

Hygienic aspects of classes with children of primary school age in sports and health improvement groups for cross-country skiing

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Abstract. The article is devoted to the training of children involved in cross-country skiing in sports and health improvement groups. Result-oriented training without due attention to load in accordance with hygienic standards does not provide the necessary effect. Hygienic requirements in the physical education of children have been established for a long time but need to be revised due to the active involvement of children below the age required for starting sports. This situation is observed everywhere, including skiing. The article analyzes the training programs for sports and health improvement groups in cross-country skiing based on hygienic requirements, training requirements, etc. The article discusses the requirements to scientifically based hygienic standards for training in sports and health improvement groups, since for many aspects they are generally absent, and existing standards are focused on initial training groups. Thus, these standards are not fully applicable for solving the problems of sports and health improvement groups and providing the necessary quality of training.

Key words: ski training; sports and health improvement groups; primary school children; hygiene requirements; training modes; regulatory requirements.

I. INTRODUCTION

The sports and health improvement stage has become an integral part of the training of future athletes in a number of sports schools. By solving the problems of health improvement and the formation of interest in physical education and sports, this stage creates a sports reserve from those children who choose sports. Their success is determined by taking into account the organizational and pedagogical conditions of the educational process. However, the requirements for the organization and content of classes at this stage have a number of contradictions, which are not always clearly regulated by corresponding acts. This results in certain difficulties in achieving the goals set by the authors of sports programs at the sports and health improvement stage. The solution of both health and development problems involves creating a system of classes in sports and health improvement groups (SHI), taking into

account hygienic factors that both appear as an integral part of physical education and perform an independent function. The importance of this approach to PE classes with children of primary school age indicates the need to analyze the programs of cross-country skiing and to identify the general trend that guides trainers in their work with students. Hygienic requirements in the physical education of children have been established for a long time but need to be revised due to the active involvement of children below the age required for starting sports. This situation is observed everywhere, including skiing [1-3].

In physical education, hygiene factors play one of the important roles, and this is due to the fact that hygiene requirements govern all aspects of physical exercises. Hygiene means combine nonspecific means of physical education, which experts are divided into two groups: means that accompany physical education and means that have become part of practical exercises [4; 5]. This implies compliance with the hygienic standards for conducting classes and matching the selected means and methods with the physiological and psychological characteristics of a particular age. The need to comply with hygiene requirements is determined by the fact that skiing refers to cyclic work of various intensity [6; 7]. During the distance, the load on the body is determined by the length and type of the route, meteorological conditions, speed, and the preparedness of those involved. In SHI groups, the need to observe anatomical, physiological and age-related psychological characteristics, as well as hygienic requirements for clothes, equipment, weather conditions, load, training method, etc. is an important element of the general mechanism on which the effectiveness of skiing in the SHI groups is based. Moreover, it is equally important to analyze the content of the programs, as the ratio of the parts of the program is important for the physical development of the child affecting the quality of movement technique and providing the basis for motivation for further studies of this type.

II. MATERIALS AND METHODS

The inclusion of the sports and health improvement phase as a stage of training athletes is indicated in the order of the Ministry of Sports of the Russian Federation

dd. October 24, 2012 N 325 “On Methodological Recommendations for the Organization of Sports Training in the Russian Federation”, in which this stage is a part of sports training. SHI groups are created on the basis of additional programs and are implemented for children and adults within the time period established by the organization in agreement with the founder (the recommended volume is 36 weeks per year). Moreover, these groups do not belong to additional preprofessional programs and sports training programs [8–11]. To assess compliance with hygiene standards when organizing cross-country skiing in the SHI groups, we analyzed the programs drawn up for these cross-country skiing groups (Table 1).

