

**THE VERIFICATION AND LEADING METHODOLOGY OF
THE PERFORMANCE FIGHTERS PREPARATION PROCESS IN
THE PRECOMPETITIVE PERIOD OF THE TRAINING
ANNUAL CYCLE**

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Abstract. The diagnostic-model system of the tests and control norms of performance fighters in the period of precompetitive training, assures veridical and sufficient information of the fighters training grade towards the existing and quick changes in various effort, volume and training intensity indices.

The actuality of research. The problems regarding the training systematization and efficiency of the fighters at the precompetitive stage have been and will always remain in the attention of domain scientists. That results from the elaboration and integration necessity of the scientific dates regarding the optimal succession identification of the precompetitive meso-cycle structure as one of the important issues in the elaboration of basic principles for the fighters preparation in the competitive period. At the same time, the dates from the specialty literature for managing, planning and realization of precompetitive meso-cycle [1, 2, 3, 4, 5, 6, 7, 12, 17, 18, 21, 22, 23, 28, 30, 32, 33] have a general and insufficient character, which does not allow the ascertainment of the means, methods and training regimes opportune correlation in different micro-cycles of this meso-cycle. This action facilitates the possibility of pedagogical errors appearance that consequently strengths the sports results, the inadequate development of the training optimum degree and of course the reduction of sports results. The insufficiency of real character and the universality of methodical recommendations for the structuring and managing the fighters precompetitive stage and the necessity of the exact relations

ascertainment of the various volume intensity and effort parameters in this period of training have represented as a right reason for the approach of this elaboration.

For the realization of the research were applied the next scientific methods: the theoretical analysis and the generalization of the specialty literature; the pedagogical observation; the specialists' interrogation; the pedagogical experiment; the statistical-mathematical method.

In the results of the obtained dates analysis in the phase of evaluation research with the help of the factor and correlative analysis, it was established a diagnostic-model specific complex for the checking of physical training and fighters technical-tactical level.

In the composition of this complex were included 8 physical training informative indices (the choice reaction, climbing 5 m rope, 10 chin-up at the fixed bar, chin-up at the fixed bars in 3 sec. in duration of a cycle, triple jump, 5 throws of the partner, 15 throws of the mannequin, 5 minutes test) and 5 technical-sports indices, that characterize multilateral the achievement of the fighters competitive activity (attack security , defense security, attack interval, the result, universality).

The testing of the fighters training degree must be performed several times in the precompetitive meso-cycle after the indices of the diagnostic-model complex: at the beginning, the middle and the end of this cycle. It must be considered the main principles of the tests theory, appreciation theory and measures theory [10], which increases the efficiency of the diagnostic-model complex application. These principles are:

- the simple relatively procedure of measures and appreciation of the tests results;
- the possibility of creating identical conditions for all the athletes at all the tests phases;
- the relatively short duration of the tests requirements implementation ;
- The creation of a competitive ambience during the test towards the increase of athletes' motivation;

The practical realization of the testing process of the athletes' training grade must be performed at the same time, after the insignificantly preventive enlivenment and after the approbation of testing task.

The testing procedure and the system of tests results evaluation, included in the diagnostic-model complex composition, are exposed below.

The testing of this parameter is effectuated in the laboratory using the reflexo-meter. The running reaction time is measured through the fixing of time interval, necessary for the athlete's right reaction at the wanted phase with various fighting situations. There are 3 buttons in front of the athlete; every touch of one of them corresponds with a certain fighting situation. The result of such a testing is the choosing reaction time and the accuracy of taking the decision. According to the specialists recommendations for the increase of testing results security [1, 9, 10, 14, 21] it was given 12 attempts. The best and the lowest result is considered occasionally, but from the rest of indexes is determined the medium value, which is the result of the test.

The athlete occupies the initial position sitting on the mat and taking with hands the rope. At the resonant signal with the chronometer concomitant inclusion, the athlete begins to move up on the rope without the legs help. At a distance of 5 m from the mat is fixed the sign, which the athlete must reach it with the hand as quickly as possible, in the moment of touch the chronometer is stopped, but the fixed time on the chronometer is the result in test (exactly about 0,1 sec.). Each fighter has 2 attempts with a not too high time interval. For the colloquium is considered the best result [2, 4].

