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THIRD LEVEL BASIC RUNNING TRAINING TOOLS FOR CLASSIC MOUNTAIN RUNNING IN A MODEL OF PREPARATION FOR "UP AND DOWNHILL" VARIANT - MACROSTRUCTURAL DISTRIBUTION

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SUMMARY

The article represents the distribution of the basic running training tools from the third level in the annual cycle of highly qualified racers in a preparation focused on classical mountain running in the variant "Up and Downhill". The research aims to define a principal annual model of distribution of the volume of the basic running training tools from the third level by weeks in a preparation for variation of racing„uphill and downhill" in classic mountain running. The following methods were used: a) research of the weekly volume of the training tools within the framework of the separate mezzo-cycles in the macrostructure and b) variation analysis of the data received from the training tools explored. The results received show, that the biggest portion of the training workout is related tothe development of the sub-factor from the third level "basic endurance". Running tools for "basic endurance" take 71% of the total annual volume. It appears to be the fundament, based on which the whole structure of the training is built. Running training means for the development of the "speed" sub-factor are two to three times greater in volume in the preparation period and during the early race stage compared to the main and late race stages and the transition period. The ratio of "base endurance" to "speed" run volume is about 32:1.

Key words: Mountain running, Trail running, Off-road running, Achievement factors, Classification of the training tools, Basic training tools, Model of annual periodization…

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INTRODUCTION

Practising mountain running in natural conditions with the influence of natural factors – fresh air, sun and diverse ecosystems, helps to strengthen health and harmonious human development (Doichev, B. 2022). In the methodic literature concerning the preparation for mountain running there is a wide variety of training means and methods that are recommended for the training of the athletes in these events (Zavialov, & Konovalov, 2014). According to us one of the ways to create an order in this diversity is the training methods to be interconnected with the factors that predefine the result in mountain running. Mountain running is a fast developing masssport, with so many variations and formats thatit is difficult to be listed. However, as part ofthe athletics mountain running disciplines haveclear classification, which defines the technicalparameters of every discipline.In many regions of the world where there are no stadiums, for adolescents mountain running is their first meeting with athletics. This is a sport among the pure mountain nature, accessible to all, for which no special equipment is needed. Mountain running is a sport for endurance, practised in crossed terrenes, off-road, and far from the city and the stadiums (Bachvarov, 1982; Bachvarov, 2007; Belotti, 2010). The sport-competitive activity in mountain running requires the use of diverse training means in the preparation As a social phenomenon, mountain running is a popular mass health sport, but it is also an elite and professional sport that requires a very high level of specific training for the competitors. This creates the need to search for new training approaches through which to realize an advantage in the highly competitive environment of high-performance sports (8,9). In our previous research, we created a model of sports performance constructed from hierarchically ordered factors and sub-factors of performance (shown in Figure 1) (Slavchev, A. Kisyov, K. 2016).

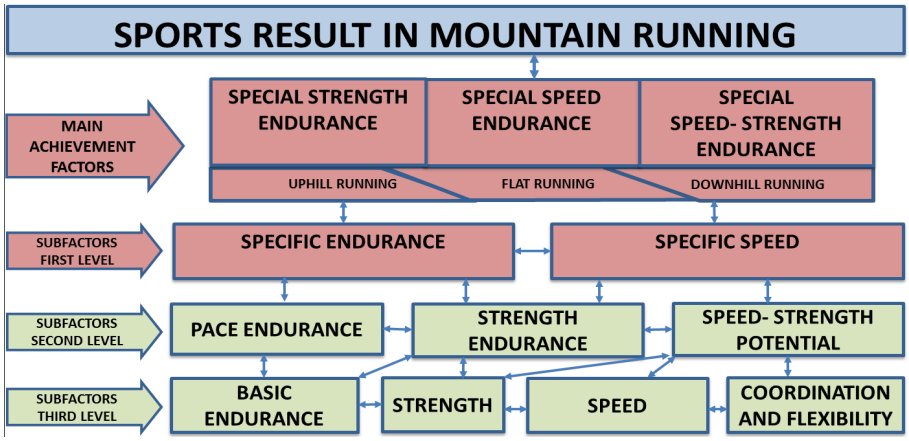

Figure 1. Model of the sports result in mountain running.

