STUDY ON MOTOR QUALITY DEVELOPMENTRESISTANCE THROUGH SPECIFIC MEANS FOOTBALL GAME

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Abstract: The completion of the research was of a longitudinal type covering the period of the 2017-2018 school year and was carried out on a number of 20 children, members of the representative school football team from the *Constantin Gerotă Secondary School* in Calafat, and targeted the following three stages: The **theoretical-empirical** stage - referred to the bibliographic study, which included numerous bibliographic nominations in Romanian, where problems on the development of resistance through specific means of football are addressed. The **experimental stage**, which involved the initial and final testing and measurements on the experiment group. The **final evaluation stage**, which consists in processing and analyzing the results of all tests and measurements in order to allow us to assess the level of effectiveness of the proposed research methodology, to interpret and present the value of the overall result in order to formulate the conclusions and recommendations which led to the completion of the research and its implementation in the present paper.
The aim of the paper is to emphasize the importance and necessity of systematization of the methods and means of development of the football game specific resistance during different training periods of the year.
The proof of the effectiveness of the methods and means used in the experiment is that the students in the experiment group detached from their opponents in the championship matches in the second half.
Keywords: *football, sport performance, specific strength..*

Introduction

Resistance is defined for the football game as the player's ability to make variable game efforts as intensity and volume throughout the match without the fatigue being established [1], which confirms that the specific resistance is achieved by means of resistance general as its morpho-functional substrate [2].
Under the conditions of the current football - when the physical effort made by the footballers during the game has increased greatly, for some of them (the midfielders) the distances travelled almost doubled [3] – it is aimed towards the total football, characterized by the players' polyvalence, a huge waste of energy and in order to support efforts in training and games, the specific resistance is mostly requested [4]. "This is only possible if it acts on the metabolism of muscle fibers through an appropriate effort so as to increase their oxidative capacity, which can be achieved by increasing the number of mitochondria and even their surface [5].
Only by correlating and processing individual data can we reveal the reality, value and ability of the player, on which we can orient the methodic and the most effective means to achieve great performances. "It should be noted that as far as the methods and means of developing resistance it is not enough to refer only to their structure but also to the number of repetitions, the duration and distance of the effort, its intensity and then the number and duration of the rest pauses and relaxation [6] ".
The process of information and knowledge of all the elements and parameters that make up the game and the training for the game leads us to the realisation of the unitary conception of these two aspects, to a causal process between two activities of the same process whose ultimate goal is the quality and efficiency of the game.
By observing the methodical line that leads us from play to training and back to the game, we achieve a system of objectification of a unitary process that is based on real dimensions and data, whose certification allows appreciation of the work done, as well as the issuing of real prognoses for the next stage of training and play [7].
The specific effort of the football game obliges the orientation of the training process towards all the forms of resistance (short, medium and long lasting), aspect which is interpreted by speed-resistance [7].
In football, we talk about the following types of resistance (depending on the duration of the effort and energy sources):

anaerobic resistance - in the case of individual technical – tactics actions: mark-demarcation, ball possession, ball management, finishing, replanting, etc .;
aerobic resistance - specific to the 90 minutes (at least) of the official football game;
mixed resistance - encountered in football due to the alternation of phases and game actions.
"The specific resistance to footballers is of utterly importance for achieving superior performance and for being able to properly support the training efforts" [8].

Material and method

The completion of the research was of a longitudinal type covering the period of the 2017-2018 school year and was carried out on a number of 20 children, members of the representative school football team from the *Constantin Gerotă Secondary School* in Calafat, and targeted the following three stages:
The **theoretical-empirical** stage - referred to the bibliographic study, which included numerous bibliographic nominations in Romanian, where problems on the development of resistance through specific means of football are addressed.
The **experimental stage**, which involved the initial and final testing and measurements on the experiment group.
The **final evaluation stage**, which consists in processing and analyzing the results of all tests and measurements in order to allow us to assess the level of effectiveness of the proposed research methodology, to interpret and present the value of the overall result in order to formulate the conclusions and recommendations which led to the completion of the research and its implementation in the present paper.
The aim of the paper is to emphasize the importance and necessity of systematization of the methods and means of development of the football game specific resistance during different training periods of the year.
The hypotheses of the research were:
Increasing the number of sportive classes and introducing an additional number of means - for the development of general and specific resistance within an entire school year -will determine the improvement of resistance indices.
By applying technical-tactical means in football game in the overall sports lessons it will determine, by transfer, the improvement of resistance indices.
In the present research I used the following methods: pedagogical observation; the study of specialty literature; pedagogical experiment; the method of conversations.
For the general and specific physical training of the experiment group, we acted in two ways:
1. For specific physical training only through bilateral games.
✓ school games; theme games; games with "handicap"; bilateral games under regulatory conditions.
2. For the general physical training through complex exercises performed by the different methods from the literature, namely:
✓ the method of continuous efforts; the interval method (short, medium and long); method of variable intensity efforts; the Fartlek method; pliometric method; circuit training method.
In order to evaluate the obtained results, we used a number of six control samples, samples for which rules for their passing were established.
1. Run resistance on a distance of 3200 m. Cooper test
The norm was between 12-12.30 min
2. Run resistance on the distance of 1600m.
The norm was between 6.10 - 6.20 min
3. Running resistance on a distance of 1000m.
The norm was between 3.50 - 4.00 min
4. Running resistance on a distance of 800m.
The norm was between 3.10 - 3.20 min
5. Running resistance on a distance of 600m
The norm was between 2.00 - 2.20 min
6. Run resistance on a distance of 400m
The norm was between 1.10 and 1.30 min

