

***Exercise system to improve the resistance capacity for strength of the youth chess
players of the EIDE of Guantánamo***
***Sistema de ejercicios para mejorar la capacidad resistencia a la fuerza de los
ajedrecistas juveniles de la EIDE de Guantánamo***

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ABSTRACT

This article responds to needs declared in the national and provincial strategies of the Chess sport; as well as the technological demands regarding the physical preparation of chess players and the deficiencies in compliance with said preparation, which affects the low sporting results currently obtained at all competitive levels. Different methods, procedures and techniques of scientific research were used, including: theoretical level, empirical level and descriptive statistics and inferential statistics were used in the processing of information.

Keywords

Chess; Physical training; Exercise system; Technological demand.

RESUMEN

Este artículo, responde a necesidades declaradas en las estrategias nacional y provincial del deporte Ajedrez; así como, a las demandas tecnológicas en torno a la preparación física de los ajedrecistas y a las deficiencias en el cumplimiento de la preparación de dicha preparación, lo que incide en los bajos resultados deportivos que se obtienen en la actualidad en todos sus niveles competitivos. Se emplearon diferentes métodos, procedimientos y técnicas de investigación científica entre los cuales se encuentran: nivel teórico, nivel empírico y en el procesamiento de la información se utilizó la estadística descriptiva y la estadística inferencial.

Palabras clave

Ajedrez; Preparación física; Sistema de ejercicios; Demandas tecnológicas.

INTRODUCTION

Currently in the world of chess progress is made rapidly in the search for results and Grandmasters at an early age, on an international level the following stand out: Magnus Carlsen, Serguey Karjakin, Teimour Radjabov, among others. Cuba has not been immune to this fact and also has its history in this regard: José Raúl Capablanca, Leinier Domínguez and Lázaro Bruzón among the most prominent. Cuba, since its revolutionary triumph, has dedicated countless resources to enhance and perfect Chess as a mass sport in the national territory; As can be seen, the results do not always meet the expected expectations, which leads to the constant search for new forms of training according to the sporting needs of athletes.

In order to be included in the world elite, Cuban Chess must make adjustments in the preparation process, perfecting the skills and physical abilities of athletes from an early age, who must be constantly influenced and advised by coaches.

In the sense, in Cuba countless resources are dedicated to promoting and perfecting the development of chess; Thus, Castro (2009) in one of his reflections stated we must apply more technical and scientific methods in the development of our athletes, we must revolutionize the preparation methods of our athletes, not only in the ball, but in all sporting disciplines. The quote confirms the importance that has been given to the preparation of chess players by the country's highest leadership.

According to Heredia, D. (2012), among the investigative studies in greatest demand by the Instituto Superior Latinoamericano de Ajedrez (ISLA) and the National Chess Commission (CNA), to enhance the chess training process, are those related to planning the theoretical and practical components.

The aforementioned author asserts that the chess player must undertake rigorous training and mental effort for several hours to master all the information, all possible knowledge and resolve the various problematic situations that occur during a game.

However, the related references regarding physical preparation are insufficient. In this way, within said preparation and especially resistance to force, it becomes a special scenario to pay attention to this fact, since it is about finding ways in which, based on adequate treatment, an effective comprehensive preparation of chess players.

MATERIALS AND METHODS

To carry out this work, 6 chess players from the EIDE of Guantánamo belonging to the youth category were selected as a sample. Using the intentional sampling technique. To carry out this work, theoretical, empirical and mathematical-statistical investigative methods were used, among which the analytical-synthetic, inductive-deductive, systemic-structural-functional, documentary analysis, scientific

observation, survey and measurement stand out. Data processing was carried out with the SSPS statistical program to determine the level of statistical significance of the changes before and after applying the training tasks.

DISCUSSION AND ANALYSIS OF RESULTS

An interview was conducted with high performance chess teachers (10). All of them presented their personal definitions based on their pedagogical-sports experience. The results of the interview are summarized below.

Interview questions:

Question 1 What do you understand by physical preparation?

Of the 10 interviewed, 100% considered that physical preparation is the ability that is aimed at strengthening organs and organ systems to obtain good sports results.

Question 2 At what stage do you consider that physical preparation should be used in training?

Of the 10 interviewees, six (60%) estimated that throughout the preparation process, three (30%) stated that it was in the general repair stage, while only one stated that it depends on the stage.

Question 3 Do you dedicate planned time to physical preparation among the elements of your training macro?

80% of those interviewed do not plan physical preparation as a training direction.

In general sense, there is a poor orientation regarding the work aimed at the development of physical preparation in the school category chess players of the preselection with a view to national events, teachers do not sufficiently master the contents of physical abilities, which is why They fail to effectively apply physical techniques to improve performance during training class. This develops a mechanistic character in chess players where empiricism prevails.

