Ciencia y Actividad Física
Vol. 7, No. 2, Mes julio-diciembre, 2020
Pág. 95-106

Tipo de artículo: Artículo original
Recibido: 13/06/2020
Aceptado: 28/11/2020

Prueba para el control de agilidad en escolares primarios

Test for agility control in primary schoolchildren

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Resumen

El trabajo aborda la aplicación de una prueba para el control de la capacidad física agilidad en los alumnos de tercer grado de la escuela primaria "David Díaz Guadarrama" en Santo Domingo. Plantea como problema científico: ¿Cómo controlar la capacidad física agilidad en las clases de Educación Física, en los alumnos de tercer grado de la escuela primaria "David Díaz Guadarrama" en Santo Domingo? Se traza como objetivo: Diseñar una prueba específica para el control de la capacidad física agilidad de estos alumnos y como sistema de objetivo: caracterizar el estado actual del control de la capacidad física agilidad y valorar a través de criterios de especialistas la viabilidad de la prueba específica para el control de la capacidad física agilidad en los alumnos. Se utilizan métodos como observación, entrevista, análisis de documentos y criterio de especialistas. Concluye planteando que el estado actual del control de la capacidad física agilidad se caracteriza por la carencia de una prueba específica que mida adecuadamente esta capacidad en las clases de Educación Física. La prueba elaborada para el control de la capacidad física agilidad en los alumnos de tercer grado en la escuela primaria, mide la calidad del desarrollo para la cual es diseñada y es considerada viable a partir de los criterios ofrecidos por los especialistas.

Palabras clave: agilidad, capacidad física, Educación Física¸ evaluación, prueba

Abstract

The work addresses the application of a test to control the physical agility capacity in third grade students from the primary school "David Díaz Guadarrama" in Santo Domingo. It poses as a scientific problem: How to control the physical agility capacity in Physical Education classes in third grade students of the primary school "David Díaz Guadarrama" in Santo Domingo? The objective is: To design a specific test for the control of the physical agility capacity of these students and as an objective system: to characterize the current state of the control of the physical agility capacity and assess through specialist criteria the viability of the specific test for the control of

physical agility capacity in students. Methods such as observation, interview, document analysis and specialist criteria are used. It concludes by stating that the current state of control of physical agility capacity is characterized by the lack of a specific test that adequately measures this ability in Physical Education classes. The test developed to control physical agility ability in third grade students in primary school, measures the quality of development for which it is designed and is considered viable based on the criteria offered by specialists.

Keywords: *agility, physical ability, Physical Education¸ evaluation, test*

Introduction

Physical Education constitutes a pedagogical process aimed at the development of the individual's physical performance capacities on the basis of the morphological and functional improvement of the organism, the formation and improvement of motor skills, the acquisition of knowledge and the development of their moral qualities and volitives, (Ruiz, 2016). In the first cycle of primary education, given the psychomotor characteristics of the ages of the boys and girls who pass through it, the objectives of Physical Education are directed to the development of basic motor skills and the coordination field.

Studies related to physical ability agility have been directed primarily to sport, with little study of this physical ability in school Physical Education. There are limitations in controlling it in Physical Education classes, although it appears as an objective of work in third grade, there is no way to evaluate it.

Various agility tests have been presented in the literature, depending on the sport and context. The authors Sánchez, JM Velázquez, M. Sánchez, D. Rabasa, O. (2007); González, (2017), propose activities for the work of agility in the Physical Education class, Espada Jiménez and Calerero (2012), elaborate an instrument for the control of agility, but not the evaluation scale. The results of most of the investigations are directed to the sport.

Griego, O and Jiménez, CG (2017), expose a study carried out with school athletes from the School of Sports Initiation (EIDE) of Villa Clara, where from considering some aspects for the validation of tests, the result obtained is a design of a test for the control of the physical agility capacity coordinative in the special preparation of the Beach Volleyball of the school category. Those that

refer to Physical Education propose instruments for the development of this capacity, but not a scale for its evaluation.

