

Planning of competitive activity of highly skilled athletes-sprinters during the annual macrocycle

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Purpose: substantiate the planning system of competitive activity of highly skilled athletes, specializing in the sprint, the annual macrocycle.

Material & Methods: in the study to take part six of athletes specializing in the sprint at the age of 19-23 years, and which have sports rank master of Sport and international master of sports.

Results: defined system of planning competitive activities of athletes which takes account of the optimal number of competitions of various species and their distribution within a year of the macrocycle.

Conclusions: shown, that the optimal amount of competition contributes to the willingness of athletes to achieve good results at major competitions an annual macrocycle.

Keywords: competition period, the training process, microcycle, competitions, sprint.

Introduction

The system of sports competitions is the system-created and integrated factor which most significantly influences all parts of training of athletes in the Olympic sport, they define the whole system of the organization, technique of training of athletes, for the productive competitive activity, and in particular in track and field athletics [1]. At present most of experts consider competitions not only as the subject of the aimed activity of an athlete, but also as a powerful factor of the improvement of sports skill. Especially visually it is shown in the course of training of high-class athletes, at the stage of the maximum realization of individual opportunities, where the increase in part of special exercises including competitive, in total amount of training means [2] became the important methodical principle. At the same time experts note that competitions have to join in the system of preparation only in that volume in which they will promote ensuring preparedness of an athlete for the highest achievements in the main starts of year and four years [7].

The analysis of modern scientifically-methodical literature allowed to come to conclusion that it is necessary to consider unity of training and competitive activity of athletes in the system of preparation which final result is dynamics of training and competitive results during an annual macrocycle [5; 6].

Modern training of the strongest runners of the world prevails examples of saturated competitive loadings. Now track and field athletics competitions in the world are held annually that is one of the prerequisites of professionalizing of track and field athletics [3; 4]. Experts note ability of high-class athletes to compete constantly throughout the whole annual cycle, actively using competitions, different in the importance, both in short, and in long series of starts.

The improvement of sports results in running types of track and field athletics of the leading athletes of Ukraine, demands

planning of the optimum system of competitions during an annual cycle, therefore, consideration of question concerning planning of competitive training of highly skilled sportswomen is relevant.

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Purpose of the research

To prove the system of planning of competitive activity of highly skilled sportswomen who specialize in sprint, in an annual macrocycle.

Research tasks:

1. To analyze the creation of an annual macrocycle of sportswomen who specialize in sprint.
2. To define the optimum number of starts of sportswomen of high qualification during an annual cycle.
3. To prove the system of planning of competitions of highly skilled sportswomen in an annual macrocycle.

Material and Methods of the research

We conducted examinations of 6 sportswomen, who specialize in sprint, of 19–23 years old, and who have the sports rank of MS and MSIC within the experiment. Three sportswomen were the part of the national team of Ukraine on track and field athletics.

For receiving the experimental data we conducted the survey of the leading coaches, the theoretical analysis of diaries of sportswomen, the analysis of result cards are made [8; 9], the

data were processed by methods of mathematical statistics.

Results of the research and their discussion

The structure of an annual cycle of training of sportswomen was in details considered. The analysis of structural elements allowed to define that the pre-cycle system of creation of an annual macrocycle was the basis for model of planning of training process of highly skilled sportswomen in sprint. So, two rather independent macrocycle were allocated in the structure of an annual cycle of preparation: the first-autumn-winter macrocycle and the second- spring- summer macrocycle.

The autumn – winter preparatory period, the winter – competitive period, the spring – summer preparatory period, the summer – competitive period and two transition periods were allocated respectively in the structure of each macrocycle. Sportswomen took part both in the winter-competitive period, and in the summer competitive period. Speeches of sportswomen in large international starts became the main criterion of each separate macrocycle.

The main competitions of the first macrocycle became – the winter European championship (Paris, 2011), the second – team championship of Europe (Stockholm, 2011) and the World Cup (Daegu, 2011).

Leaving the research tasks, the number of competitions was defined during the autumn – winter first macrocycle at sportswomen (tab. 1).

So, sportswoman used control competitions at the end of the autumn – winter preparatory period at distances of 60 m, 150 m and 200 m in the first autumn – winter macrocycle. It should be noted that the main task of control starts at distances of 150 m and 200 m – assessment of level of physical and functional preparedness of organism of sportswomen after large volume of training load of mainly aerobic and anaerobic orientation (with intensity 80-85% from maximum) which was executed at the all-preparatory stage of the autumn – winter preparatory period.

Control start at distance of 60 m was carried out within the precompetitive mesocycle on the specially-preparatory stage which task was determination of preparedness of sportswom-

en for running loading of high intensity in the winter – competitive period.