A wide variety of training tools is included in the sports training of elite mountain runners. The present study is aimed at the use of the basic running training tools from the third level. These training tools affect the subfactors "base endurance" and "speed". For "baseline endurance" runs are performed in a variety of conditions in aerobic mode-1, and for "speed" runs are in anaerobic-alactate mode (15) (shown in Table1).

Table 1. Basic running training tools for the development of the third-level subfactors, the bioenergetic regime and the conditions under which they are performed.

Subfactors from the third level	Bioenergy Regime	Basic running training tools	Terms of performance
Basic endurance	1.Aerobic regime-1	14.Aerobic support running 15.Aerobic compensatory running	13.Various conditions
Speed	5. Anaerobic-non lactate regime)	18.Sprint running	13.Various conditions

The purpose of the research is to define a principal annual model of distribution of the volume of the basic running training tools from the third level by weeks in a preparation for variation of racing„uphill and downhill" in classic mountain running.

METHODS

Tasks of the research:

1. Defining the volume of basic running training tools in the macrostructure and their implementation per factors of achievement.
2. Analysis of the distribution of the basic running training tools per week in the framework of the macrostructure.

The object of the research is the training and sport - racing activity in mountain running, and the **subject** is the basic running training tools, used in the preparation of mountain runners. **The scope** of the research is 29 training programs for mountain runners.

The methodology of the research includes:

1. Analysis of the scientific-methodology literature for long-running and mountain running.
2. Research the weekly volume of the training tools in the frame of the separate mesocycles in the macrostructure of the training programs of the runners.
3. Variation analysis of the data from the training tools in the macrostructure.

One part of the research literature sources looks at the problems of the specialized diversity of the training tools (2,3), and other part looks at the specific of the racing courses in mountain running (11,12) and training methodology

(1,4,6,7,10,13,16,17,18,19). A total of 29 training schedules of highly qualified racers have been reviewed.

RESULTS

Table 2 presents the average values of the weekly volume distance and denivelation of the basic running training tools from the third level in the researched training programs.

Table 2. Basic running training tools from the third level.

Weeks	Basic running training tools		
	Basic running tools from third level		
	Basic endurance		Speed
	Distance in km	Displacement	Distance in km
1	55	1750	2
2	65	2170	2
3	70	2410	2
4	80	2520	3
5	85	2580	4
6	90	2810	3
7	90	2820	4
8	85	2510	3
9	80	2830	3
10	78	2850	4
11	85	2660	2
12	90	2750	3
13	70	2480	2
14	85	2620	3
15	80	2490	3
16	75	2460	5
17	80	2540	3
18	85	2510	2
19	80	2470	2
20	85	2520	3
21	80	2510	2
22	80	2460	2
23	85	2470	3
24	80	2310	2
25	75	2180	2
26	70	2110	2
27	75	1850	2
28	65	2000	2
29	70	2140	2
30	75	2100	2
31	70	2030	1
32	70	1630	1
33	75	1430	1

34	65	1360	1
35	65	1140	1
36	50	1020	1
37	75	1000	1
38	70	900	1
39	50	900	1
40	65	1160	1
41	65	1350	1
42	60	1370	1
43	65	1400	1
44	55	1420	1
45	50	890	0
46	55	670	0
47	50	680	0
48	50	860	1
49	55	1340	1
50	50	1790	1
51	40	1970	1
52	40	1690	1
Total	3638	100880	98

Analysis of the annual volume of the third-levelbasic running training tools

Data received shows that, the biggest portion of the training work is related to the sub-factor „basic endurance“. It appears to be the fundament, above which the whole structure of the training is developed. The ratio of the volume of the running for basic endurance and speed is 97 to 3 (shown in Figure 2).