Agility is a complex coordinative physical ability; it has been classically defined as the ability to change direction quickly, with speed and precision, while maintaining control of the whole body. This is characterized by being executed with actions that contain activities with change of direction, rhythm and movements. It has great importance in the achievement of a correct motor response, it represents a model of coordinated movements, that is, they are organized, and the parts of the body that take part in the execution of an action move in the appropriate point, at the opportune moment and in the correct sequence.

The search for alternatives that allow the control of physical agility capacity is one of the priorities of this research, which is why it is considered as a problem situation: limitations in the control of the physical agility capacity in third grade students of primary school "David Díaz Guadarrama" in Santo Domingo.

This allows us to understand that, within the complexity in the problematic situation, the physical agility capacity in the area that needs to be studied are distinguished and to achieve in it, the necessary application of a proposed solution to be introduced in practice, defining itself as a scientific problem : How to control physical agility capacity in Physical Education classes in third grade students of the primary school "David Díaz Guadarrama" in Santo Domingo?

The research has the general objective: To design a specific test for the control of physical agility capacity in third grade students at the "David Díaz Guadarrama" primary school in Santo Domingo.

The importance of the work lies in the fact that an evaluation scale is developed that allows the Physical Education teacher to constantly control the performance of the physical agility capacity of the students, aimed at verifying and assessing the achievement of the objectives prescribed in the study plan and the program, regardless of the diagnostic studies that can be carried out to verify compliance with the objectives.

Materials and methods

It works with several populations

Population 1: Made up of 20 third-grade group A students from the David Díaz Guadarrama school in the municipality of Santo Domingo, Villa Clara province, of them 10 boys and 10 girls; a second population made up of the 3 Physical Education teachers from the school itself. And a third population composed of 5 specialists who were used to assess the proposal, which have special characteristics, such as: having worked in the field of Physical Education for more than 5 years, having a Bachellor Degree in Physical Culture or a Bachellor Degree in Education in the specialty of Physical Education and have experience in the work of Physical Education in primary education.

Methods and techniques

In this research, the theoretical methods fulfilled a very important function, because they made possible the conceptual interpretation of the empirical data established, explaining the essential relationships and quality of the unobserved process, and also allowed the elaboration of the theoretical referential framework.

Empirical methods.

Structured open observation: it was used by means of the data protocol during the collection of the information, relative to the work time of the exercises proposed for the development of agility and form of control of it.

The document review allowed obtaining the necessary information from different sources, which guide what has happened in terms of the profile of the investigation, what happens and how it could be projected in the future, in official documents such as the Physical Education Programs to analyze the tests that are projected in that guiding document regarding the control of physical capacities.

The interview to the teachers made it possible to know the way in which they plan and develop the control of physical agility capacity.

Measurement made it possible to obtain numerical information, to ensure unity and accuracy, about the result of the measurements made at different moments of the investigation. That is, it is the attribution of numerical values to the executions of the skill.

The specialist criterion was used from the diagnosis phase and throughout the investigation to know the specialists' assessment of the test and the entire process of construction of the test, until its final evaluation.

The descriptive statistics technique it was used to perform the statistical processing of the information obtained from the different measurements that were made.

Results and Discussion

With the analysis of documents from the review of the programs and methodological guidelines of Physical Education for the third grade of primary education, it was observed that physical agility capacity appears as a work objective of the degree, but it is not explained how to assess the development of it. In consultations made to the diploma work "Specific test for the control of agility in universal players of School Beach Volleyball in special preparation" by Martínez Pentón (2017) an instrument is proposed to evaluate agility, but for the sport of Volleyball of beach, this research provides an evaluation method for this physical ability that was taken into account in the research.

As a result of the interview to the Physical Education teachers, 100% dominate the concept of agility and what characteristics the work of this capacity has. In the question regarding the type of tests used to measure agility capacity, they answered that they fundamentally use agility games that are in the degree program and activities where the student makes changes of place, zigzag races and with changes of direction. The question related to how they control agility, 100% refers they work on it, but they do not control it as a frequent evaluation.

