

**NATIONAL UNIVERSITY OF PHYSICAL EDUCATION AND SPORTS -
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ABSTRACT OF DOCTORAL THESIS

Author: Savu Cristian Florian

Scientific coordinator: Prof. univ. dr. Dorina Orțănescu

Title of doctoral thesis: *Optimization of physical training in junior basketball players I as a determining factor in maximizing sports performance*

Key-words: optimization, physical training, junior basketball players I, maximizing, sports performance.

Introduction

Concept of basketball game, in specific current vision, requires understanding and acceptance of the characteristics and peculiarities of its promotion of training based on a national strategy to target the specific age work samples such training and competition in compliance with internationally.

Basketball current manifestation involves superior indices of speed capacity, which corresponds to filing a consistent exercise doubled as a mental effort. Therefore, with manifestations of speed and targets strength and coordination in enforcement actions, joint mobility and suppleness muscle force under these forms it is necessary to develop a sense of ball, resulting a safety trapping and passing object game (balls) and precision of completion actions.

The motivational theme choice

Modern sports training requires increased attention to all components depending on the specific structure of each branch or practiced sports events. However, in most cases, physical training is recognized as a fundamental factor in the preparation of athletes, as only optimal development of general and specific driving ability can bring success in sports competitions.

The current methodology of training in terms of sports has undergone

important design changes to the content, structure, organization and performance of training crews and their components. In this context, as a result of development of knowledge based on scientific but also practical experience of coaches at different levels in the design, development and implementation of training programs were implemented principles, methodologies and technologies of modern teaching specialized targeting methods the objectivity and modernization of sports training content.

That is why we chose the present theme in an attempt approach to demonstrate that the differential treatment of specific physical preparation of methodological reasons, depending on the position held in the game (a junior basketball players I, 17-18 years old, in our case) players can increase efficiency and therefore better results can be obtained in contests and competitions, which gives our thesis regarding current concerns mentioned and their implementation.

News and reflection in the literature theme

Currently, athletic performance and getting it highlight importance of the steps in the process of training pathways and methodical way of transmitting information, practicing in an educational system with correction-control functions based on feedback phenomenon. From this point of view, the experts consider that athletic performance in teaching - learning is conditioned by objective and content programming to harness the skills, talent, motivation and aspirations of any sport.

Over time it has been considered that physical training complex, namely the concurrent development of all conditional and coordinative abilities should be a basic principle in preparing athletes, regardless of the profile applications. Experimental research and careful observations refute the validity of this principle in any situation.

The complexity of preparing athletes, result of the requirements necessary to obtain increased performance, necessary to optimize this process, and the involvement of many other factors of organizational, medical and basic material with the purpose of increase scope, exceeding categorically on its own with a classic educational process. It can be concluded that during the current approach is needed to the detriment of the traditional qualitative, quantitative sports training.

Periodicity as planning effort in it, must take into account the realities of organizational - calendar competition - and not become an end in itself. Variability bio-psycho-social and motor behavior (predispositions, skills, talent) has an unrepeatable character which obliges the differential treatment of each personality (paying so much attention to individualization).

In accordance with the requirements and rules of conduct and organization of doctoral studies in quadrille U.N.E.F.S. thesis is divided into three parts, namely: Part I - Fundamentals conceptual, scientific and methodological aspects of the

game of basketball; Part II. - Preliminary study on optimizing physical training in junior basketball players and as a determining factor in maximizing sports performance; Part III. - Personal contribution related to optimizing physical training for junior basketball players as a key factor in maximizing sports performance.

Part I aimed to build information and knowledge necessary including design and conduct experimental study related tasks.

Part II, also the preliminary study is to determine the opinions of coaches and training specialist teachers in junior basketball players on the current methodology of work, especially on the share of physical training in sports training.

On the other hand, following physical training and specific assessment of the level of practitioners play basketball at a junior age I (17-18 years) in relation to the requirements of Model FRB assessment will underpin the design and implementation of a training program geared towards improving functional changes, the morphological and driving necessary to achieve superior sporting performance. Meanwhile, research work aimed to verify instruments and to determine any failures of training programs.

Hypothesis of the preliminary study

a. The weight of the basketball players for junior physical training, exercise in practice, can be determined by a questionnaire survey on the basis of the specialists applied operating at this level of age;

b. Evaluation of the physical training for junior basketball players, based on the association of specialized model can reveal the degree of adaptation to effort, as well as functional and morphological changes induced in the course of driving training.

Subjects of the preliminary study

The preliminary study was conducted on a sample that includes:

- 35 teachers and coaches operating in polling basketball school sports clubs and classes, basketball sports program in high schools in the country, to which was applied a questionnaire survey method described. Age coaches interviewed between 25 and 56 years, with seniority from 3 to 28 years, of those surveyed, 21 coaches category 4 - Class II 5 - Category III.

