

## Procedures to plan the force preparation in youth wrestlers

### Procedimientos para planificar la preparación de la fuerza en luchadores juveniles

Jorge Clemente Noriega-Gómez<sup>1</sup>, Luis Alberto González-Duarte<sup>2</sup>, Antonio de la Caridad Lanza-Bravo<sup>3</sup>

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<sup>1</sup>*Lic. Profesor y Metodólogo inspector de Luchas. Dirección Provincial de Deportes. Villa Clara, Cuba. [jnoriega@uclv.cu](mailto:jnoriega@uclv.cu)*

<sup>2</sup>*Dr. C. Profesor Titular. Universidad Central de las Villas, Facultad Cultura Física. Cuba. [lagonzalezd@uclv.cu](mailto:lagonzalezd@uclv.cu)*

<sup>3</sup>*Dr. C. Profesor Titular. Universidad Central de las Villas, Facultad Cultura Física. [alanza@uclv.cu](mailto:alanza@uclv.cu)*

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The study guides Villa Clara's Olympic Wrestling coaches on planning the preparation of muscle strength for freestyle youth wrestlers. The strategic nature of this sport in Cuba for its results obtained international events, make the Provincial Commission of Villa Clara prioritize their attention in the planning of their training, as one of the functions of the management for the different competitive levels, is verified through observations, surveys and interviews, the approach to the planning of muscle strength as a complement to training, considering the changes in the International Regulation.

**Key words:** Olympic wrestling; Planning; Strength preparation; Muscular strength

#### RESUMEN

El estudio orienta a los entrenadores villaclareños de Lucha Olímpica sobre planificación de la preparación de la fuerza muscular para los luchadores juveniles del estilo libre. El carácter estratégico de este deporte en Cuba por sus resultados obtenidos eventos internacionales, hacen que la Comisión Provincial de Villa Clara priorice su atención en la planificación de su entrenamiento, como una de las funciones de la dirección para los diferentes niveles competitivos, es constatado a través de observaciones, encuestas y entrevistas, el abordaje de la planificación de la fuerza muscular como complemento del entrenamiento, considerando los

cambios del Reglamento Internacional.

**Palabras clave:** Lucha olímpica; Planificación; Preparación de la fuerza; Fuerza muscular

## INTRODUCCION

The activities of muscular strength come together with the emergence of man as part of his daily life, he lifted and moved different types of loads, logs, animals and other objects, these natural activities that he carried out for his survival made his muscular strength constitute a of the qualities most appreciated by him.

Between the middle of the 18th century and the beginning of the 19th century, exercises with weights began to take their current form, with the appearance of the clubs in which their practice became common in the second half of the 19th century, European and Asian countries such as Russia, Greece, Turkey and China stand out from their inception, then Canada and the United States are introduced by European immigrants themselves.

In 1965, the Higher School of Physical Education (ESEF) had among its annexed schools, the training school for Fighting trainers, which counted on the advice of Soviet specialists, beginning to guide the planning process of the preparation of the strength from the criteria of the Soviet School of Struggle.

For his part, González (2000, 2014, 2017) is one of the first to carry out research in Cuba on the methodological technical bases, considering what was proposed by Galcovki and Catulin (1960), and reflected in the text "The Sports wrestling", in the that the empirical way in which he trained is recognized.

These authors point out that most of the exercises of the wrestlers must have an explosive character and of rapid force, González Catalá, creator of the book "Planning of training in sports fighting" presents results in the theoretical order, but does not specify the means to achieve it in special force training for youth categories.

Wrestling is an intermittent exercise of variable intensity characterized by constant and explosive attacks and counterattacks repeatedly. In this regard, Callan (2000) and Hrvoje (2008) consider that the aerobic and anaerobic energy systems are used in different degrees. The anaerobic system provides the maximum power

actions, while the aerobic system allows recovery and maintenance of effort during exercise. course of the competition.

On this subject, García (1996) refers to the fact that the current sporting reality, with a high number of competitions, does not allow training to be organized correctly, so those capacities that we consider most important for performance should be selected.

In this sense, this author considers that the most manageable skills are the qualities of speed and strength, since they recover to their maximum level within three weeks, while the endurance capacities require a supplementary week.

In the preparation of the wrestler, the special physical preparation is the process of developing conditional and coordinative capacities, such as strength, speed, endurance, agility, flexibility, coordination and balance, according to the specific needs of the sport; The morphological and psychological development of each fighter is also considered, since their planning and development are part of the preparation components (Physical, Technical, Tactical, Psychological and Theoretical).

