

Characterization of competitive activity in the shot put

Caracterización de la actividad competitiva en la impulsión de la bala

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ABSTRACT

The research is developed with trainers of the shot put with the objective of characterizing the competitive activity in this modality. For this purpose, theoretical methods such as synthetic analysis and empirical methods such as non-participant observation and document analysis were used. The main results are the characterization of the activity attending to eleven indicators that are associated in three groups of parameters which will allow a better physical preparation in this sport.

Keywords: Shot put; Competitive activity; Physical preparation; Athletics

RESUMEN

La investigación se desarrolla con entrenadores de la impulsión de la bala con el objetivo de caracterizar la actividad competitiva en esta modalidad. Para ello se utilizaron métodos teóricos como el analítico sintético y métodos empíricos como la observación no participante y el análisis de documentos. Se obtienen como resultados principales la caracterización de la actividad atendiendo a once indicadores que se asocian en tres grupos de parámetros lo que permitirá una mejor preparación física en este deporte.

Palabras clave: Impulsión de la bala; Actividad competitiva; Preparación física; Atletismo

INTRODUCTION

The dynamics of contemporary sport pose challenges that demand the presence of

science to find appropriate solutions. In the case of the shot put, this becomes more valid because, in our country, there is only one representative who from 2000 to 2017 obtained satisfactory historical results at the highest level.

Athletics, king sport and generally the basis of many sports because of the variety of elements that feed on it, has the richest antiquity of all the sports that exist. This was born, was forged and became popular in man since he had to acquire a series of skills such as walking, running, jumping, throwing, which later, through the years, contribute to the formation of this sport and its international competition. Athletics is broken down for participation in five major areas such as speed, mid-bottom and bottom, pitches, multiple tests and jumps. For its training, the launch area has (disc throwing, javelin throwing, hammer throwing and shot put. In Cuba there have been excellent results since the 80's and the specialty under analysis had athletes like Velay Laza, María Elena Sarriá, Hilda Ramírez, Gracia Hamilton, Herminia Fernández and Yumileidi Cumbá. Larovere (2015).

This discipline represented Cuba worldwide since its inception, demonstrating that women who have driven the bullet have always been in the first in the world mainly from the year 80 to the present day with multiple Olympic, World, Pan American and Central American athletes.

Cuba currently only has one athlete whose results correspond to those demanded at an international level where the characteristics of the sports activity have varied both in the modes of participation and in the regulations that arise. Together with this, although there is no increase in the levels of national and international records, it is unquestionable that there is a substantial modification of the methods and procedures that underpin the training process.

METHODS

To address the object under investigation, theoretical and empirical methods were selected, based on a theoretical research proposal, predominantly qualitative. (Álvarez, 2010)

The study unit was selected in an intentional non-probabilistic manner and was made up of the 4 trainers of the National Shot Put Team of the ESFA High Performance Athletes Training School "Giraldo Córdova Cardín" in the period

between 2000 and 2017 These coaches had an average age of 48 years, 23 years of experience as coaches, of them an average of 12 years as coaches.

A documentary review was carried out that included the training plans corresponding to the macrocycles 2002, 2006, 2008, 2011, 2014 and 2015, as well as the Comprehensive Athlete Preparation Program. In addition, non-participant observation was used to characterize the competitive activity.

RESULTS AND DISCUSSION

The dimensions that make up the universe and at the same time contain the essential invariants capable of characterizing the competition, are given by:

- The parameters associated with the regulations of each competitive year.
- Those that describe the actions with which individuals carry out the exercise.
- Those that define the effect that such actions produce on the participating subjects.

Next, the dimensions that are related during the execution of the competitive exercise are explained (Copello, 2007).

Regulation of the competitive exercise. Of course, that aspects not directly related to success such as the costumes, the functions of the officers and others, are not part of this study, but those that they condition the behavior of the competitor and on which the modeling of the training process depends.

Actions to apply. The most important thing in any sports discipline regarding the techniques or actions that are executed, is in the consideration of the committed body segments and the functions they perform, as well as in the classification of those actions from the necessary points of view.

Those who define the effect of these actions on the participating subjects. To design the preparation tasks according to the demands of the competition, it is necessary to have a reference that allows objectively quantify the nature of the efforts and the right moment for their application.

Finally, in a second abstraction, it is possible to determine those aspects that would objectively verify the components of the competition that were selected and that in this section are called indicators.

The following indicators are derived from the aforementioned dimensions:

Actual and total duration. The total duration is that which is previously determined by the regulation, but the actual duration is that which refers to the time that the activity objectively lasts, considering the pause times between the components.

Regulatory time in sports there is a rule that establishes a minimum regulatory time. Consideration of this statutory minimum time helps determine the maximum rest time between one activity and another during training for competition preparation.

Number of presentations to be among the first. The types of organizational charts that are applied in competitive sports events are very varied, especially taking into account the objectives of the competitions where they take place, understand preparatory, official or training events. This data allows us to approach an adequate idea about the overall volume of the competition.

Approximate duration of the competition. The duration of the competition is very varied but, in any case, it is a reference of particular importance not only for the selection of the content, but also for the programming of the process.

