:

• For physical tests and measurements Anthropometry plays a sufficient role in selecting young talents in swimming.

• Physical development is considered a complementary indicator to the process of selecting juniors.

4. Research aims:

Through this research, the researcher aims to:

• Highlighting the importance of basic physical characteristics and morphological indicators in the process of selecting young swimming talents.

• Learn about physical tests and their role in the process of selecting young

talents.

• Evaluating and following up the emerging swimmer in terms of growth and development of physical qualities.

5. Importance of the topic:

The importance of the topic, which is listed under the title: Assessing physical development to select young talents in swimming in Algeria, 11-13 years old, lies in giving a scientific study on the initial principles of evaluation of the physical characteristics that a coach must adhere to to make a sound selection to reach high levels, based on local talent.

6. Defining concepts and explaining terms:

a. Sports selection:

It is selecting the best elements that have certain characteristics and determinants, whether inherited or acquired, to join the practice of a particular sport, while predicting the extent to which the training process will impact the capabilities and preparations of these individuals in the future. The elements in a way that enables him to reach the best high levels of sports.

b. Evaluation:

Operational definition: It is a diagnostic process The physical and skill capability of players, based on standards or levels that give the correct estimate of these capabilities.

c. Physical abilities:

- "Kamal Abdel Hamid" and "Mohamed Sobhi Hassanein" believe that what is meant by ability is: "the current level, whether of physical fitness or skill, and determining ability may be one of the factors determining goals and objectives" 3

d. Swimming:

- Swimming one Species Sports Watercolor And it is considered Basis the first for her and without Master it, He can't exercise any activity in the field Watery.

7. Previous studies similar to the research:

a. The first study:

- study Researcher: Mazari Light. 2012/2013. study introduction To get a certificate Ph.D

- Title Search: Suggestion battery Tests To straighten Capacity Skill And physical during practical selection Swimmers

Juniors For the stage Age 12-13 years

- problem Search: Is it? maybe suggestion battery Tests Skillful and Physical To use it in practical selection Swimmers Juniors

- Goal search:

- knowledge fact Selection The athlete in Clubs the Algerian.

- Giving the rules the theory and methodology for process Selection The athlete for class Juniors

-Hypotheses _ search:

- Hypothesis General: Maybe suggest battery Tests to straighten Capacity skills and physical to use in practical selection Swimmers Juniors

- Hypotheses Partial:

- there loss in the application battery for the exams to pick Swimmers Juniors on level Clubs Swimming.

- He works all from qualification Scientific For the coach and possibilities club, and he intervened Officials The club in practical Selection on disability use the battery the exams from party Trainers To straighten Capacity Skill And physical during practical selection Swimmers Juniors.

- The most important results reached: The researcher reached the reasons that prevented the implementation of the test battery by the trainers and found that most of them attributed them to the lack of modern capabilities and methods, which led many of them to become accustomed to random and spontaneous work and to rely on the principle of personal experience, and in the end the researcher called To adopt a method of using a battery of tests to evaluate the abilities of emerging swimmers during the selection process because of its scientific and standardized results.

b. The Second study:

- Study by researcher: Ben C. Kaddour Habib - (2008) - A study submitted for obtaining a doctorate degree

- Research title: Determining standard levels for selecting junior students (12-13) years old in the quadrilateral competition in athletics.

- Research problem: Does setting standard levels contribute to selecting youngsters (12-13) years old to practice the quadruple as a combined event in athletics?

- Determining the proposed standard levels helps to select emerging students (12-13 years) in combined competitions (four courses).

- Research Methodology: The researcher used the descriptive survey method.

- The research sample: It included junior students (12-13 years old) in the quad competition in athletics.

- Research tools:

In this regard, the researcher used means to collect information such as field visits, and personal interviews with some experts and specialists to control and determine the validity of the tools used, as well as look into the reality of selection among young people, through a questionnaire directed to physical education and sports teachers and another directed to athletics coaches.

8. Search procedures:

a. Approach:

b. The researcher used the experimental method to suit the nature of the research.

c. Research community and sample:

• **Special sample with the questionnaire:** We have tried to select a sample for this study that is more representative of the original community. This is what enables it to obtain results that can be generalized, even in a relative way, and then come up with results that are consistent with the truth and give a realistic picture of the field studied. Good selection of the sample makes the results generalizable to the community given that the study population is small in size. We selected the sample in a purposive manner (purposive sample), which included 10 trainers (a comprehensive inventory) who are active at the national level, where they train the age group (11-13) years, some of whom are national trainers and some of whom were previously national trainers.

• Sample for physical tests and morphological measurements: Through the statistical community, we selected 9 teams out of the total number of active teams at the national level, which are:

Table N (01): shows the sample for physical tests and morphological measurements:

code	Sample team	Number of Players
COS	Olympic Club of Setaifi	09
CHS	Al Hadab Club Setif.	11
CASUC	University of Setif	06
USMA	Union of Algeria	08
NRDI	Dali Ibrahim Club	05
SNA	Nautik Al-Abyar Coast	05
RAET	Bahia Oran	10
WAT	Widad Tlemcen	10
ASPTT	Post and transportation of Algeria	10
the total		74

9. areas:

a. Human domain:

The questionnaire sample included 10 trainers They are active at the national level, and included physical tests and morphological measurements on nine teams from different parts of the country. The study included 74 swimmers in the age group (11-13 years).

b. domain:

The questionnaire was distributed to coaches in April 2021.

