

THE CONSTRUCTION OF THE TRAINING PROCESS HIGHLY SKILLED ATHLETES IN SOCCER AND FIELD HOCKEY IN THE ANNUAL CYCLE OF TRAINING

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Annotation. The purpose of the study - to justify the theoretical and methodological principles and concepts of the training process of building highly skilled athletes in soccer and field hockey in the annual cycle of training. The results. Calculate the ratio of training loads of different orientation in the annual cycle of training. Means of producing football players in the annual training cycle is as follows: non-specific (general training exercise) - 45.6%, specific - 54.4% (special training exercise - 4.1% subsidiary - 22, 7%, competitive - 27.6%). Means of producing players in the annual training cycle is as follows: non-specific (general training) exercise - 49.0%, specific - 51.0% (special training - 2.3% subsidiary - 26.1%, competitive exercise - 22.0%).

Keywords: football, hockey, one-year, training, cycle, load funds, theory, periodization training.

Introduction

At present, one of critical problems of highly qualified sportsmen's training in game kinds of sports is searching of rational ways for improvement of training process.

First of all it is conditioned by the following:

- Increase of game kinds of sports' popularity among different groups of population. In most countries of the world basketball, volleyball, handball, football, hockey are the most mass kinds of sports;
- Intensive development of game kinds of sports in different countries of the world that still more aggravated competition on international championships, especially on Olympic Games and world and European championships. For example, in football, the quantity of teams, which take part in final matches of European championships increased from 8 to 12, in world championships – from 16 to 32;
- Extension of competition schedule, first of all due to participation of teams in different international tournaments on club levels and with combined teams. The quantity of official matches in sport season is 60-80 matches;
- Change of outdoor games competitions' system within annual training cycle. Last decade championships of Ukraine are conducted as per schema "Autumn-Spring", that conditions simultaneous application of one-cycle's, two – and three-cycles' structure of annual macro-cycle.

Analysis of scientific-methodic works permitted to determine, that nowadays the problems of complex solution of annual macro-cycle's construction in outdoor games, on the base of theory of periodization, have not been sufficiently elucidated. Some works deal with control of sportsmen's preparedness, training and competition activity on different stages of annual training cycle [7, 10], development of means and methods of sportsmen's training within micro- and meso-cycles and stages of annual macro-cycle [2, 4, 5, 9], planning and programming of structural units of macro-cycle [1, 3, 8]. There has not been still any solution of training process construction's problem for outdoor games' sportsmen on the base of theory of periodization, as per schema of doubled annual training cycle. Searching of ways for optimization of training process in team kinds of sports is an urgent demand. It is necessary to provide scientifically grounded approach to training process's re-orientation from, mainly, empirical-intuitive (as on to-day it is still characterized just by these features in outdoor games) to controlled process with predictable results, that will permit to shift the work with club and combined teams to qualitatively new level, first of all at the account of introduction of clear key points, on the base of which it would be possible to purposefully simulate and objectively evaluate value and orientation of training influences on sportsmen's organisms.

Purpose, tasks of the work, material and methods

The purpose of the work is to ground theoretical-methodic principles and conception of training process's construction for highly-qualified sportsmen in football and field hockey in annual cycle of training.

The tasks of the researches:

- 1. To study and analyze modern state of problem of highly qualified sportsmen's training process's construction in football and field hockey in annual cycle of training
- 2. To determine structure and content of training process of football and field hockey sportsmen on different stages of annual cycle of training.
- 3. To provide theoretical and experimental foundation of conception of training process's construction in annual cycle of outdoor games' sportsmen's training.

Results of the researches

On the stage of stating experiment the main task of the research was to scientifically ground construction of football and field hockey players' training process on different stages of annual cycle of training. With it we determined specificities of trainings' structures, of micro-cycles, meso-cycles, stages and periods of football and field hockey teams' training in annual macro-cycle. It was assumed, that determination of structure and content of training cycles and stages would permit, on the one hand, to optimize the structure of football and field hockey teams' training process

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and, on the other hand, to experimentally verify application of means of simulation in training process of outdoor games' sportsmen on the stage of forming experiment.