Spatial and temporal limitations. It refers to the size of the area where you compete.

Criteria of effectiveness of the actions. It refers to the way in which the action taken is valid, not only from the point of view of the regulation but, also for its purpose, this indicator is one of the most important, since it identifies the character and purpose of the sports.

Classification of the shares. Most of the volume of actions carried out is classified as varied acyclic, but they can also be simple, combined or poly-structured. This consideration of the external nature of the movements makes it possible to select both the means for the levels of development of the coordination and its levels of complexity.

Functional structure of the actions. The consideration of this aspect, allows to assess which are the most involved body parts in the activity, it is the foundation of the selection of the most specific means for training, which allows to infer its importance for the individualization of the preparation.

Type of predominant stimulus. As the competitor's actions are known, he constantly travels through perception, analysis and motor response. In that arc reflection perception is the first phase and the quality of it determines, to a large extent, the effectiveness of the action. Therefore, to the extent that the process of specialization of perceptions is best conducted, the competitor's behavior in the competition must be superior.

Density of the charges presented by the competitive year. Most of the sports that participate in the Olympic program and others that do not participate, are obliged by their regulations to develop a great frequency of actions. This data is invaluable for projecting physical training training.

Character of the efforts. It is clear that from a simple observation it is not possible to determine the energy cost of the action taken. However, their approximate duration and the intensity with which they are executed helps to infer whether it is a speed-force, speed or actual event.

maximum strength, which gives the coach an idea of the type of effort to which the adaptation should be oriented.

RESULTS OF THE CHARACTERIZATION OF THE COMPETITIVE ACTIVITY

Being consistent with the indicators that derive from the declared dimensions, the parameters associated with the regulation of the competitive activity will be seen first:

As for "the real and total duration of the presentations", it is generally observed that the total duration of the bullets is approximately 1hour ½ depending on the number of competitors called, but the time to make the Drive is 1 minute.

Regarding the "regulatory time between presentations", it is only possible to affirm that it is a fact that is subject to what the venue of the competition has.

Another important indicator for the characterization of the competitive exercise is "the number of presentations to be among the first". In that sense the shot put is organized for a total of six presentations per athlete, but the definition of the place does not depend on the number of presentations because from the first drive the mark obtained can define the place.

When considering the “approximate duration of the competition” it is appreciated that the total competition time for this sport is approximately 1hour 1/2 hours, while the “spatial and temporal limitations” are characterized by being carried out in a roofed area or not roofed in clipping track that measures 2.13 meters in circumference and also has a stop.

Another indicator is the "Criteria for the effectiveness of actions" which for this sport due to the performance of the competitors is tactical. (Aurelio, 2016)

When the characterization of the competitive exercise is carried out based on “the indicators that describe the actions with which the individuals carry out the exercise”, it should be taken into account that their classification is cyclical

Taking into account the "Functional structure of the actions" that are carried out, such as the modes of relationship between the functions of the body segments, it is possible to appreciate that they perform anteversions, retroversions and bending in regimes the same static as in movements. When obtaining the information from a structured observation such as the one that was applied, it is perceived that the actions, however simple they may seem, are composed of subsystems of movements that are organized temporarily, a result that is coincident with the statement by Donskoi and Zatziorski in their Biomechanical work of the exercise.

Finally, the characterization of the competitive activity is based on the indicators that define the effect that the actions produce on the participating subjects and in that order the “Type of predominant stimuli” is taken into account first, which are as variable as the visual, somatosensory stimuli linked to the perception of the level of fatigue to manage the resources available.

Regarding the “Density of the loads represented by the competitive exercise”, there are concentrated and sustained efforts as there are no pause moments during the test.

Finally, regarding the “Character of the efforts” which is the indicator that allows to infer the capacities that support the execution of the exercise, it is observed that the efforts are explosive, conditioned by the strategy conceived or by the lack of pause that characterizes it They can range between moderate and submaximal.

CONCLUSIONS

The characterization of the competitive activity is carried out according to the indicators proposed that will allow not only to take into account the aspects related to the regulation but also those specific to the specific activity carried out by the athlete.

BIBLIOGRAPHIC REFERENCES

- Álvarez, C. (2010). Metodología de la Investigación Científica (Sexta Edición). Grupo Editorial Kipus, Bolivia Depósito Legal, 2-1-932-04.
- Aurelio, N. (2016). Sistema de entrenamiento para la dirección del desarrollo de la fuerza especial en corredores de obstáculos de alto rendimiento. Tesis presentada en opción al grado científico de Doctor en Ciencias de la Cultura Física. Camagüey, Cuba.
- Bernal, M. (2012). La Planificación: Conceptos Básicos, Principios, Componentes, Características y Desarrollo del Proceso. Los Teques.
- Copello, M. (2007). Metodología del entrenamiento deportivo desde la perspectiva de los deportes de combate. La Habana, Cuba.
- Larovere, P. (2015). Actualización en cargas de entrenamiento en atletismo. Foco en fondistas y mediofondistas. Recuperado el 3 de Julio de 2015.