In relation to the criteria they have to determine the performance evaluation, 100% state that they do not know these elements. When asking the necessary considerations in a test for agility control,they states that it must comply with the characteristics of suddenly changing direction without sudden changes and speed, with an explosive start. 100% of the teachers interviewed stated that in the

methodological and program guidelines there are no indications on how to evaluate agility capacity, only guide how to work it, so they do not have criteria for its evaluation.

In the 5 observations made to Physical Education classes where agility is a function of the objective, it was observed that this ability is worked systematically and responds to the needs of the students, but in none of them any evaluations or control are applied.

When reviewing the postulates of Zatsiorski (1989) and the methodology proposed by Morales (1996) for the presentation of tests, it is verified that this methodology is characterized by offering extensive information on its content and is broken down into 13 aspects: Name of the test, definition of what is to be measured, objective, theoretical foundation of the test, methodology, task or slogan, standardization conditions, means and instruments, ways of qualifying, researchers, protocol, information processing and standard. Some of these aspects were used that were considered more important and that provide the essence of what is intended to be achieved.

Procedure for the elaboration of the instrument

The procedure for the construction and description of a test is not unique. Different authors are known who have dealt with the subject, such as: Meinel (1977) and Valdés (1987).

Morales (1995) in his doctoral thesis designs a methodology for the preparation of tests that synthesizes the elements to be considered, proposing the following steps:

1. Analysis of the activity, according to the parameter to be measured.
2. Definition of the particularity to be measured.
3. Selection of exercises.
4. Theoretical foundation of the exercises that are proposed.
5. Standardization of exercises.
6. Piloting the tests.
7. Selection of tests for validation.

This methodology was taken as the basis for the development of the research. In order to achieve standardization, permanent conditions were established for all students who would be subjected to

the application of the test. This was established when the test methodology and instruments were developed. On the other hand, the piloting allowed to corroborate, in practice, what constituted the theoretical model and facilitated the development of the test.

In order for the test development process to conclude satisfactorily, the presentation structure of Morales (1995) was specified and assumed in this research. After an analysis and taking into consideration that there is the antecedent of the tests prepared for Beach Volleyball players by Martínez Pentón (2017), the contribution of this research is assumed in the elaboration of the values to establish the evaluation scale, the The elaborated test was defined with the following presentation structure.

Name of the test: Displacement test.

Definition: reflects the development of agility achieved by students

Objective: to check the development achieved in the agility coordination capacity by third grade students of the David Díaz Guadarrama School.

Foundation: To achieve a greater development of basic motor skills in close relationship with conditional, coordinative and flexibility physical capacities, emphasizing the coordination of movements, applying the different rhythms and combining them with each other during the execution of physical activities. A specific test is carried out to evaluate the development achieved by the student.

Methodology for the development of the test

Description of the agility test: the Illinois test (variant) is started by following the following steps: it starts sitting on the left side of the field, with the feet crossed next to the starting cone-marker with the hands placed to the side of the body. When the assistant indicates it and activates the stopwatch, the student must get up as quickly as possible, and go all the way to the first cone located in front at a distance of 5 meters, skirt this and run diagonally towards the cone located next to it. from the exit cone, separated by 3 meters from it, it moves in a zig-zag pattern between the 4 cones placed at a distance of one meter, borders the last one and returns in the same way. It runs diagonally to the cone

on the right, skirts it and returns in a straight line to the finish line. Once the finishing cone-marker has been passed, the assistant will stop the watch and record the athlete's total time to cover the entire course. The Illinois test proposes this route, starting from the plank position, with a greater distance (60 meters), when adapting the test the maximum limit of the route of 30 meters is taken into account, which is the established distance for this level of teaching.