We also repeated the same tests and measurements on the same sample in 2021.

c. Spatial domain:

The field study was conducted, At the level of the Algerian swimming clubs, the junior category, was moved to various swimming pools and the headquarters of some clubs located in the aforementioned states: Algiers, Setif, Oran, and Tlemcen.

10. the exams are Physical And measurements are Morphological:

a. the exams Physical:

the goal of which measurement Ways physical (such as strength, speed, Endurance ... etc.), To stand on the level the condition Physical For individuals and get to know on Their abilities Physical.

b. For measurements Morphological:

c. the goal of which measurement Dimensions body Swimmer (as mass muscular, height, the weight, Mass Bones ... etc.

d. means Statistics Used:

• The ratio Centenary

• Your test 2
• analysis variance Innova Anova

Table N (02) showing both physical tests and morphological measurements for the three age groups:

NUMBER	PURPOSE TESTS AND MEASUREMENTS	INDICATION
1	Know the difference in weight/height between swimmers aged 11-13 years Measure weight/height	There is no statistical significance
2	Know the difference in body mass index between swimmers Measuring body mass index	There is no statistical significance
3	Know the difference in muscle mass index between swimmers Measuring muscle mass index	There is no statistical significance
4	Know the difference in bone mass index between swimmers Measurement of bone mass index	There are significant differences
Analyze and compare the results of the physical development of swimmers during the first stage		
5	Know the difference in vertical jump index between swimmers Measuring the vertical jump index	There is no statistical significance
6	Know the difference in ability index between swimmers Measure the power index	There are no significant differences
7	Know the difference in speed index between swimmers Measure the speed index	There are no significant differences
8	Know the difference in flexibility index between swimmers Measuring the plasticity index	There are significant differences
9	Knowing the difference in sustainment index between swimmers Measuring the sustainability index	There are significant differences
10	Know the difference in the 15-meter indicator in water between swimmers Measurement indicator 15 meters in water	There are significant differences
morphological parameters		
11	Know the difference in height index between swimmers Measure length index	There are significant differences
12	Know the difference in body mass index between swimmers Measuring body mass index	There are no significant differences
13	weight/height index between swimmers Weight/height index measurement	There are no significant differences
14	Know the difference in muscle mass index between swimmers Measuring muscle mass index	There are no significant differences
15	Know the difference in bone mass index between swimmers Measurement of bone mass index	There are no significant differences
16	Know the difference in bone mass index between swimmers Vertical jump comparison	There are no significant differences
17	Know the difference in ability between swimmers Measurement test Ability	There are no significant differences
18	Know the difference in Strength among swimmers Force measurement test	There are no significant differences
19	Know the difference in Speed among swimmers Measurement test the speed	Know the difference in Speed among swimmers
20	Know the difference in flexibility between swimmers Measurement test Flexibility	There are significant differences
21	Know the difference in Speed among swimmers Speed test 15 metres	There are no significant differences

11. General conclusion:

Light of what The results of this study were reached, and through theoretical data and field study we were able to uncover the reality that goes through the process of selecting players in the sport of swimming, for this reason, we concluded that the process of evaluating the physical and skill abilities of players during the selection process through the process of morphological measurements and initial physical tests is considered a work A scientific method that requires the coach to have scientific and professional competence to be able to apply it, as tests are considered the ideal method that helps the coach to know the true capabilities of the players who will be selected.

From another perspective, we concluded that the process of selecting swimmers is built on random foundations that have nothing to do with scientific foundations, and this is what makes the fate of the swimmer vulnerable to certain marginalization. Also, coaches who rely on competitions and observations while conducting the selection process will face problems later, as the majority of them find it difficult to The method of training these swimmers, and the amount of training doses that must be given to them since they do not have the necessary and accurate data on the true abilities and potentials of each swimmer. This training process is a waste of time and a waste of effort and money, and the success rate in it is small because they supervise swimmers who are not expected. a lot.

What can also be concluded from the above is that evaluating physical development has a role no less important than morphological tests and measurements as well, and is considered a complementary indicator to the selection process to demonstrate scientific objectivity, and to avoid conducting interviews and observation to avoid randomness, the results of which are often based on chance and surprises, as it should These coaches must build their work on a scientific basis and focus on the swimmer's future, which is one of the priorities of a competent coach so that they can have champion swimmers who climb the podiums in sports events.

Finally, it can be said that the process of selecting budding swimmers is based primarily on assessing the physical level as well as the morphological indicator, and this is what proves the validity of our general hypothesis, which is that the success of the selection process of budding swimmers is mainly based on the initial assessment of the basal physical characteristics as well as the morphological indicators.

12. Suggestions and future hypotheses:

The best effect that a researcher can leave after conducting his research topic is to leave the field open and suggest some points that contribute to the service of scientific research and support it. This is what we will do now, that is, provide some future suggestions and hypotheses that give the research scientific value, as well as open the way for the continuation of research in it. The two researchers submit suggestions. The following future assumptions:

- The need to increase the cognitive capabilities of coaches in the field of selecting swimmers scientifically, and this is through participation in scientific forums and lectures under the supervision of experts and specialized frameworks.

- Programming a plan for the selection process in terms of methodological steps and methods of using measurements and tests to control this process in terms of time and quality by those responsible for this sport.

- Encouraging and motivating all coaches and officials to pay attention to the selection process to form teams ready to compete.

- Coordination between the heads of the teams, associations, and federations to determine the nature of the trainers' work, follow up on them, and watch over them so that their work has a systematic and scientific nature, and thus avoids chaotic and random work.

- The necessity of improving the level of coaches and providing them with modern tests and measurements, and everything new regarding the process of selecting swimmers.

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