The test is applied towards the development degree appreciation of the energy- speed qualities and is included in the complex component according to the specialists recommendations [3,12,15]. The athlete hanged by the fixed bar with stretched hands (the holding of the fixed bar by overhead and the hands at the shoulders' distance), the test execution begins at the sonorous signal with the stopwatch fixation. Every cycle of effectuated assignments is counted in voice. After 10 hangings at the bar, the stopwatch is stopped, but the marked time by the stopwatch is considered the tests result.

From the initial position similarly to the previous one, the athlete performs multiple chin-up at the fixed bar, respecting necessarily the regime of suggested exercises. The counting of the executed exercises cycles will be done in voice, in the case when the athlete realizing the chin-up does not touch the bar with chin or does not respect the exercise regime, the testing procedure is canceled, but for colloquium are considered only the number of chin-up, which are executed without any mistakes.[4]

To assess the level of the development of the power –speed qualities of the legs muscles it is applied the triple jump from standstill

[15,20].The athlete , after the hands moving, pushes with the both legs, landing first on the one leg, then to the other , but after the third jump on the both legs must jump farther. There are proposed three attempts with little intervals of rest. The best attempt is considered the definitive result in the test and is registered in the report.

In order of the exercise standardization in the test , all the fighters execute identical throws, which in the terminology [2,13,24] are called –“throws over the shoulder”. The testing procedure is established in line with the specialists recommendations [2,13,24] and includes the following. The athlete with the partner almost of the same weight category (± 3 kg) sits in the battle position on the mat opposite to each other, the fighter under the testing executes the necessary catch for the execution of the first throws. At the sonorous signal with the simultaneous inclusion of the stopwatch , the athlete as quickly as possible executes five throws. The partner’s aim consists in the quick stand up after every throw and taking the fight position . The stopwatch stops simultaneously with the fifth throwing, but the stopwatch fixed time is the result of the test [5, 24, 26, 27].

During the test the experts group appreciate visually the technique of the methods execution , but the main criterion of the execution correctness consists in the throwing basic structure retention with a right condition and existence of the flying optimal stage of the flung fighter.

This kind of the fight specialized test is used according to the recommendations [3,12], which demonstrated in its high formality at the pedagogical control of the special activity ability of the qualified fighters. The testing procedure shall be the next one:

- The athlete executes throws of the training mannequin at the “Throw!” command with an interval about 4 sec, for a minute. Thus executing 15 throws, the athlete sits on the chair and is counted FP in the first 15 sec at the first, second and the third minute of recovery. On the basis of these measurements is counted the so-called “ adaptation coefficient” according to the formula:

$$Ka = \frac{\Sigma FP \cdot 4}{15}$$

Where: K_a – adaptation coefficient (u.c.);

ΣFP – sum of three measurements (number);

15 – Number of throws.

The adaptation coefficient values in this way obtained is considered the final result in test.

As well as in the previous test, the experts group appreciate the throws execution quality, the test is considered achieved, if each of 15 throws is executed not worse than “the good “coefficient.

To determine the fighters resistance degree is applied a more complicated test, which influences in many regards the fighter competitive activity. The testing procedure is the following:

The test procedure is as follows:

- the athlete performs the throwing of the dummy during five minutes, at the beginning of every minute he makes in 40 sec. 4 throws in a moderate tempo (each roll within 10 sec.), then at the command "spurt" carries a greater number of throws in 20 seconds; totally after this scheme are performed 5 series of exercises without interruption. The test result is the total number of throws in all five spurts [2, 12, 15, 16] .

The expert group must oversee the quality of the test effectuation and follow technique realization of the throws that allows improvement of standardization conditions requirements towards athletes and growth of test safety.

Gathering information for setting technical-sports parameters is performed by timing techniques, stenography and videos of the fighters' competitive fights. Based on the recommendations [2, 25], during the fights, in maps specifically designed for timing were fixed all the technical and tactical actions carried out by fighters. Therewith, any method done by fighter is marked with the sign (+) in the respective section with the titled procedure and the procedure conducted by the opponent with the sign (-). Analogical are registered all real fighters attack attempts. If the fight ends before the regulation time by completing "clean" victory of one of the athletes, in the appropriate section it is fixed how much time the fight lasted.