- 26 junior athletes components of the group I (17-18 years) of Club School Sports Târgoviște and Ploiești profile participants in the National Championship. Please note that the 26 athletes were divided into two groups, taking into account the origin of the club to which they belong, as follows: A total of 13 subjects (athletes sports club School Târgoviște) are components of the experimental group, and the remaining 13 - subjects are athletes of Ploiești School Sports Club, also

members of the control group.

- Both groups have conducted training in accordance with the training program developed by coaches.

Applied research methodology

To achieve the purpose of research, checking assumptions were used scientific methods of research established as follows: teaching observation; the scientific literature and methods in the art; survey-based call and questionnaire; Method of measuring and testing - anthropometric measurements (height, weight, extent of the arms, the chest perimeter resting versus inspiration - expiration), control samples for preparing the general physical (running speed on the distance of 50 meters with the start of the standing, bending and stretching the arms of the forward lying supported tractor hung from the horizontal bar, the lifting feet 90 ° from hanging scale fixed trunk extension of lying face within 30 seconds and the running resistance on the distance of 1000 meters), the sample for the preparation of specific physical-technical (running speed on the distance of 30 meters, chromatography vertical small marathon way, complex way specific to each job, and complex free-throw) and testing for functional capacity (forced vital capacity, body mass index Index Lorentz test and tests Ruffier and Sargent); statistical and mathematical methods of data processing; Graphic representation method.

Conclusions of the preliminary study

According to the analysis of replies to questions from the questionnaire teachers and coaches working with junior I have concluded that the readiness of basketball players of 17-18 years is relatively good. All coaches recognize that specific physical preparation of basketball players has large gaps in 17-18 years, it is the support technical and tactical training.

Regarding the specific physical training for junior basketball players with the 35 respondents who operate the vast majority believes that it has an average

Therefore the hypothesis is confirmed that the share of physical training for junior basketball players in practical training, can be determined by a questionnaire survey on the basis of operating skilled applied at the level of age;

By analyzing the data recorded in preliminary testing anthropometric measurements and comparing them with the model developed by F.R.B., it is found that the subjects of both the experimental group and the control group of model performance did not satisfy the requirements for this age.

Regarding the functional development, analyzing the performance of athletes of both groups (experimental and control), we see that the differences are in favor of controls for players defender that players of the post pivot of the experiment.

In conclusion, we can say that averages by athletes investigated the

preliminary study highlight results in the training set for this age by the standards of performance of the model FRB, which allows us to state that the juniors are necessary to improve the content factor general and specific physical training, the idea of achieving performance targets.

The results of testing the two groups confirmed for research aimed at evaluation and specific physical training practitioners basketball game of junior I age category (17-18 years), assessment underpinning design and implementation of a training program geared towards improving changes of functional, morphological elements and driving necessarily ones to achieve superior sporting performance.

At the same time, hypothesis regarding assessment of the level of physical training for junior basketball players, based on the association of specialized model can reveal the degree of adaptation to effort, as well as functional and morphological changes that induce the course of driving training.

Data from preliminary study in which it was established level of physical training of the junior basketball players (17-18 years), carried out by comparison with the scales of physical and technical requirements established by the FRB, allowed us to identify the causes inferior model motor junior I, was 17-18 years old and basic support in implementation of interventions aimed to improve training and sport.

Part III - Personal contribution related to optimize physical training for junior basketball players as a key-factor in maximizing sports performance, aimed to optimize physical training program content based on the results of the preliminary study. Inclusion in the general and specific physical training of basketball players for junior (17-18 years), structures of exercises designed to increase the level of expression of conditional and coordinative abilities, to the application of specific technical procedures basketball game, while improving exercise capacity, aiming to obtain superior performance in sporting competitions.

Hypothesis of experimental research

a. Implementation of training programs geared towards efficient means of physical training will lead to achieving the standards of specialist federation model.

b. Increasing share of the economy training of general and specific physical training will increase exercise capacity of junior basketball players and hence the sport performance.

c. Selecting physical training content based on actual measurements and scientifically will lead to improved performance technique.

Subjects of experimental research

Basic research was conducted on a sample of 26 components of the basket sections of juniors I (17-18 years) of the School Sports Clubs Târgoviște and

Ploiești, participants to the National Championship field.

It is to be noted that the 26 athletes were divided into two groups, taking into account the origin of the club to which they belong, as follows: 13 subjects (School Sports Club Târgoviște members) are components of the experimental group and the remaining 13 subjects being members of School Sports Club Ploiești, respectively the control group.

Methods and test used for research

To achieve the purpose of research, checking assumptions were used scientific methods of research established as follows: the experimental method; measurement and testing method; evidence for general physical preparation; specific physical preparation; technical training; tests to evaluate the adaptation effort, the same used in the preliminary investigation; statistical and mathematical methods of data processing; Graphic representation method.

Experimental method

Experimental method will be the main research method, it involves establishing and using a set of conditions by which we verify the veracity of preliminary assumptions made both for research and for the base. In our case, the experiment base was the application of a physical training program general and specific based on structures of exercises designed to increase the level of expression of capacities conditional and coordinative and the application of technical procedures specific to the game of basketball to achieve superior performance in sporting competitions.