TABLE I. ADDITIONAL SKI TRAINING PROGRAMS IN SPORTS AND HEALTH IMPROVEMENT GROUPS

№	Content	Time spent for different parts of the program (%)											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Theory	2.4	-	5.3	2.6	5.4	6.7	7.1	3.5	2.9	5.6	6.3	4.7
2	General physical fitness	41.8	55.4	56.4	61.5	75.7	38.2	55.3	36.9	64.5	37.3	55.8	55.4
3	Special physical fitness	20.5	21.4	19.4	32.5	-	19.8	18.8	12.5	18.8	18.2	23.5	17.3
4	Technique and tactics	34	21.4	12.7	-	12.8	13.5	4.7	8.4	12.4	13.5	11.6	14.3
5	Control exercises	-	0.9	4.8	-	4.8	5.9	-	3.5	1.4	5.6	1.4	1.8
6	Competitions	-	0.9	-	1.9	-	-	3.5	-	-	5.6	-	-
7	Medical examination	1.3	-	1.4	1.5	1.3	1.6	1.2	0.6	-	1.6	1.4	1.8
8	Health improvement camps and individual work	-	-	-	-	-	14.3	-	34.6	-	12.6	-	4.7
9	Recovery means	-	-	-	-	-	-	4.7	-	-	-	-	-
10	Instructor and referee training	-	-	-	-	-	-	4.7	-	-	-	-	-
Total	52 weeks (hour)	312		312		312			312				
	46 weeks (hour)		103					166		276		276	208
	36 weeks (hour)				252		252				252		

Note. 1 - Ishim sports school No 1, Ishim, Tyumen region; 2 – Vostok Sports School, Tula; 3 - Youth Sports School of the Yarkovsky Municipal District, Yarkovo, Yarkovsky district, Tyumen region; 4 – Baikalsk sports school, Slyudyansky district, Irkutsk region; 5 – Sports School № 1, Danilov, Yaroslavl region; 6 – Sports School, Chastye, Perm Krai; 7 – Sports School, Priuralsky district, Yamalo-Nenets Autonomous District; 8 - Sports School, Yevlashevo, Kuznetsk district, Penza region; 9 - Sports School, Tashtagol, Kemerovo region; 10 - Seltinskaya Youth School, Seltinskiy District, Udmurt Republic; 11 - Vozhegodskaya Youth Sports School named after A.I. Bogaliy, Vologda Region; 12 - Moshkovskaya Sports School, Novosibirsk region.

III. RESULTS AND DISCUSSION

Almost all programs consist of 46 or 52 weeks of classes per year. Only three programs (4, 6, 10) included 36 weeks of classes but exceeded the number of hours per week (7 instead of 6). Most likely the number of weeks for classes is more than 36. The programs developed for

each stage of sports training have certain requirements, which are presented in Table 2.

TABLE II. MODES OF TRAINING AND REQUIREMENTS FOR SHI GROUPS

Group	Min age, years	Max hours per week	Annual load, hours	Min number of people per group	Recommended number of people per group	Max number of people per group	Requirements for physical fitness
SHI	8-18	6	312	10	12-15	30	general physical fitness standards

In SHI groups, the maximum amount of training load per group per week can be reduced, but not more than 10% of the annual volume and no more than 2 hours a week with the possibility of increasing during the vacation period, but not more than 25% of the annual training volume. The duration of one training session is calculated in academic hours, taking into account the age of participants. One academic hour for students from 7 years and older is 45 minutes, the recommended number of classes 2 times per week for 2 hours [12-15].

A necessary hygienic factor is the rational daily regimen of students. This creates the basis for the activity and recovery of the body and leads to an increase in sports performance.

Table 1 showed that the ratio between the number of hours and the number of weeks for classes per year was not always an integer. Thus, the overall picture showed the insufficient development of lesson planning for children in SHI groups.

In SHI groups with children of primary school age, it is important to observe all the conditions that ensure a positive result, whether it is an increase in the level of physical preparedness or health status. Planning the content of classes plays an exceptional role. Unfortunately, the content of classes in SHI groups is determined by additional programs implemented in physical education and sports, and the requirements of federal standards for sports training do not apply to classes in these groups. Classes in ski training at a sports school are part of a ski racing training program and are developed independently by the trainer.

As can be seen from the table, the approximate content of the programs varies enough in hours. Virtually all sections vary greatly in volume. The hours on the general and special physical fitness in the SHI groups vary greatly. It should be noted that the planning of classes in SHI groups is determined only by the personal ideas and knowledge of the authors. Some programs do not presume the recommended 312 hours. However, the recommended 36 weeks of training meet these requirements. It should be said that almost all programs comply with the stated requirements and conditions. The same can be said about the intensity of training. In all regulatory sources, load is indicated only for the initial

groups in cross-country skiing. We conditionally accepted the minimum threshold as the maximum for SHI groups (Table 3).