Analysis and interpretation of data:

For samples no. 1 and 2 (see Table 1)

1. For running the 3200m distance
In the initial testing, an average time of 13.07 minutes was recorded, while in the final test an average of 12.9 minutes, the progression being 58 seconds.
2. For the 1600m distance running
In the initial testing, an average time of 6.56 minutes was recorded, while in final testing an average time of 6.14 minutes, the progression being 39 seconds.

Table 1

Sample no. 1 Running on 3200 m distance.		***Sample no. 2. Run on the 1600m distance.***	
Initial Testing	13.7 min	Initial Testing	6.56 min

Final Test	12.9 min	Final Test	6.14 min
Diff. T_f-T_i	58 sec	Diff. T_f-T_i	0.39 sec
The norm was between	*12-12.30 min*	The norm was between	*6.10 – 6.20 min*

Testing table with the results obtained in the initial and final samples of the running distances 3200m and 1600m

For samples no. 3 and 4 (see Table 2)

3. For running the 1000m distance

Initial testing had a mean time of 4.31 min. while in the final test an average of 3.55 minutes, the progression being 36 seconds

4. For running the 800m distance

Initial testing showed an average of 4.4 minutes, while in the final test an average of 3.33 minutes, the progression being 31 seconds.

Table 2

Sample no. 3 Running on 1000 m distance.		***Sample no. 4. Run on the 800m distance.***	
Initial Testing	4.31 min	Initial Testing	4.4
Final Test	3.55 min	Final Test	3.33
Diff. Tf-Ti	36 sec	Diff. Tf-Ti	31 sec
The norm was between	*3.50 – 4.00 min*	The norm was between	*3.30 – 3.40 min*

Testing table with the results obtained in the initial and final samples of the running distances 1000m and 800m

For samples no. 5 and 6 (see Table 3)

5. For running the 600m distance

Initial testing had a mean time of 2.34 min. while in the final test an average of 2.11 minutes, the progression being 23 seconds

6. For running the 400m distance

Initial testing had an average of 1.39 minutes. while in the final test an average of 1.19 minutes, the progression being 20 seconds.

Table 3

Sample no. 5 Running on 600 m distance.		***Sample no. 6. Run on the 400m distance.***	
Initial Testing	2.34 min	Initial Testing	1.39 min
Final Test	2.11 min	Final Test	1.19 min
Diff. Tf-Ti	23 sec	Diff. Tf-Ti	20 sec
The norm was between	*2.00 – 2.20 min*	The norm was between	*1.10– 1.30 min*

Testing table with the results obtained in the initial and final samples of the running distances 600m and 400m

Disscution and Conclusions:

The superior results from the final test to the initial one demonstrate the correctness of the used training methodology, this being the actual way of increasing the quality of the training.

The proof of the effectiveness of the methods and means used in the experiment is that the students in the experiment group detached from their opponents in the championship matches in the second half.

Motor quality - resistance is one of the most easily educated and developed motor skills. This is also due to the fact that for its development we found in the textbooks and the studied materials no less than nine methods. These methods are generally

effective, but most have their well-established place in the periodic exercises.

Increasing workload in training by using aerobics in the specific sports lesson specific to the football game leads to the improvement of players' performance in their effort. The prolonged and fatigued effort experienced by the students of the experimental group in the sport lessons has significantly contributed to their physical training by increasing the effort capacity.

Increasing the workload volume of the training, together with the gradual decrease of the intensity, is a major factor in improving the effort capacity influencing in this way the physical and technical-tactical expression of the players on the field, knowing that the level of technical expression - tactically decreases in the extended effort and the half-time, and the number of mistakes increases proportionally to the level of fatigue.

The correct selection of the technical-tactical means of football play has led to a transfer to achieving superior parameters in terms of effort capacity.

Due to the large number of repetitions in the training lessons and on the basis of a precise planning elaborated with streamlined and standardized means, the team effort and the tactical acquisition of the actions have evolved significantly both qualitatively and quantitative.

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