Such a timing system and stenography of fights competition, with the applying protocols prepared in advance and ways of registration, considerably simplify the fixation of technical-tactical actions of fighters carried out directly during competitions or watch videos. Such obtained information is subject to further detailed analysis.

This analysis is performed by calculating indices that characterize different aspects of fighter's competitive activity and determines their tactical and technical mastery level. These indices are:

- 1) the number and quality of victories;
- 2) the number of technical actions appreciated;
- 3) the number of points won and lost;

4) attack safety – report of the successful technical actions carried out against the overall number of attacks [2, 3, 4, 19];

5) security defense - report of successful reflected attacks of the opponent to the overall number of attacks [7, 11];

6) attack interval - the average time of achievement by fighter of the estimated technical actions [15, 25, 31];

7) efficaciousness – the report of the earned points number in regard to the number of technical actions performed [12, 30];

8) universality - the number of procedures applied by fighter during competitions, from the following seven groups classification: in position - downs on the ground, debates, throws, counter; the ground floor - twists, throws and counterattacks [3, 13].

Indices of physical training and sports technical mastery, enumerated above, that possess bigger information, constitute the basis of a complex diagnostic model for examining the fighters in immediately pre-competitive preparation.

Such a control should be based on regular factors confrontation of individual data values with model values of controlled indexes. In order to achieve the success of this process it is necessary a reasoned elaboration of control normative system at each indices in accordance with their dynamics during the pre-competitive preparation of the fighters. Such control norms applied to the 8 indices of the complex of diagnostic model are presented in Table 1.

Table 1. Control normative of fighters' physical training indices in pre-competitive training meso-cycle

Indices and measure unit	Level of normative control					
	Start of the meso-cycle		Middle of meso-cycle		End of meso-cycle	
	from	till	from	till	from	till
Reaction at running (ms)	235	240	230	235	230	235
Rope lifting 5 m (s)	9,0	9,5	8,5	9,0	8,5	9,0
10 chin-up at the fixed bar (s)	12	13	11	12	11	12
Lifting at fixed bar during a 3 sec. cycle of a tempo (number)	18	20	20	22	20	22
Triple jump(cm)	700	720	720	740	720	740
5 throws of the partner (s)	9,5	10,0	9,0	9,5	8,5	9,0
15 throws of the dummy (u.c.)	25	26	24	25	23	24

5 min test (number)	56	63	60	67	63	70
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In the elaboration of these regulations were taken into account not only the average values of indices obtained during preventive investigations and optimal manifestations admitted at certain qualities of fighters, which is particularly important in establishing the primordial physical qualities, under which athletes get performance sports results [3, 27].

Analysis of the content from Table 1 shows that the regulatory level at all indices included in the diagnostic model complex tend to increase the requirements for athletes as the competitions approaches. This trend is maintained for degrees indices of general physical training (reaction choice, climbing rope of 5 m, 10 lifts the fixed bar, lifting at the fixed bar during a tempo of 3 sec. cycle, triple jump) only until the middle of meso-cycle pre-competitive training stage. Then the requirements for this index are not increased, but remain at a relatively stable level.

At the same time, levels of special training norms indices continue to rise and reach optimal values at the end of preparatory meso-cycle phase. The differences mentioned in elaboration of normative levels reflect objective laws of specialized qualities development and skills in direct preparation of athletes for competitions

Analysis of competitive activity and the level of technical and tactical training of fighters is performed by the expert assessment method during the battle of control and viewing of video competitions recordings. Mathematical analysis of the main indices, which is a complex motivation of competitive actions, allowed to establish that the next five sports and technical indices have important values:

- safety of attack;
- security of defense;
- efficaciousness;
- universality;
- range of attack.

The modalities for recording the incipient information and calculation of indices listed are exposed above and detailed enough.

We can observe that if assessment of the physical training degree is done on the basis of complex diagnostic-single model, then the estimation of competitive activity is performed by applying the differentiated principle based on anticipated division of fighters in three groups according to the style of fight: attack, counterattack and defense.