On the base of theory of periodization of sport training (L. Matveyev, 1964-2001; V. Platonov, 1980-2008) we used in this research doubled cycle of training process construction for football and field hockey players during all year (see fig.1).

Distribution of training loads of different orientation in annual cycle of football players' training is presented in fig.2: 41.2% of loads are mainly in aerobic mode; 50.7% are mixed (aerobic-anaerobic) loads and 8.1% - anaerobic loads, including: 5.0% alactate and 3.1% - glycolytic. Means of football players' training in annual cycle are distributed in the following way: not specific (general training exercises) -45.6%, specific -54.4%, including: exercises of special training -4.1%, auxiliary -22.7%, competition exercises -27.6%.

Distribution of training loads of different orientation in annual cycle of field hockey players' training is presented in fig.3: 51.8% are aerobic loads; 42.5% - mixed loads (aerobic-anaerobic) and 5.7% anaerobic loads, including: 3.6% - alactate and 2,1% - glycolytic.

Cycles	g: 3.6% - alactate and 2,1% - glycolytic.										II							
Month s	1–3						3 – 6	6 – 7			7 –11	11–12						
Period s	1-st initial							1-st competitio n	2-nd initial			2-nd competitio n	transitive					
stages	General- preparatory				Special training			competition	General- preparatory		Special training		competition		transitive			
Meso-cycles	involving		Basic development		Basic-stabilizing (control- preparatory)		Pre-competition			involving		Pre-competition			competition	recreational		
Micro-cycles	Two involving	recreational	Two advanced	recreational	Two advanced	recreational	Two auxiliary	recreational	Alternation of competition, inter-match and recreational	recreational	involving	advanced	auxiliary	auxiliary	Alternation of competition, inter-match and recreational	recreational	Leave (home task)	

Fig.1. Structure of doubled cycle of highly qualified football and field hockey sportsmen' training during year

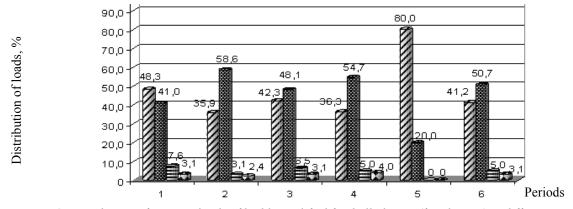


Fig.2. Distribution of training loads of highly qualified football players (first league) in different periods of annual training cycle:

1 –first initial (preparatory) period; 2 – first competition period; 3 – second initial (preparatory) period; 4 – second competition period; 5 – transitive period; 6 – annual training cycle;



Periods

Z – aerobic loads;
Z – aerobic loads;
Z – anaerobic alactate loads;
Z – anaerobic glycolytic loads.

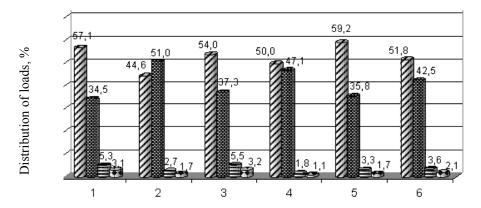


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Z – aerobic loads;
Z – aerobic loads;
Z – anaerobic alactate loads;
Z – anaerobic glycolytic loads.

Means of hockey players' training in annual cycle of training are distributed as follows: non-specific (general training) exercises -49.0%, specific -51.0%, including special-preparatory -2.3%, auxiliary -26.1%, competition exercises -22.0%.

Annual training cycle for combined team is constructed, considering, on the one hand, achievement of the set for current year goal and, on the other hand, preparation for and participation in main competitions of 4-years period – Olympic Games and world championships.

In annual cycle of trainings, planning of training process of combined field hockey team of Ukraine is carried out in parallel with planning of players' trainings in clubs. For direct training of players in combined team 95-115 days are assigned, during which 133-155 trainings are conducted. Besides these trainings, in annual cycle there are conducted 5-7 preparatory, 9-13 control, 1-2 auxiliary (model) and 5-8 scheduled matches.