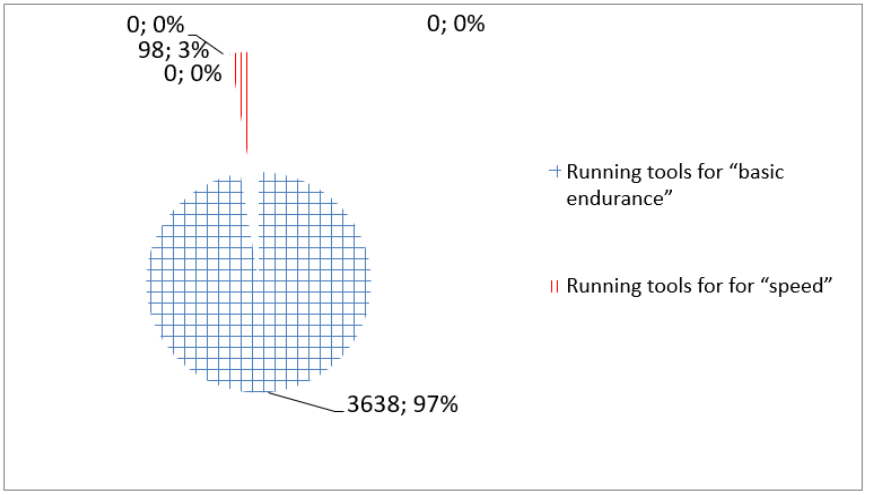

Figure 2. Annual volume of kilometres of the basic training tools from the third level.

The basic running tools for development of the basic endurance take 71% ofthe total annual running volume (shown in Figure 3).

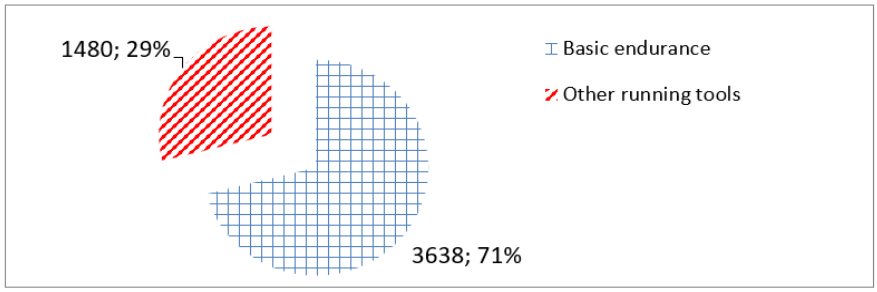

Figure 3. Comparison of the volume kilometres of the tools for basic endurance to the total running volume of the rest running tools.

The total volume of running workout for "basic endurance" is 3638 km with positive and negative denivelation from 10880 meters. The weekly volume is in the range of 50 km during the transient period, to 90 km with up to 3000m positive and 3000m negative denivelation during the preparation period (shown in Figure 4 and Figure 5).

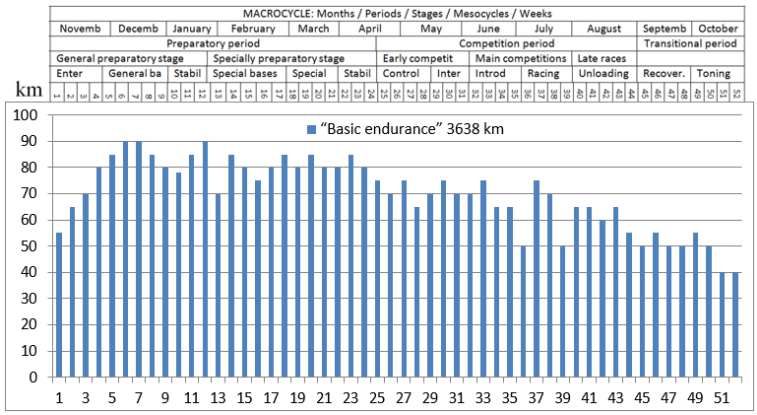

Figure 4. In the frame of macrocycle on the abscissa is shown the weekly distribution of the kilometres for basic endurance.