Differences of competitive activity indices depending on the style of fight realization predetermines the superiority of one fighters group or another from one of technical-sports clues, fact that was reflected at the establishing of normative levels of these indices in the immediate pre-competitive stage of preparation. These levels are shown in Table 2.

Table 2. Control norms of technical-sports indicators to assess competitive activity of the fighters

Indicators and measure unity	Styles of competitive activity		
	attack	counterattack	defense
safety of attack (%)	65-70	60-65	55-60
safety of defense (%)	60-70	65-75	75-85
range of attack (sec.)	30-40	40-50	50-60
efficaciousness (points)	1,6-1,7	1,6-1,7	1,5-1,6
universality (number)	3-4	3-4	2-3

The analysis of data presented in Table 2 testifies that normative levels of attack safety indicator are higher safety for fighters who prefer style attack in competitive activity (65-70%). For athletes counter attack style we can consider safety enough the index equal to 60-65%. The index requirement for the defense style wrestlers is even lower and constitutes 55-60%.

A similar dynamic of normative levels was displayed and at the range of attack index: frequently must attack style attack fighters, which are required to carry no less than an attack for 30-40 sec. Requirements to the level of the range attack index for athletes of other styles is slightly lower and is for counterattack wrestlers - 40-50 sec., and for defenders - 50-60 sec.

Resultativity and universality of fighters with technical actions style of attack and counterattack must be superior, which is: the index of resultativity - 1.6-1.7 points and the index of universality - 3-4 classification of procedure from various groups. For defensive style fighters, sufficient levels of resultativity are 1.5-1.6 points and universality - 2-3 procedures from various groups.

Normative levels of security index defense have contrary orientation: if for attack style fighters the sufficient level of this index can be considered 60-70%, then for counterattack fighters style this should

already constitute 65-75%. For athletes with defense style requirements for security defense considerably increases up to 75-85%, which allows them to hold up successful in front of the fighters from others activity styles within the competitive battles.

Totalizing the analysis of data presented in Table 2, we can observe that the normative levels of technical-sports indicators' values in a largely amount depends on the insufficiency of competitive activity style of fighters. Athletes that use style attack must attack more often than others and have the highest indices of safety for these attacks, keeping at a higher level than the average of resultativity and universality of technical- tactical actions.

Fighters of counterattack style must have the same level of actions resultativity and universality as athletes of attack style, but they can attack a little slower and less safe. Thus they have to defend themselves more secure. Fighters of defense style in competitive activity compared to other athletes have much lower safety indices of range attack, resultativity and universality of technical actions, getting most of times, superiority over opponents based on the considerably increased index of defense safety.

Conclusions

Thus, the research results conducted in order to determine the optimal diagnostic -model tests complex and indices, as well as their regulations to control the preparedness of athletes in pre-competitive training allow the following conclusions:

- Effective preparation for the competition can be ensured under optimum ratio of constituents, including accurate and optimal opportunity to assess the readiness of all the constituents of the athletes in order to individualize the training process and introduce necessary rectifications;

- Getting that assessment is a necessary condition for achieving a complex pedagogic control based on model- diagnostic complex determined by a system of minimum indexes of principal training pedagogical constituents;

- establishment of the indices importance that determine the efficiency of instructional and competitive work out of skilled fighters, revealed the 8th more informative parameters for the assessment of athletes physical training and five technical-sports indicators for measuring the success of athletes competitive activity;

- the elaborated normative levels of control physical exercises of the diagnostic -model complex were obtained considering the average values of indices and their optimal variations permissible, which allows to take into account the individual manifestations of fighters certain qualities;

- To assess the physical training of the fighters was developed a unique diagnostic -model complex and the assessment of athlete's competitive activity should be carried out taking into account the preventive division of fighters with their appropriate style of supporting the competitive battles.