In addition to genetically gifted fighters, winning the fight requires a number of essential elements that normally must be applied under conditions of fatigue, including high levels of dynamic and isometric strength, aerobic and anaerobic conditioning, speed, flexibility, and power. The complexity of the demands of fighting suggests the need for a highly integrated and individualized strength training and conditioning program.

In Villa Clara, since 2013, a decrease in national results has begun to show, both in School Games and in National Youth Olympics, obtaining places outside their potential range, aspects that led the Provincial Fighting Commission to write a report reporting some of the causes that led to the decline in such results (González and Noriega, 2015). One of the negative elements that are manifested is the lack of planning and the lack of control in the preparation of strength, an aspect that is part of the training process with its proper control and dosage.

Cortegaza (2003) referring to Caspersen, Powel and Christenson, (1985) considers physical activity as body movement of any kind, produced by muscle

contraction and leading to a substantial increase in energy expenditure of the person. It is conditioned both by physical exercises and by the practice of sport, which must be carried out in a planned, structured and systematic way, to raise, improve or maintain the physical and sports form of its practitioners.

These theoretical considerations when putting them into practice and more specifically to the sport of high-performance Wrestling, makes us take into consideration the different aspects that make up the training of an athlete from all orders, but, above all, prepare and train them for life, giving you only what you really need to become a champion.

All these aspects mentioned above show the need to provide theoretical and methodological contributions that guide on the ways to solve such shortcomings in the planning of the preparation of the force with a scientific nature, thus improving the preparation of youth fighters.

Therefore, the general objective of this study according to the Comprehensive Program of Preparation for the Athlete (PIPD), (2016) is to propose procedures to contribute to the planning of muscular strength in relation to the improvement of technique in young fighters, raising the special physical preparation and maintaining the general physical preparation, to be able to complete the competitive system of the category.

## **MATERIALS and METHODS**

At the theoretical level, the methods used were analytical-synthetic and inductive deductive, while at the empirical level, observation, survey, bibliographic review and documentary analysis, triangulation by source, brainstorming and how are used techniques kinetic study.

In addition, the method, as a way to plan the sports preparation process, guarantees that each content fosters the desired effect on each fighter, using mainly the wave and circuit methods for the General Preparation Stage, specifying the rest intervals between series, which should range from one to three minutes, depending on the stage of preparation.

For its part, the means that will be used, according to the morphological study, will be auxiliary exercises for arms, trunk, legs and combined. These are

conceived to work the synergist, agonist and antagonist muscles that intervene in the movements of the fighters.

For the muscular plane of the arms, the auxiliary exercises to be used will be: Strength. Standing, Force. Lying Down, Standing Row, Strength. Standing from behind, Force. Squat and Force ahead. Squatting from behind. For the trunk will be the abdominal exercises with weight / Incline, Trunk Hyperextension, Bow with Flexion. For the legs, the Squats will be used behind and in front and the Squats with scissors, while the combined ones will only work the Standing Row and Standing Force.

## **RESULTS**

Training loads, dependent or interdependent, have a biological incidence, since they cause morphological, physiological and biochemical alterations, but in no way should they affect the health or ontogenetic development of the athlete. According to Ranzola (2001), to apply a system of training or competitive loads, it is necessary to know which biological objective it responds to and with what volumes and intensities that objective is achieved. The author himself exemplifies that for the multiplicity and thickening of the myofibrils, the biological objectives must guarantee the superior contractile capacity of the muscle, it will always be achieved that once activated, loads are made in the directions of maximum force and explosive force with weights greater than 80% and between seven and eight series. This would be the essential basis for the development of competitive special resistance, whether in terms of strength or speed.

The authors consider that the training loads necessary to achieve the desired biological effect should be investigated, what is spent on the athlete's body to fulfill the types of tasks, and what must be done to restore losses, in order to raise the demands training and avoid wear and tear, which are sometimes irreversible and lead to the loss of competitive abilities.

In this sense, Platonov (1990), Verjoshansky (1990), Molnar (2003) investigated the athlete's recovery, not talking about rest, but rather working to accelerate recovery. Platonov in his book: "The adaptation to training", states that in the execution of loads with directions combined with different magnitudes, the

adaptation to these will appear indifferently and at different times. In this sense, examples are given with different combinations of magnitudes in the three energy systems. Hence, it is necessary to know the magnitudes of each direction of training for each athlete and classify them to project the increases once the adaptation is achieved. Another important aspect is knowing at what times of the day the body best assimilates the types of loads and their energy, physical and mental availability to apply the training sessions. The coach must know the regenerative processes of the body of her athletes compared to the magnitudes of the loads, their type and how long their recovery lasts.