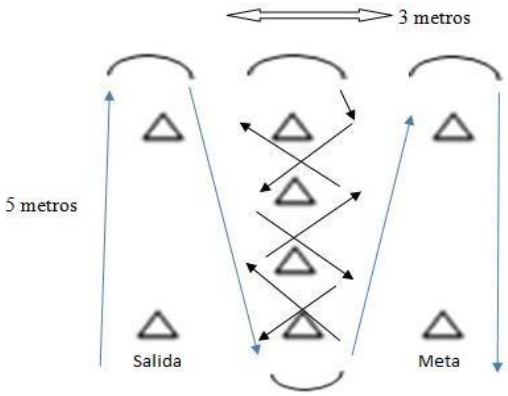

Figure 1 Walk test

Orientations:

- The test is performed after warming up.
- Must reach the cones and go around them
- Never do the exercise after having done another physical activity.
- The exercise is executed three times (different days), the best time will be taken, this way allows the student to strive for a better result each time he executes the test.

Means and instruments: Stopwatch, whistle and cones to place as a mark.

Qualification form: Seconds.

Researchers: Timekeeper and Registrer.

Information processing: During the three attempts, the time in which the exercise was performed is recorded. Then he takes the best of times he could achieve.

For the determination of the distances covered by the students in the test, the grade objective for the work of the speed is kept in mind, which is 30 meters. The test has characteristics that identify it and support its conception. These characteristics are as follows:

- It is structured taking into consideration the characteristics of the third grade student.
- The main activities that a student from this grade develops are combined to establish the exercise to be developed.

Results and Discussion

Measurement results

From here the measurements were developed to the students to establish the evaluation scale. Established everything concerning the conformation of the test is applied to 10 females and 10 males of third degree. Measurements are made in January at the beginning of the second period of primary education.

Table # 1 Average values

	Males	**Females**
First measurement	14,46 seconds	15, 69 seconds
Second measurement	14,42 seconds	15,52 seconds
Third measurement	14,36 seconds	15,48 seconds
Average value	14,30 seconds	15,27 seconds

Evaluation criteria: To form the evaluation criteria as a result of all the measurements carried out, the group mean by sex is taken and the standard deviation is determined. The standard deviation is subtracted from the mean and all the results that are at this value or below are considered Very Good (VG), those that are between this value and the mean are valued as Good (G), the results that are above the mean and the sum of the standard deviation are evaluated as Regular (R) and those obtained above these are classified as Bad (B).

Table # 2 Reference values

Evaluation Criteria	**Females**	**Males**
VG	14,55 or less	13,20 or less
G	14,56 – 15,27	13,20 - 14,30
R	15,28 – 15,99	14,31 – 15,40
B	16,00 or more	15,41 or more

Evaluation of the proposal

The work of the third stage of the investigation was characterized by the determination of the quality criteria and the evaluation of the work carried out. For a test to be scientifically endorsed, must meet requirements that certify its authenticity (Morales, 1996). After having established the evaluation scale, it is proceeded to check some aspects related to the reliability of the prepared test, considering that the certainty of the information obtained is essential for the teacher's work.

The veracity of the tests is corroborated according to quality criteria such as validity and reliability (Zatsiorski, 1989). In the research, a validation with that magnitude was not carried out, but it was facilitated that in the development of it, some actions aimed at that purpose could be carried out. That is why only aspects related to the reliability criterion are evaluated: stability and concordance. The reliability of the test is corroborated according to criteria from the research "Reliability of tests that measure coordinative abilities in acyclic sports" (Cardona 2018).

Then it is submitted to the criteria of specialists, the 5 selected considered that the quality and utility parameter of the proposed test has a good organization related to the exercise that is carried out, the capacity that it measures and the characteristics that identify it. In another order of analysis, they specified that the test is pertinent and declare that it is of great importance for the work in Physical Education classes, since it improves the way of evaluating agility performance in correspondence with the characteristics of each group. On the other hand, they argued the advantages offered by the test for working with the individual differences of the students in the development of the classes.

Conclusions

1. The initial state of control of physical agility capacity in the third grade of the David Díaz Guadarrama elementary school in Santo Domingo, is characterized by the lack of a specific test that adequately measures this ability.
2. The design of the test developed to control agility in third grade students at the "David Día Guadarrama" elementary school in Santo Domingo, measures the quality of development for which it is designed.
3. The special agility test can be considered viable based on the criteria offered by the specialists and the quality criteria determined in it, which speak in favor of its quality and practical utility.

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