

MODEL CHARACTERISTICS OF HOCKEY SPORT PREPARATION IN BULGARIA

(Preliminary communication)

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Abstract

Modeling of sport preparation is achieved through the development of basic models which represent most specific model characteristics – qualitative and quantitative, with reference to their importance in the training process and competition activities. The aim of this research is to model hockey sport preparation in Bulgaria revealing the basic quantitative indexes – model characteristics of planning. In order to achieve our aim we studied the existing literature and normative resources on the problem. We systematized the acquired information and we used logical, theoretical, variation and contrastive analysis to process it. The results from our research definitely prove that there is a normative model developed for planning the sport preparation of Bulgarian hockey players with quantitative indexes - model characteristics.

Keywords: *hockey, training hours, competition hours, general models in sports, group models in sports, individual models in sports, variation analysis, percentages*

INTRODUCTION

According to Platonov (Платонов), (1986), models used in sport are divided into three levels: general, group and individual models. General models represent the characteristics of a subject or a process based on the results from studying a relatively large group of athletes of a definite age, sex and qualification. Models from this level carry information about general rules of sport preparation, training and competition activities. Group models are built on the basis of studying a concrete group of athletes or teams, having specific peculiarities within a given sport. Models characterizing specific aspects of the sport preparation of goalkeepers, defenders, defensive mid-fielders and attackers are good examples here. Individual models are developed for concrete players.

Zhelyazkiv & Dasheva (Желязков & Дашева), (2011), define sport preparation as a multifactor process and a system of specialized knowledge, means, methods, and forms of organization, providing complex conditions for an adequate preparation and maximal realization of an athlete's potential abilities.

Raychev (Рачев, 1999), states that sport preparation is a complex long-term, pedagogical, recreational and

educational process, taking strictly into account the individual age-sex characteristics of the developing youth.

Effective management of sport preparation is closely connected to the modeling of the training process. Korenberg (Коренберг), (2004), mentions seven definitions of the term "model".

According to Platonov (Платонов), (2004), a model is an example – a standard which an object, process or event meets.

Korenberg (Коренберг), (2004), defines "a model" as the material and process map, or the schematic information map, of specific processes or events, also referred to as the original or the modeled object. The model has to reflect adequately not all aspects and functions of the original, but the most significant ones for its creator.

Depending on the management purposes there are: basic, perspective, theoretical and mathematical models. Basic models are developed with reference to the specific indexes on different stages of the training process and they mainly give information. Perspective models are built on the grounds of the dynamics of sport achievements, following the rules of development

of a sport. Theoretical models represent a system of knowledge, describing and explaining the processes, the events, and the influence of the different aspects of sport preparation. Mathematical models are based on the results of the mathematical and statistical analysis,

We systematized the acquired information and we used logical, theoretical, variation and contrastive analysis to process it.

RESULTS

Table 1. Values of the basic quantitative indexes for annual hockey sport preparation in Bulgaria

AG years	TT minutes	NTW number	NTA number	TH hours	CD minutes	Competitions		CH hours
						NC	NCD	
-8	up to 45 min.	2	80	60	20/20	20	20	20
8-10	up to 60 min.	3	120	120	30/20	25	30	30
11-12	up to 75 min.	3	120	150	30/30	25	35	35
13-14	up to 75 min.	4	160	200	40/30	25	40	40
15-16	up to 90 min.	4-5	170	250	70/40	25	45	50
17-18	up to 90 min.	5	200	300	70/40	25	50	60
+18	90-120 min.	+5	+300	+500	70/40	30	70	100

Table 2. Ratios between training hours (TH) and competition hours (CH) in different 8 – 20 years old age groups

AG	8 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	Total
TH	360 (120)	300 (150)	400 (200)	500 (250)	600 (300)	1000(500)	3160 hours
CH	90 (30)	70 (35)	80 (40)	100 (50)	120 (60)	200 (100)	660 hours
Total	450 (150)	370 (185)	480 (240)	600 (300)	720 (360)	1200 (600)	3820 hours
% ratios	80/20	81/19	83/17	83/17	83/17	83/17	83/17

and they represent graphics, equations, coefficients, algorithms, etc.

According to Kostjuevich (Костюкевич), (2010), a model represents a definite structure, comprised of various indexes reflecting sport results. The structure of each model contains model characteristics and model indexes.

Model characteristics are viewed as the optimal - ideal condition of an athlete, team or organization, when the top level results are achieved. Model indexes are subordinated to model characteristics, and using them we could judge the level of sport preparation.

The aim of this research is to model hockey sport preparation in Bulgaria revealing the basic quantitative indexes – model characteristics of planning.

METHODS

In order to achieve our aim we studied the existing literature and normative resources on the problem (Antonov (Антонов), 2006); (Antonov (Антонов) 2006b); (Tsaroucha (Царуха), & Antonov (Антонов), 2010).

DISCUSSION AND CONCLUSIONS

The results from our research definitely prove that there is a normative model developed for planning the sport preparation of the Bulgarian hockey players with quantitative indexes - model characteristics (Table 1).

The duration of the training sessions varies from 40 minutes in 6-7 years old, to 120 minutes in men and women. The number of weekly sessions is also specified – from 2 training sessions in 6-7 years old, to 10 sessions in men and women. The dynamics of basic parameters, characterizing the volume of educational and training work - NTA and TH are reflected in Table 1. From the obtained information it is clear that training sessions vary annually from 80 – in 6-7 years old, to 300 – in men and women, i.e. the increase rate in the number of the annual training sessions from beginners to elite hockey players is 3.75 times. The model characteristics of the volume of the education and training process, reflecting the number of training hours has a more dynamic increase - from 60 hours annually in 6-7 years old, to over 500 in men and women, i.e. an increase of

more than 8 times.

The dynamics of model indexes characterizing competition activity – number of competitions NC, number of competition days NCD and competition hours CH, is reflected in Table 1. It is obvious from these results, that with the annual number of competitions NCA, there is hardly any difference between indexes - from 20 competitions in 6-7 year olds to 30 competitions in men and women. When planning the sport preparation of the beginners, there is an adequate number of competitions scheduled – club, town, regional, state and international competitions, aiming to increase the interest in the sport. With the elite players, quantitative indexes of competition activity are much greater compared to those of beginners. However, their increase does not correlate with the number of competitions NC, but with competition days NCD – 20 days versus 70 days (3.5 times increase), and more significantly with competition hours CH - 20 hours versus 100 hours in men (5 times increase). These results are mainly the consequence of the greater duration of matches with elite players.

Long-term sport preparation of hockey players is a continuous process, involving a 10-12 year period, when beginners gradually go through all stages of development reaching the top level performance. We have given the values of two of the most important quantitative indexes of sport preparation in Table 2 – training hours TH and competition hours CH, characterizing the volume of training and competition activity in players 8 to 20 years old. The results show that a 12 year period is needed for the development of elite hockey players, including a schedule of planned 3160 hours of training and 660 hours of competition activity, realized in 2300-2500 training sessions and participation in 400-500 official matches. The relationship between training activity and competition activity expressed in percentage is 83% to 17%. The percentage correlations between the training hours of different age groups and their respective total volume of training work logically determines the greatest percent in 19-20 years old (31%) and the smallest in 8-10 years old (7%). In this study we do not analyze the percentage representation of the smallest children (-8), because the Bulgarian hockey model of sport preparation does not include this age group. Analyzing

the percentage correlation of the competition hours in different age groups, we distinguish the same trend. The greatest percent of competition activity in comparison to the total volume is achieved in 19-20 years old (30%), and the smallest - in 8-10 years old (9%).

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