Hence the need to use daily and in the planning of mesocycles and microcycles, the optimal rest intervals between training sessions to achieve the goal. For these reasons we assume the criterion of Ruíz, (2012) which states that functional recovery, restoration and regeneration are stages that guarantee the appearance of supercompensation, they constitute the object, the path and the end of sports training. These conditions are what make us find in the preparation of the fighter aspects that threaten the process of supercompensation and adaptation as an elemental phenomenon that causes the aggression of the physical load to the athlete's body.

## **DISCUSSION**

The problem of our research is that the youth wrestlers during their sports training receive two workloads within the same training session, violating the criteria of the two aspects of their organization, the distribution of the loads in time and the interconnection among them (Verjoshanskij, 1990).

The research shows that the wrestler receives a first load that has a well-structured planning system designed to achieve competitive results, taking into account his age, the exercises of special and general preparation, height, body weight and the load indexes for each stage of the preparation, considering the competitive systems that are carried out and a second load that is carried out in different ways by the coaches, where 87% execute it empirically, which which

makes the wrestlers receive two types of loads in the same training session, lacking the integration of the latter to the objectives of the training unit.

On the other hand, and in the same sense, it is highlighted that the wrestlers perform the muscle strengthening exercises of their choice, without considering those that truly affect the muscles involved in the technical execution of the basic exercises, without also controlling the volume and intensity to be performed, for which the wrestler receives a planned and controlled load on the one hand and at another time of the training another load that is not planned or structured, violating what is established from the methodological point of view, which is the performance of a single load, as it is oriented for work with overloads.

These violations have resulted in injuries, competitive stress, poor performance and deficiencies in the recovery and recovery of our fighters. These aspects lead to looking for alternatives to improve the planning of the strength preparation of youth fighters.

To solve this problem, a force preparation plan has been designed which is applied to youth fighters who reside in the Provincial EIDE "Héctor Ruíz" since the 2017-2018 academic year, which is executed with personalized training criteria. , with a morphological study on the main muscles involved in the technical execution of the basic exercises for work with weights, to carry them out, it has been determined to use additional loads, that is, outside of what is oriented by the preparation program for the athlete, which has a novelty that is offered in ranges and not punctual as determined by the PIPD. (González and Lanza 2017)

The individualization of the process conceived from the basic premises achieved in the initial diagnoses and aimed at both strengths and weaknesses detected. Strength work is carried out within the preparation as one more task of each training unit as appropriate, with an approximate frequency between two and four exercises per session and between two and three sessions with weights per week, considering the preparation stage.

Describing somewhat what has been done in practice, we can state that the objective of the General Preparation Stage (EPG) is to adapt the fighters to create the initial bases of strength, deepening more in volume than in intensity, making it coincide with the planned one in the basic and special exercises; For the Special Preparation Stage (EPE) the objectives are related to intermuscular coordination, concentrating on the work of the rapid force until reaching the competitive stage.

The objectives per mesocycles were determined from the purpose of maintaining the strength levels that are dosed, in correspondence with the stages, microcycles and training units. The evaluation of the muscle strength process will be carried out by observing each training session, the communication between wrestlers and coaches and the maximum result in the selected auxiliary exercises. The rest of the exercises performed were dosed based on the experience of the coaches and the guidance of the PIPD, (2016).

Sports preparation as a process of long years, where the obtaining of high sports performances is promoted without compromising the physical and emotional health of the athlete, sustainable sports preparation should be considered as ... " the multifactorial and integrative pedagogical process aimed at improvement physical and their development of capacities, whose objective is to achieve high sports performances without compromising the athlete's quality of life, as well as guaranteeing the full enjoyment of their reintegration into daily social life "... (Santana, 2000).

## **CONCLUSIONS**

The topic addressed allows to publicize the importance of assuming training in young people as true biosocial beings, who will be the athletes of the future. The proposed planning procedures contemplate essential methodological aspects of the preparation of the youth wrestlers' force. The application of these aspects of preparation will allow not only to reform the planning process of youth fighters, but also to work on the true needs of muscular strength in each athlete.

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