TABLE 3. RATIO BETWEEN THE VOLUME OF TRAINING AND TYPES OF PREPARATION AT THE SPORTS AND HEALTH IMPROVEMENT STAGE

Preparation	Ratio (%)
General physical fitness	>57
Special physical fitness	<18
Technique and tactics	<18

Based on these data, we can say that the overall picture clearly demonstrates the excess of regulatory requirements for the amount of training load for children in SHI groups (Table 4).

TABLE 4. ANALYSIS OF THE RATIO BETWEEN THE STANDARD AND ACTUAL VOLUMES OF TRAINING BY TYPES OF PREPARATION IN THE SHI GROUPS

Preparation	Sports school												Ratio, %
	1	2	3	4	5	6	7	8	9	10	11	12	
GPF	41,7	55,4	56,4	61,6	75,7	38,2	55,3	36,9	64,5	37,3	55,8	55,4	>57
SPF	20,5	24,2	19,3	32,5	0	19,8	18,8	12,5	18,8	28,2	23,5	17,3	<18
TT	34,4	21,4	12,8	0	12,8	13,5	4,7	8,4	12,4	13,5	11,6	14,3	<18

Table demonstrates that 25% of educational organizations increase the volume of physical education in the SHI groups to the level of training corresponding with the initial training groups. In our opinion, this is quite advisable, taking into account the goals of this stage. On the contrary, a significant decrease in the means of general physical fitness is undesirable, since it does not provide the proper foundation for preparing children for future serious skiing lessons or simply for increasing the level of physical and functional fitness.

As for the hours for special physical fitness, practically all groups had a complicated program and the share of special training was higher than even at the initial training stage. Inconsistency with the age of children could lead to injuries, to a decrease in interest in activities, etc. Technical and tactical training, its volumes, in our opinion, correspond to the classes in SHI groups. One of the training programs does not involve technical and tactical training, which is not advisable since competitive exercises (skiing) are also aimed at special physical qualities.

From a hygienic point of view, many sections of the developed programs require their further improvement. The volume and content of the load either do not solve the tasks facing by the SHI groups, or put too great demands on students.

VI. CONCLUSION

The study allowed us to evaluate the ski program for children of the Kuznetsk Sports School, Penza region. According to the established regulatory requirements, the volumes of the training sections in the SHI groups for cross-country skiing and the volumes declared by the program meet the official requirements. There is a large number of hours for classes of children in the summer camp. A clear picture of the content of training in the SHI

groups for children of primary school age involved in cross-country skiing is presented in Figure 1.

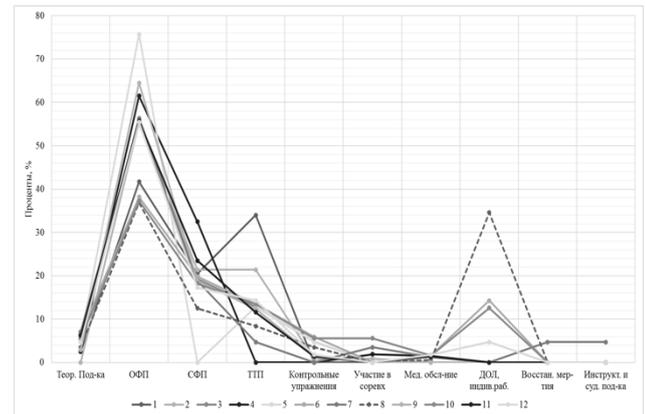


Fig. 1. Content of training in the SHI groups for children involved in cross-country skiing

In fact, the lack of legislative regulation of the content of programs for the SHI groups and insufficient research in this area lead to a misunderstanding of the importance of the sports and health improvement stage for a novice athlete. Educational organizations that develop general programs in the field of physical education and sports experience significant difficulties in compiling them. Further work in this area will systematize training in the SHI groups and contribute to the creation of a unified educational process in ski training.

Based on the analysis of the data collected, we made a number of conclusions: effective work in SHI groups should be based on developed program and normative documents, which are currently generalized and require systematization; work in SHI groups should have a developed structure and content or be advisory in nature, supported by hygiene standards for working with children in such groups; the preparation of children in SHI groups should be oriented towards the general preparation of children in a selected form, but not solve the problems of the initial stage of sports training.

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