

***Methodological strategy for arm strength resistance in the Physical Preparation
subject
Estrategia metodológica para la resistencia de la fuerza de brazos en la asignatura
Preparación Física***

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ABSTRACT

The objective of this article is to propose methodological activities with teachers, aimed at increasing their preparation, in order to make the most of the potential offered by the contents in the subject of physical preparation, to enhance resistance to spleen strength, through of a continuous and permanent process. For the development of the research, research methods and techniques were used such as analysis-synthesis, historical-logical, observation, interview, survey and percentage calculation that allowed corroborating the insufficiencies that gave rise to the problem under study as well as for the preparation of the exercises necessary for its solution.

RESUMEN

En el presente artículo se proponen actividades metodológicas con los docentes para elevar su preparación, en función de aprovechar al máximo las potencialidades que brindan los contenidos en la asignatura de preparación física, para potenciar la resistencia a la fuerza de brazos, a través de un proceso continuo y permanente. Para el desarrollo de la investigación se utilizaron métodos y técnicas de investigación tales como análisis-síntesis, histórico-lógico, observación, entrevista, la encuesta y el cálculo porcentual que permitieron corroborar las insuficiencias que dieron origen al problema objeto de estudio, así como para la elaboración de los ejercicios necesarios para su solución.

Keywords

Resistance to force; Arm strength; Activities; Students; Cycling.

Palabras clave

Resistencia a la fuerza; Fuerza de brazos; Actividades; Estudiantes; Ciclismo.

INTRODUCTION

Our institutions, starting from young people with certain qualities and inclination for the military profession, train bachelors in science and literature with high political, moral and disciplinary values, with the conviction of training as FAR officers, making this possible by developing in them high levels in physical and mental abilities.

From this perspective, it is essential that, from the pedagogical context, methodological activities are developed with teachers, aimed at increasing their preparation, in order to make the most of the potential offered by the contents in physical preparation, to enhance strength capacity, through of a continuous and permanent process.

Physical preparation is a component part of the training process that consists of developing the functional potential of the practitioner and his physical qualities to the highest possible levels.

Comply with the demands of the training loads that are applied, to develop physical capabilities, paying special attention to the conditional ones (speed, resistance and strength), the latter being the fundamental one, also taking into account the different combinations of these, enabling the level of development necessary to complete the evaluations.

Strength, as a most important capacity, requires more hours and presents several parameters for its development. Traction on fixed bars is one of the most important due to its complex implementation. “Strength, defined as a physical capacity, is associated with muscle contraction and energy expenditure”

Hegedüs, (1998), can also be described as “the ability to overcome external resistance or react against it through muscular tension” (Cervera, 1996). Strength can be understood as the necessary budget for the execution of a movement, therefore being a conditional capacity from the point of view of Physical Activity and Sports Sciences.

Knuttgen and Kraemer (1987) They define it more specifically as the tension capacity that each muscle group can generate at a specific speed of execution against resistance. The generation of force is, therefore, one of the essential characteristics of muscular exercise, and any expression of physical performance can be reduced, in biomechanical terms, to the union of force and movement. Following Faigenbaum et al., (2009), resistance training or strength training refers to the use of physical conditioning methods that progressively use a wide range of weights or resistance loads in different ways, designed to improve the health, physical condition, and sports performance.

The terms resistance training, strength training, and weight training are often used synonymously. In other words, this can be understood as the neuromuscular physical capacity with which an individual

is able to overcome a resistance (that is, a weight or a load) whether it is in an external or internal environment, through a muscular contraction. which is called effort.

METHODS

The population was represented by all 5 professors of the department, the head of the Chair, and an enrollment of 150 eleventh grade students. The sample for the initial diagnostic study was distributed as follows: 5 professors of the specialty, the head of the department and was stratified in the case of students, with the entirety of each group being selected.

During its development, a bibliographic review was carried out in which the main background and trends in the historical evolution that characterize the development of physical preparation were determined, as well as the exercises and objectives that are evaluated in this type of center according to the Physical Preparation study program (2018).

Several class sessions were observed to determine the Inadequacies that students present in compliance with the standards in traction on the parallel bars and that gave rise to the problem of this research. Then, the students were surveyed to find out their mastery in relation to the technical aspects of traction on the fixed bars, as well as their opinion on the elements that hinder their learning and mastery of this exercise.

The coaches were also interviewed to find out how they conduct the Learning and development of traction on the fixed bars during classes, as well as corroborating the need to develop a tool that helps improve repetitions in this exercise in the students under study. After quantifying and interpreting the results obtained with the application of the methods and techniques used during the research, the proposal of a methodological strategy for the resistance of arm strength in the subject of physical preparation was prepared.

RESULTS

Taking into account the results obtained from the diagnosis, a methodological strategy is proposed for the resistance of arm strength in the physical preparation subject of the "Camilo Cienfuegos" military school in Guantánamo.

Strategic planning: the First stage: is aimed at reflection, training and awareness of teachers.

Objective: to be met (short term)

Train the department's teachers about the existing problematic situation and how to implement the actions and actions offered in the methodological strategy in order to transform reality.

Actions to develop at this stage:

Theoretical and practical workshop on the conception of the methodological strategy and conditions for its application (analysis of the problematic situation).

Reflection and awareness workshops.

Phase 1. Determination of the objectives of the methodological strategy for the development of strength in adolescents from 15 to 18 years old.