References:

- [1] BOMPA, T. (2002). Teoria și metodologia antrenamentului (periodizarea), București, ExPonto, 442 p.
- [2] MANOLACHI, V. (2003). Sporturi de luptă – teorie și metodică, Manual, Chișinău, Tipografia Centrală, 400 p.
- [3] MANOLACHI, V. (2015). Dirijarea și structurarea etapei pregătirii precompetiționale a judocanilor de performanță, Ghid metodic, Chișinău: Editura USEFS, 39 p.
- [4] MANOLACHI, V. (2015). Realizarea și structurarea selecției optime a metodelor de antrenament a tinerilor luptători în ciclul anual de pregătire. Ghid metodic. Chișinău. Editura USEFS, 32 p.
- [5] MANOLACHI, V., HANTĂU, I. (2000). Pregătirea fizică a judocanilor, Manual, Chișinău, Tipografia Centrală, 202 p.
- [6] PLATONOV, V.N. (2015). Periodizarea antrenamentului sportive, București, Discobolul, 607 p.
- [7] БОЙКО, И.Ф., ДАНЬКО, Г.В. (2004). Физическая подготовка борцов, Киев, Олимпийская литература, 224 с.
- [8] БОНДАРЧУК, А.П. (2005). Периодизация спортивной тренировки, Киев: Олимп.лит., 304 с.
- [9] ВЕРХОШАНСКИЙ, Ю.В. (2005). Теория и методология спортивной подготовки: блоковая система тренировки спортсменов высокого класса. В: Теория и практика физической культуры, №4, с. 2-14.
- [10] ГОДИК, М.А. (1988). Спортивная метрология: Учебник для ин-тов физич. культуры, Москва, Физкультура и спорт, 192 с.
- [11] ДАХНОВСКИЙ, В.С. (1979). Оптимизация структуры максимальных нагрузок на этапе предсоревновательной подготовки борцов высших разрядов: Тезисы докладов респуб. конф., Минск, БГОИФК, с. 16-18.

- [12] ЕГАНОВ, А.В. (2014). Теория и методика спортивной тренировки дзюдоистов, Монография, Москва, 211 с.
- [13] ЗАМЯТИН, Ю.П., ТАРАКАНОВ, Б.М. (1986). Экспериментальное обоснование методики педагогического контроля физической подготовленности борцов. В: Пути совершенствования эффективности подготовки юных и взрослых спортсменов: Сборник науч. трудов, Ленинград, ГДОИФК им. П.Ф.Лесгафта, с.22-26.
- [14] ИВАНОВ, А.В. (1995). Проведение учебных тренировок студенток, занимающихся дзюдо: Методические рекомендации, СПб., «Образование», 24 с.
- [15] ИССУРИН, В.Б. (2010). Блоковая периодизация спортивной тренировки. Москва, Сов. спорт, 288 с.
- [16] КУЛИБАБА, В.Л. (1998). Акмеологическая специфика подготовки спортсменов тяжелых весовых категорий в спортивной борьбе: Автореф. дис. канд. пед. наук, СПб., 27 с.
- [17] МАРТЕМЬЯНОВ, Ю.Г. (1988). Комплексная оценка перспективности квалифицированных дзюдоистов-юниоров.: Автореф. дис. канд. пед. наук, Ленинград, 20 с.
- [18] МАТВЕЕВ, Л.П. (2010). Общая теория спорта и ее прикладные аспекты: учеб. для вузов физ. культуры, 5-е изд, Москва, Сов. спорт, 340 с.
- [19] НИКУЛИЧЕВ, В.А. (1990). Перспективы совершенствования предсоревновательной подготовки борцов высокой квалификации. В: Спортивная борьба: Сборник информ.-метод. мат-лов, Вып. III, Москва, ЦНИИС, ВНИИФК, с.9-12.
- [20] НОВИКОВ, А.А. (1990). Теоретические аспекты построения системы управления подготовкой высококвалифицированных борцов. В: Спортивная борьба: Сборник информ.-метод. материалов, Вып. I, Москва, ЦНИИС, ВНИИФК, с.5-8.
- [21] ПАШИНЦЕВ, В.Г. (1995). Скоростно-силовая подготовка дзюдоистов при переходе из учебно-тренировочных групп в группы спортивного совершенствования: Автореф. дис. канд. пед. наук, Москва, 22 с.
- [22] ПЛАТОНОВ, В.Н. (2008). Теория и периодизация подготовки спортсменов в течение года: предпосылки, формирование, критика. В: Наука в олимпийском спорте, №1, с. 3-23.
- [23] ПОТРЕБИЧ, В.А. (1988). Особенности построения предсоревновательного мезоцикла дзюдоистов старших разрядов:

Автореф. дис. канд. пед. наук, Минск, 24 с.