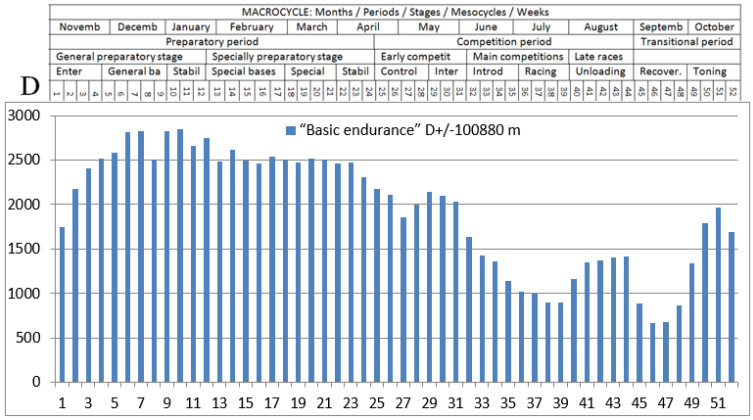

Figure 5. In the frame of the macrocycle on the abscissa is shown the weekly distribution of meters denivelation for basic endurance.

The annual volume of the speedrunning for the development of the sup-factor speed is 98 km. They are present in all stages of the preparation.Only in the second half of the previous period, the work for that factor is interrupted (Fig. 6). During the preparatory period and the stage of early racing, the weekly volume is more often between 2 and 3 km. In three of the weeks of the general preparation stage, it reaches up to 4 km, and in one of the weeks of the special basic mesocycle, it reaches up to 5 km. After that, in the periods of the main and late racings and toningperiod, the weekly volume decreases to 1 km.

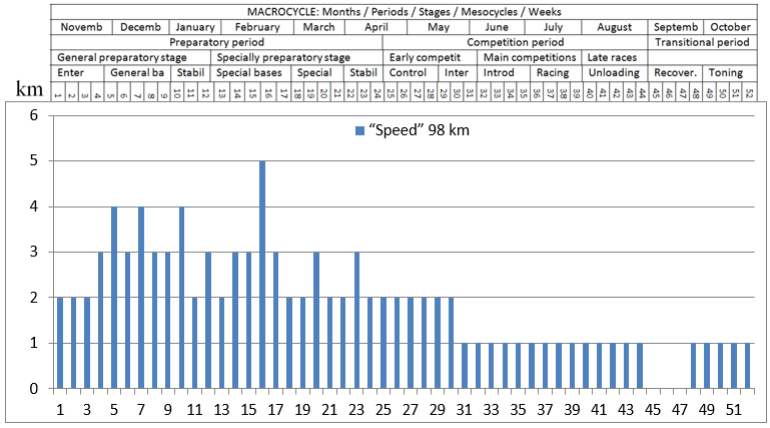

Figure 6. In the frame of macrocycle on the abscissa is shown the weekly distribution of the kilometres for speed.

CONCLUSION

1. Running tools for development of the „basic endurance“ take 71% of the total annual running volume.
2. From the basic tools directed to the development of the sub-factors from the third level, the biggest portion of the running workout is related to the sub-factor „basic endurance“. It appears to be the fundament, based on which the whole structure of the training is built.
3. Running training means for the development of the “speed” sub-factor are two to three times larger in volume in the preparatory period and during the stage of early competitions compared to the stages of the main and late competitions and the transition period.
4. The ratio of “base endurance” to “speed” run volumes is about 32:3.

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