The function of this phase is to reveal the purposes to be achieved with the development and application of the methodological strategy for the development of arm strength in adolescents through the physical preparation class, so the development of the Objective is determined as actions. general and specific objectives, which are detailed below.

General objective: improve the process of developing physical capacity and strength in students of the “Camilo Cienfuegos” Military School.

Specific objectives: improve the preparation of physical preparation teachers on conditional abilities, methodological systems, classification of physical abilities, methods for strength work, dosage of work with arm strength and control of the external components of the burden.

2. Develop professional pedagogical skills for the planning and organization of the Physical preparation class and in particular in working with physical strength capacity.

3. Develop the arm strength of the students of the “Camilo Cienfuegos” Military School with correct use of methods, procedures and forms of organization.

Phase 2. Design of training and preparation activities for teachers. The following workshops and talks were held:

Training workshop 1.

Workshop 1. Physical abilities in the classroom. Physical Preparation Classification and fundamental characteristics of its development.

Participants: Physical Preparation Teachers

Objective: Improve knowledge about conditional and coordinative physical abilities in the Physical Preparation class.

Content: Definitions of conditional and coordinative physical capabilities.

Factors that condition the development of physical abilities in the Physical Preparation class. Prepared by: Medina (2021)

Training workshop 2.

Location: Camilo Cienfuegos Military School

Workshop 2: Methodological systems for the development of conditional capabilities in the classroom.

Physical training.

Participants: Physical Preparation Teachers

Objective: Identify the particularities of the different methods for the development of different abilities in the Physical Preparation class.

Content: Types of methods for working with physical abilities in the Physical Preparation class

Prepared by: Medina (2021)

Training workshop 3.

Location: Camilo Cienfuegos Military SchoolTaller

3: Strength. Factors that condition its development. Types of strength and their particularities in the **Physical Preparation class.**

Participants: Physical Preparation Teachers

Objective: Know the functional and pedagogical particularities of the work of the different types of strength in the Physical Preparation class.

Content: Definitions of force. Classification of types of force by the type of action performed and the type of muscle contraction. Prepared by: Medina (2021)

Training workshop 4

Location: Camilo Cienfuegos Military School

Workshop 4: Arm strength. Methods. Procedures and exercises for its development.

Participants: Physical Preparation Teachers

Objective: Demonstrate knowledge and practical skills in working with the physical capacity of arm strength.

Apply the procedures and organizational forms for working with arm strength.

Content Arm strength. Methods, procedures and exercises for their development in the Physical Preparation class.

Prepared by: Medina (2021)

Training workshop 5.

Location: Camilo Cienfuegos Military School

Workshop 5: The components of physical load in the planning, control and evaluation of arm strength in the class.

Participants: Physical Preparation Teachers.

Objective: Apply knowledge and skills to dose and control the components of the physical load during work to develop arm strength. Apply a test to control the physiological state of the students.

Content Dosage of intensity, volume and density during arm strength work. Calculation of the working heart rate during strength work. Prepared by: Medina (2021)

DISCUSSION

The exercises proposed in the research constitute a tool novel for cycling coaches because they provide new avenues for improve pedaling technique in male athletes in the 12-13 category years from the insufficiencies detected in the training sessions visited as well as the review of the Comprehensive Preparation Program Athlete (2017) in which it was found that the proposed exercises did not are sufficient for this purpose.

In the definition offered by Pujota (2018) the importance of the technique is revealed of pedaling in the results that the cyclist can obtain, its cyclical nature, as well as such as the connecting rod as a key element to delimit its phases. It is worth highlighting Furthermore, this author delimits the circumference of pedaling, elements that consideration of the authors play an important role for the correct implementation of this technique.

In the bibliography consulted, distinctive elements of the pedaling technique as well as the phases that compose it, defined by Algarra and Gorrotxategi (2008) which were taken into account for a better conception of the exercises aimed at perfecting this technique in cyclists male category 12-13 years of the sports team “Reparto obrero” in the Guantánamo municipality.

The description made by Ríos (2013) was also considered in relation to the position of the foot on the pedal and of the knees during pedaling that consideration of the authors are among the most important aspects that should be take into account when working on this technique in athletes of the category object of study, because they are in the initiation stage and it is necessary that from that age they achieve a good command of this technique.

After carrying out the investigation, it can be concluded that the exercises developed to improve pedaling technique constitute a possible solution to the insufficiencies presented by male cyclists in the 12-13 year category in the “Reparto Obrero” sports team of the Guantánamo municipality evidenced based on the diagnosis made during the preparation process of these athletes.

BIBLIOGRAPHIC REFERENCES

Algarra, J y Gorrotxategi, A. (2008). *Ciclismo Total*. España: Gymnos.

Pujota, A. (2018). Estudio de la técnica de pedaleo y su incidencia en el rendimiento físico, en los ciclistas de ruta de la categoría pre juvenil de los clubes de ciclismo de la provincia de

pichincha, en el periodo del primer trimestre del 2018 –propuesta alternativa. Trabajo de Grado Previo a la Obtención del Título de Licenciado en la Especialidad de Entrenamiento Deportivo, Ibarra, Ecuador.

Ríos, M. (2013). Análisis, desarrollo y evaluación de un plan de entrenamiento sobre bicicletas estratégicas“E.S.B.E.” Tesis para optar por el grado de Magíster en Educación Corporal, La Plata, Argentina.