Foundation of the physical exercise system.

The essential objective of the physical exercise system proposed in this research is to improve the performance of chess players in the chess training process, as well as in competition. The intention of this article is for the sports teacher to become the facilitator who helps the chess player build his own knowledge, encouraging him to make correct decisions during the game.

According to Zatsiorski (1989) the set of any elements is called a system that form a single whole. According to what was stated by Bertalanffy (1991), a system is a set whose elements are in interaction. The proposed system of physical exercises has a systemic character, it was built on the basis of the systemic - structural - functional method, which makes it possible to understand the process of physical preparation of high-performance chess players as an integral reality.

It is based on the criteria of Heredia, D. (2012), who states that the physical component of the chess player's preparation enables: the creation of biological adaptations that promote a better supply of oxygen and energy substrates to the brain during the high mental activity they display. high-performance chess players in each game and throughout the competitive cycle; accelerate the recovery of the structures of the Central Nervous System that participate in the intellectual activity of the chess player, therefore it fulfills the function of being a compensatory activity that improves the plasticity of the brain; strengthen the muscular planes that receive greater tension in the prolonged sitting posture adopted by chess players; and from a social point of view it contributes to physical recreation, the promotion of a healthy life, and the formation of a physical culture as part of the integral formation of the personality.

On the other hand, the active involvement of the chess player means that he has a leading role in the process of physical preparation in a conscious manner and with a willingness to make intellectual effort, reflection, problematization and the creative search for knowledge.

Exercise system to improve the physical preparation of youth chess players

MAIN CONTENTS OF PHYSICAL PREPARATION	EXAMPLES	OBJECTIVES
Aerobic Resistance	- Continuous and variable careers. - Pre-sports and sports games (Football, Basketball, Handball, Volleyball). - Aerobic musical gymnastics. - Swimming.	Develop aerobic capacity to ensure a greater supply of oxygen, blood glucose and nutrients to the brain.
Strength Resistance from 12 years of age (back, glutes, quadriceps femoris, posterior thigh muscles)	- Do 3 and 5 sets of 10 to 15 repetitions. - Squats (squats) with weight between 3 and 5 sets of 10 to 15 repetitions. - Flexion and extension of legs with weight (quadriceps femoris) between 3 and 5 sets with 10 or more repetitions. - Fixed bar between 3 and 5 sets with 10 or more repetitions.	Strengthen the muscular planes that receive the greatest amount of tension during the chess player's sitting posture.

	- Deadlifts between 3 and 5 sets with 10 or more repetitions. - Bent-over row with weight between 3 and 5 sets with 10 or more repetitions. -Pulley tractions for back between 3 and 5 sets with 10 or more repetitions.	
Therapeutic exercises for prophylaxis and treatment of postural deformities.	- Exercises for scoliosis, cervical disorders, kyphosis, lordosis, low back pain, etc..	Prevent and treat deformities and postural disorders.

Relationship between the particularities of chess and the content of physical preparation

(Prepared by: Fausto Lorenzo Osorio Curbelo)

Features of chess	Physical preparation content
Total duration of the classic game of 1.5-3 hours Extension of the event of 5-15 days Predominantly intellectual work, an activity where the aerobic energy system prevails, and blood glucose is the main fuel for brain tissue. Endurance	Aerobic resistance.
The main muscle planes involved in the position adopted by high-performance chess players (both in the theoretical-practical and competitive preparation process), for the time they remain in a static position, although there is no shortening or lengthening of the muscle fibers , generates a tension, considered a static isometric contraction.	Force resistance.
The last five minutes of the time controls (they can be two or even three) are played at a very fast pace, where there must be coordination between the actions that must be carried out, with the movement of the piece without knocking over the others, as it loses time. in arranging them as established, marking in some way the number of moves and finally activating the clock, to consider the move complete. Quick chess (game duration between 15 and 60 minutes) and lightning (less than 15 minutes) although They are forms of sport, they are frequently used as means of tiebreakers.	Anaerobic resistance, speed and coordination.

Results of class observation (final)

Eight classes were observed; in which it was possible to verify that:

- Greater motivation and involvement of chess players in physical preparation was achieved.
- In 62.5% of the classes, the activities developed managed to link the theoretical, tactical, and physical contents in preparation. The potential of chess players was also taken advantage of.
- In 100% of the classes, the preparation was conceived with an integrative approach to the components of the preparation.
- In 75.0% (six classes), the proposed physical exercises contributed to the learning of the chess players.

CONCLUSIONS

1. The epistemological study revealed that the physical preparation of the chess players is not in accordance with the needs of the chess players, which limits their competitive performance.
2. The proposed system to improve physical exercises constitutes an effective way to improve physical preparation in high-performance Chess, fundamentally resistance and strength.

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