[24] СЕРГЕЕВИЧ, Е.А. (1991). Комплексное использование физических средств восстановления при непосредственной подготовке к соревнованиям борцов классического стиля высших разрядов: Автореф. дис. канд. пед. наук, Омск, 22 с.

[25] ТАРАКАНОВ, Б.И. (1988). Педагогический контроль за физической подготовленностью борцов: Метод, пособие, Ленинград, ГДОИФК, 25 с.

[26] ТАРАКАНОВ, Б.И. (1989). Оценка технико-тактического мастерства борцов: Учебное пособие, Ленинград, ГДОИФК им. П.Ф.Лесгафта, 22 с.

[27] ТАРАКАНОВ, Б.И., КУДЛАЙ, С.А., КУЛИБАБА, В.Л. (1997). Методы диагностики и моделирования физической подготовки юных и квалифицированных борцов. В: Современные проблемы теории и практики физической культуры: взгляды, идеи, концепции: Сборник науч. трудов, СПб.: Изд-во СПбГАФК им.П.Ф.Лесгафта, с. 129-131.

[28] ТАРАКАНОВ, Б.И., КУЛИБАБА, В.Л., КУДЛАЙ, С.А. (1997). Динамика показателей спортивно-технического мастерства борцов высокой квалификации в зависимости от весовых категорий. В: Научные исследования и разработки в спорте: Вестник аспирантуры, Вып. 3, СПб., СПбГАФК им.П.Ф.Лесгафта, с.72-76.

[29] ТЕЛЮК, С.И. (1984). Соотношение средств специальной физической подготовки борцов высших разрядов в соревновательном периоде: Автореф. дис. канд. пед. наук, Москва, 24 с.

[30] ТРОНИН, Н.И. (1987). Соотношение средств общей и специальной подготовки на этапах предсоревновательной подготовки борцов высших разрядов: Автореф. дис. канд. пед. наук, Киев, 21 с.

[31] ШУЛИКА, Ю.А., КОСУХИН, В.М., ЛЕЩЕНКО, В.И., НОВИКОВ, В.Д., ХОМЕНКО И.Т. (2006). Греко-римская борьба для начинающих, Ростов-на-Дону, Феникс, 240 с.

[32] ЯРЫГИН, И.С., ЮШКОВ, О.П., ДЯКИН, А.М., ОНОПКО, В.М. Основные организационно-методические принципы подготовки советских борцов по вольной борьбе к XXV Олимпийским играм: Метод. рекомендации, Москва, ВНИИФК, 1989, 30 с.

[33] ВОМПА, Т.О. (2005). Total training for coaching team sports. / Т.О. Vomp, V. Carrera. 2nd ed. Champaign, IL, Human Kinetics, 259 p.

[34] BOMPA, T.O. (2009). Periodization: theory and methodology of training. / T. Bompă, G.G. Haff. 5th ed. Champaign, IL, Human Kinetics, p. 63-84.

**METODOLOGIA VERIFICĂRII ȘI DIRIJĂRII PROCESULUI DE
PREGĂTIRE A LUPTĂTORILOR DE PERFORMANȚĂ ÎN
PERIOADA PRECOMPETIȚIONALĂ A CICLULUI ANUAL DE
ANTRENAMENT**

Cuvinte-cheie: efort, volum, intensitate, planificare, regimuri de antrenament, microcicluri, mezocicluri, etapa precompetițională, rezultat sportiv, complex informativ, diagnostic-model, performanță.
Rezumat. Sistemul de diagnosticare-model al testelor și normativelor de control al luptătorilor de performanță în perioada de pregătire precompetițională, asigură informație veridică și suficientă a gradului de pregătire a luptătorilor în scopul modificărilor curente și operative în diverși indici ai efortului, volumului și intensității de antrenament.