Summary:

- 1. At present stage construction of annual training cycle of football and field hockey players is conditioned by the following factors:
- Annual training of players is carried out by schema of doubled cycle: first cycle includes first initial (preparatory) and first competition periods, second cycle consists of second initial, second competition and transitive periods;
- Structure of every period consists of appropriate stages: general training, special training, competition and transitive;
- Structure of every stage consists of determined meso-cycles: involving (warming up), basic (developing), stabilizing (control-preparatory), pre-competition, competition and recreational;
- Structure of meso-cycles consists of micro-cycles: involving, advanced, auxiliary, competition, inter-match, recreational.
- 2. In annual macro-cycle for training work with professional football team (first league) approximately 302 days are assigned, during which 439 trainings are carried out, particularly: 295 (67.1%) of developing, 87 (19.8%) auxiliary (maintaining form), 57 (13.1%) recreational. During annual macro-cycle team conducts 36-44 of scheduled and 14-22 preparatory, control and auxiliary (model) matches. Total scope of training work of club football team in annual macro-cycle is approximately 1446 hours.

For training work with club field hockey team (major league) approximately 316 days are assigned in annual macro-cycle, during which 470 training are carried out, particularly: 253 (53.8%) developing, 139 (29.5%)maintaining form, 78 (16.7%) recreational. During annual training cycle, team conducts 62 scheduled, 7 preparatory, 19 control and 17 auxiliary (model) matches. General scope of training work of club field hockey team is approximately 1232 hours.

The prospects of further researches in this direction are connected with development of models of training meso-cycles in team kinds of sports.

References:

1. Aleshin I. N. *Model' godichnogo cikla podgotovki gandbolistov vysokoj kvalifikacii* [Model of year cycle preparation of highly qualified handball players], Cand. Diss., Chelyabinsk, 2004, 186 p.

- 2. Bazilevich O. P. *Upravlenie podgotovkoj futbolistov na osnove modelirovaniia trenirovochnogo processa* [Manage the preparation of the players based on the modeling of the training process], Kiev, 1983, 20 p.
- 3. Buznik A., Dzhus O. *Instrukciia po rabote nauchno-metodicheskikh grupp v neamatorskikh futbol'nykh komandakh* [Manage the preparation of the players based on the modeling of the training process], 2001, 40 p.
- 4. Vozniuk T. V. Optimizaciia trenuval'nogo procesu kvalifikovanikh basketbolistok zasobami shvidkisno-silovoyi spriamovanosti na peredzmagal'nomu etapi pidgotovki [Optimizing training process means skilled basketball players speed-power focus on precompatitive preparation], Cand. Diss., Lviv, 2006, 21 p.
- 5. Godik M. A. *Fizicheskaia podgotovka futbolistov* [Physical training of football players], Moscow, Terra-Sport, Olympia Press, 2006, 272 p.
- 6. Golomazov S. V., Chirva B. G. *Teoriia i metodika futbola* [Theory and methods of football], Moscow, TVT Division, 2008, 476 p.
- 7. Liukshinov N. M. Formirovanie model'nykh kharakteristik sorevnovatel'noj deiatel'nosti futbolistov na osnove analiza igr chempionata mira i pervenstva SSSR [Formation of model characteristics of competitive activities on the basis of the analysis of football players the World Cup games and the championship of the USSR], Leningrad, 1989, 212 p.
- 8. Portnov Iu.M. *Teoreticheskie i nauchno-metodicheskie osnovy podgotovki kvalificirovannykh sportsmenov v igrovykh vidakh sporta* [Theoretical and methodological basis of preparation of qualified athletes in team sports], Dokt. Diss., Moscow, 1989, 326 p.
- 9. Savin V. P. *Teoriia i metodika khokkeia* [Theory and methods of hockey], Moscow, Academy, 2003, 400 p.
- 10. Shamardin V. N. *Modelirovanie podgotovlennosti futbolistov* [Simulation training of football players], Dnipropetrovsk, Thresholds, 2002, 200 p.
- 11. Sunderland C., Nevill M.E. High-intensity intermittent running and field hockey skill performance in the heat. *Journal of Sports Sciences*. 2005, vol.23(5), pp. 531–540. doi:10.1080/02640410410001730197.
- 12. Brétigny P., Leroy D., Button C., Chollet D., Seifert L. Coordination profiles of the expert field hockey drive according to field roles. *Sports Biomechanics*. 2011, vol.10(4), pp. 339–350. doi:10.1080/14763141.2011.629675.



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