The winter competitive period consisted from two competitive mesocycles where sportswomen took part in run at distance of 60 m. The duration of the first competitive mesocycle – 5 weeks, the second competitive mesocycle – 4 weeks.

The sportswoman took part in eight competitions within the first competitive mesocycle: from them 3 – control competitions, 1 – elimination competitions (the Cup of Ukraine) and 4 – admitting (model) competitions (sportswomen took part in the international starts which enter sports calendar of the World international association of track and field athletics federations). The determination of level of high preparedness of sportswomen for performance in main competition of the winter competitive period became the main task of these starts.

Only the main competitions of the winter competitive period – the winter European championship (Paris, 2011) were planned within the second winter competitive mesocycle, where one gold and silver medals were received by the Ukrainian sportswomen.

The distribution and the number of competitions in the second spring-summer macrocycle of training of high-class sportswomen who specialize in sprint (tab. 2), were analyzed by the similar way.

The sportswoman took part in one control competition at distance of 200 m on the specially-preparatory stage within the control and preparatory mesocycle. The elimination competitions (the Cup of Ukraine) in run were planned for 200 m and relay of 4x100 m within precompetitive mesocycle.

The summer competitive period is the longest, it included at itself two competitive stages (duration of 15 weeks). The first competitive stage – the admitting (model) competitions lasting 8 weeks. The main task of this stage – improvement of the maximum high-speed opportunities, support of optimum level of special high-speed endurance, technical skill, mental conditioning, achievement of good results, in series of control starts.

The structure of the first competitive stage was made by two competitive mesocycle and precompetitive mesocycle. The

Table 1

Distribution and the number of competitions in the first autumn – winter macrocycle of high-class sportswomen who specialize in sprint

Period	Autumn-winter preparatory				Winter preparatory	
	All-preparatory		Specially-preparatory		Competitive 1 (control, qualifying and admitting competitions)	Competitive 2 (main competitions)
Mesocycles	BM 1	BM 2	CPM	PCM	CM 1	CM 2
60 m				1(2)	8 (15)	1(3)*
150 m		1				
200 m		1				

Note. Here and further: BM – basic mesocycle, CPM – control and preparatory mesocycle, PCM – precompetitive mesocycle, CM – competitive mesocycle; * – the number of starts in competitions, to take into consideration runnings, semi-finals, finals is given in brackets.

Table 2

Distribution and number of competitions in the second spring-summer macrocycle of high-class sportswomen who specialize in sprint

Period	Spring-summer preparatory				Summer competitive				
	All-preparatory		Specially-preparatory		Competitive (control, qualifying and admitting competitions)			Competitive (main competitions)	
Stages	BM 1	BM 2	CPM	PCM	CM 1	PCM	CM 2	PCM	CM 3
Mesocycles									
100 m					5(6)		1(2)		4(5)*
200 m			1	1(2)	3		1(2)		2
4x100 m				1	2		1		1(2)

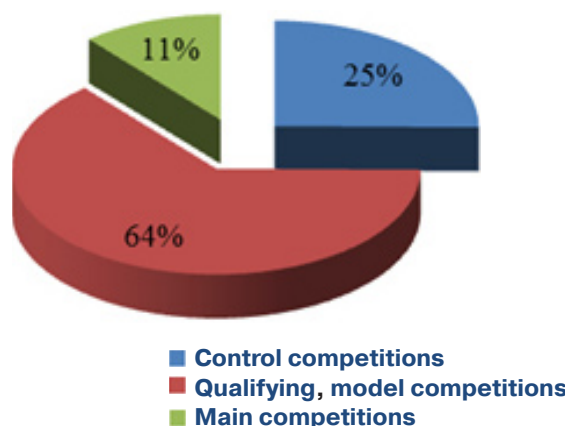
sportswoman took part in 10 starts, the team championship of Europe became basic of which (Stockholm, 2011) in the first competitive mesocycle of the summer competitive period. Also sportswomen spoke at the international competitions “Diamond League” at distance of 200 m which entered sports calendar of the World international association of track and field athletics federations. Competitions of the second competitive mesocycle were planned in three weeks prior to the main start of the whole annual macrocycle – the World Cup therefore they had nature of model competitions. The sportswomen took part in three competitions in run on 100 m, 200 m, and relay of 4x100 m.

The structure of the second competitive stage (duration of 7 weeks) was made by precompetitive and competitive mesocycle in which sportswomen started in 7 competitions. Within this stage the main competitions of the whole annual cycle – the World Cup (Daegu, 2011) were planned in which sportswomen won bronze awards in relay of 4x100 m.

It is necessary to define that the system of planning of competitions has some features of competitive preparation during an annual macrocycle on the basis of the carried-out analysis of planning of competitive activity of high-class sportswomen who specialize in sprint (tab. 3).