Basic experiment was conducted during a competitive year or month July 2013 - May 2014. The members of the experimental group have worked after the training program proposed by us, and those in the control group were used specific means for this age group, currently used by coaches.

Programming and preparedness of planning

Physical training program for basketball players (juniors, 17-18 years old) was designed and built new profile by studying literature with reference to this subject, and following analysis of the approach taken by many coaches and teachers with specialization basketball and based on personal experience. Thus, defining objectives and determining program content of physical training applied in the experiment base, were preceded, on the one hand, a survey based on a questionnaire and on the other hand, the application of control samples within preliminary experiment - the purpose of these activities was directed to the opinions of teachers and coaches carrying out specific groups of basketball players aged 17-18 years, and assess the level of physical training and technical subjects included in the research.

The content of the training program team School Sports Club Târgoviște (experimental group), the model of the game approached, followed the development of indices senior manifestation of motor skills closely related to increasing the overall effectiveness of the game in attack and defense, with all that involves two phases of the game for each post in part.

In terms of its importance proposed new training program for basketball players for junior (17-18 years) clearly highlights the amount of hours of training directly related to physical and psychological characteristics of athletes enrolled in this category age, the preparation process is characterized by flexibility and adaptability to all components of sports training - physical training benefits on average 35% of the hours of training, the technical 27.5%, the tactic of 22.5%, the theoretical 6 % and 9% intended psychological preparation.

Under the program, the appropriate started preparatory period was devoted to general physical training, creating the premises of a functional nature of the proposed performances to be achieved.

As a result, the means used in this time targeted upgrading of the capacity of driving out, preferably in the level of expression of the capacity (quality) of the speed and coordination abilities (skill) is concerned, at the same time, and the systemic growth of the possibilities of aerobic body (resilience).

The second part of the training period - defined and stage specific training or pre-competitive - content physical training overall has acquired specific features being directed to improving indices show increased capacity conditional and the coordinative requested by playing basketball. Annual training plan, depending on the structure of the competitive calendar year 2013-2014, accordingly to juniors I (17-18 years), shows the weight and objectives for each component of sports training. Based on the structure of this plan were developed micro-cycles training that present number of training for general and specific physical training.

Conclusions

Conclusions of experimental research

Progress samples for anthropometric and motor skills applied with specific leads us to observe that training program and game content, also methodology training process proposed by us in the experiment base, was effective multi-causing obtain of significant performances approaching scales of controls and requirements of resort Federation.

Those elements confirm hypothesis formulated earlier for experimental research that shows implementation of training programs was geared towards efficient means of physical training, those willing to lead to achieve standards federation model of a specialist.

Analysis of the results obtained following the implementation of the training program allowed us to see that between groups are not to be noted significant differences in all six samples applied to assess physical training by general highlighted values of Student test, whose values varies threshold meaning more than 5%, which shows that at the beginning of the experiment both groups have the same level of development of motor performance.

Following implementation of experimental program, it was observed that results of the functional tests for both subjects for the control group and those for the experimental group are positive at the final tests, but progress of experimental group compared with the one of control group are significant, which shows that adaptation of the body to effort at the juniors aged 17-18 years could be perfectible and could maintain ratio between weight and height.

By mentioned hypothesis, is validated, as resulted after experimental research, that supports of growth economy share and training of general and specific physical training will increase exercise capacity of junior basketball players and hence the sport performance.

Links correlation between physical evidence and technical ones shows that development and improvement of physical qualities by using in training with the experimental group of technical structures and specific tactical game of basketball helped develop motor indicators and they in turn influenced manifestation superior technical execution.

We believe that physical attributes, also technical and tactical ones structures' used for improving technical performances and somatic parameters as well.

It is confirmed and experimental research assumption that the selection of content based on measurements of physical training real and scientifically, will lead to an improved technique for execution.

General conclusions

Following studying literature references for scientific issues and methodology of sports training in general and for basketball especially, analysis educational approach on practicing basketball game at school level sports program - specialization basketball and the work on the sports clubs, characteristics specific age for junior basketball players, 17-18 years old, came of the idea that their preparedness planning and programming are not met, on the one hand, by methodological conditions required by driving capacity of development at this age and, on the other hand, by correlation between the requirements of the game at this age, in terms of general and specific physical training, meaning that they are underestimated.

Preliminary experiments aimed to assess level of physical fitness and motor

of junior basketball players (17-18 years), carried out by comparison with physical and technical scales set Romanian Federation of Basketball. This led to identifying those factors that determine the achievement of results under the model motor sports category analyzed what defined starting point in implementing the program designed to improve specific sports training process.

At the same time, regarding replies to the questionnaire applied to teachers and coaches, subjects of this research, we found that most of them play basketball characterized as a dynamic and complex, which has caused 71.43% of them recognize motor skills crucial role of the complex speed - resistance - force skills.

Recorded data from preliminary testing anthropometric measurements and comparing them with the model developed by RFB, we can conclude that both subjects of the experimental group and the control group are largely influenced by the model performance requirements for this age.