Uneven distribution of competitions during an annual macrocycle was noted on the basis of experimental data which are presented in table 3. The sportswomen took part in 35 competitions of different level. So, the gradual increase in number of starts from May till September, the decrease in October, the increase and stabilization in the competitive periods were noted, that demonstrates wavy distribution of competitive loading for year.

The second feature consists in different ratio of distribution of types of competitions for year (pic. 1).



Pic. 1. Distribution of types of competitions which were planned during an annual macrocycle at sportswomen of high qualification

So, 64% from the whole number of competitions for an annual macrocycle were taken away on qualifying, admitting (model) competitions, 25% for control competitions and 11% were taken away on the main competitions of an annual macrocycle.

Conclusions

Results of the research demonstrate that the two-cycle system of preparation, where the winter European championship, the team championship of Europe and the World Cup, were the main competitions of annual cycle, was used during the creation of annual macrocycle of training of sportswomen of national team of Ukraine on track and field athletics. The optimum number of competitions were planned according to the calendar of national and international competitions and regularities of acquisition of sportswear. Separate competitions

Table 3

Distribution and number of competitions in an annual cycle of training of high-class sportswomen who specialize in sprint

Distance	Autumn-winter preparatory period	Winter preparatory period	Spring-summer preparatory period	Summer preparatory period	Total
60 m	1(2)*	9(18)			10(20)
100 m				10(13)	10(13)
150 m	1				1
200 m	1		2(3)	6(7)	9(11)
4x100 m			1	4(5)	5(6)
Total competitions	3(4)	9(18)	3(4)	20(25)	35(51)

are obliged to solve the concrete tasks of the current stage of preparation. The greatest number of starts were taken away on elimination and model competitions as effective remedies of the integrated training of sportswomen for the main competitions of annual macrocycle – the World Cup. In general planning of the competitive activity is the integral component of the training process and serves one of the powerful factors

for the achievement of high sports results.

Prospects of the subsequent researches consist in the subsequent studying of question concerning features of planning of the competitive activity of highly skilled sportswomen who specialize in sprint, in the Olympic annual macrocycle.

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References

1. Balakhnichev, A. V. 2004, *Sistema sorevnovaniy v mnogoletney podgotovke begunov-sprinterov*: dis. ... kand. ped. nauk : 13.00.04 [System of competitions in the preparation of multi-year sprinter : PhD diss.], Moscow, 164 p. (in Russ.)
2. Vrublevskiy Ye. p. 2011, [Theoretical and methodological grounds programming macrocycle training athletes specializing in speed-ylovnyh kinds of athletics], *Slobozans'kij naukovo-sportivnij visnik*, Kharkiv: KSAPC, No 4(27), pp. 74–77. (in Ukr.)
3. Kozlova Ye. K. 2008, [Competition in terms of professionalization of athletics], *Pedagogika, psikhologiya i mediko-biologicheskiye problemy fizicheskogo vospitaniya i sporta* [Pedagogy, Psychology, and medico-biological problems of physical education and sport], No 12, pp. 1–11. (in Russ.)
4. Mirzoyev, O. M., Bodrova, N. D., Bodrov, I. V. 2014, [Athletics. Modern tendentsin bihu of 100 m], *Slobozans'kij naukovo-sportivnij visnik*, Kharkiv: KSAPC, No 1(39), pp. 66–74. (in Ukr.)
5. Ozolin, E. S. 2010, *Sprinterskiy beg* [Sprint Run], Moscow: Chelovek, 176 pp. (in Russ.)
6. Platonov, V. N. 2004, *Sistema podgotovki sportsmenov v olimpiyskom sporte. Obshchaya teoriya i yeye prakticheskiye prilozheniya* [The system of training athletes in Olympic sports. The general theory and its practical applications], Kyiv: Olimp. I-ra, 807 p. (in Russ.)
7. Yushko, B. N. [Using the basic adaptation of laws in the training process of skilled runners on short distances], *Materialy IX Mezhdunarodnogo kongressa «Olimpiyskiy sport i sport dlya vsekh»* [Materials IX International Congress "Olympic Sport and Sport for All"], Kiyev: Olimpiyskaya lit-ra, 2005, 449 p. (in Russ.)
8. *Ofitsialnyy sayt Mezhdunarodnoy Federatsii legkoy atletiki* [The official website of the International Athletics Federation], Available at: <http://www.iaaf.org/results/>. (in Russ.)
9. *Ofitsiyinyy sayt Federatsii legkoi atletiki Ukraini* [Official site of the Athletics Federation of Ukraine], Available at: <http://uaf.org.ua/>. (in Ukr.)

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