

STUDY ON THE DETENT EFFICIENCY THROUGH THE USE OF MODERN TRAINING

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Abstract: *In this research we started from the premise that the detent is one of the most important motric qualities present in sports games. Owing to the changes which have contributed to the improvement of sports games, detent has obtained a much more important role, has become an essential element of the modern gaming. The results of the research shows us that the repetition of exercises specific to the development of this qualities, in the course of the lesson of physical education can lead to improved performance obtained.*

Key words: *detent, physical education, sports games, student.*

1. Introduction

Detent is one of the driving qualities of a sportsman. The motric qualities are defined as qualities of the human body, which may develop during the life. They may call and physical qualities and are of two categories - basic and specific. [4]

Another approach, defines the motric quality as an essential part of muscle activity, expressed through motric acts, conditional on the structure and the fundamental capabilities of different systems of the human body and mental processes. [3]

The motric qualities not may occur in isolation. While performing the motric acts, at the same time, are present forms of manifestation of all the motric qualities, each of them participating in a certain proportion to carry out this task of movement. The level of the indices of speed, skill, resistance, strength or the

suppleness, makes it only perform the driving skills but also the maximum.

A detent definition date mentions this quality as: ability of certain groups of muscles to develop the maximum force in the shortest time. [5]

Detent = Speed + Strength

Force under speed (explosive force) is characterized by working with loads ranging between 65-80% of the maximum. In this case, and only in it, we obtain the improvement of the indices explosive force. [1]

The detent is a measurement of explosion, which is connected with the strength and speed in the sports literature. Increasing the explosion in vertical jump should be transferred at a high speed (first stage, explosion, accelerator). This is due to the capacity of coordination of the muscular, which is involved in stabilization of the torso in flight and landing. We can see many young

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sportsmen as well as the lack of coordination are during jumping and landing. What is missing, is the coordination and absolute power to control the eccentric forces necessary to explode in the concentric forces during the first stage and acceleration.

The muscular contraction has an important role in the execution of a jumping. The muscular contraction can be static or dynamic. [6]

The bounce in sports games provides an ascendant important in the fight directly to the opponent is distinguished from those of the athletics jumping. The bounce aimed at maintaining a more balanced positions as well as enabling the execution of processes of high precision. The detent, orientation and the balance of the body in the air have a particularly important role in making the technical processes used in the game. The position of the player which salt must be correct to ensure balance, in order to ensure a proper landing. [7]

The application force in a vertical motion that the jump appears very quickly, somewhere around 200 milliseconds (2-tenths of a second). In general there is a need around the value of 400-700 milliseconds (4 to 7-tenths of a second) to apply the maximum force. Therefore, the notified body must not only be able to apply more force, but also to be able to apply it quickly [2].

A problem with the training with weights is the fact that the programs of bodybuilding have dominated the programs of athletes everywhere and many athletes trying to make gains "athleticism". The training programs based on the methods of bodybuilding often include a large number of repetitions made up to exhaustion, with particular emphasis on the maintenance of the tension for periods of time.

Mechanically, when the foot run out, the student must lower the center of gravity,

creating a speed pointing downwards. This phase of depreciation is an important component of any activities with jumping, as students prepare detaches from the ground. The contact with the ground must be as short as possible. Student must be shortened the damping phase. As this phase is shorter, the more powerful the concentric muscular contraction after the moss was, in advance, lying through an eccentric contraction in the phase of depreciation. This action is possible due to the recovery and the use of the whole energy that has been stored in the elastic components of the muscle during any action of tension.

2. Organization of the Research

Research has taken place within hours of physical education of students from the faculties with another field than sports specific. The duration of the study is included in the period 01 octombri 2016 and 31 May 2017. The purpose of this research is to identify, apply and test the efficiency of means intended to improve the specific detent sports games. For this research we have determined the following tasks :

- the analysis of the theoretical concepts relating to the detent and the methods of development;
- checking the efficiency of the use of the model proposed for the development of the specific detent sports games.

3. Material and Methods

I established experimental and control groups which have been formed of students passionate about sports and who have expressed their intention to perform the exercises imposed by this program. The main criterion in the determination of each of these two groups shall be based on the motric qualities, aiming to that their

level of development to be similar. Subjects have benefited from the same training environment, the lessons taking place in the same sports hall.

At the beginning of the research subjects select have been tested by the execution of the control samples. For measuring device was used Optojump Next, is an optical system of analysing and measuring composed of two bars with led, one of the transmission and one of reception of the optical signal. The system detects any interruption of communication between the two bars and calculates the amount of time. This makes it possible to measure the flight time and when we perform a series of jumping. Starting from these fundamental data, the program may obtain a series of parameters connected to the performance of the student with the maximum of accuracy and in real time. The appliance is dedicated to any sports branches where there is a movement and are mainly used in the lower limbs.

On this appliance have been measured two samples:

- **Squatjump:** Sample aims to assess explosive force at the level of the legs.

Recording(height) is performed using OPTOJUMP Next. The position of departure is standing with his feet apart at the shoulders, his knees flex at 90° (must be maintained this position for a second) and hands on hips. The sample shall be carried out twice and note the best result

- **Free jump:** the sample aims to assess explosive force at the level of the legs. The registration is performed using OPTOJUMP Next. The student performs a jump in height, on the spot, without a place of departure or other movement. The hands can help you to perform a jump higher by moving, the hind elan forwards. The sample shall be carried out twice and note the best result.

- **Plyometric Jumps:** The student must make for 24 seconds as many jumping related (free jump). Jump registration is performed using OPTOJUMP Next and calculate the height of each jumping, media, the total power expressed as well as the rate of retaining or decrease of power during the entire time how long the sample

4. Results of the Research

Results of the initial and final test

Table 1

	The initial test control group (cm.)	The final test control group (cm.)	Improving	The initial test experimental group (cm.)	The final test of the experimental group (cm.)	Improving
H max. squat	28,91	32,08	3,11	29,08	35,16	6,08
H max. free	33,83	40,75	6,92	33,75	45,83	12,08

The data submitted in the table indicates that the initial testing to a control group for testing squat jump performance was less than when testing free jump: 33,83 to 28,91.

The experimental group we find that the

average performance at the squat jump was 29,08 and at free jump have obtained an average of 33,75.

The final testing brought a progress to both teams, but to a control group we can talk about a lower progress. At the squat

jumping from the rose up to 32,08 cm and jumping free even more, here speaking about an average of 40,75 cm. The final test of the experimental group we have the largest great progress. The jumping squat have reached an average of 35,16 cm, and the jumping free a value of 45,83.

The data contained in the summary table indicates that all tests carried out to achieve a greater progress in the experimental group than to a control group. So we have a

progress at control group 3,11(squat jump) and 6,92 (free jump). The experimental group we have higher performance 6,08 (squat jump) and 12,08 (free jump) .

In relation to the maximum height reached from the position of the squat (registered using Optojump), the group of control it is found that the initial testing has obtained a performance of 28,91 cm, and to the final testing an index of 32,08 cm, such a progress of 3,11 units.(chart 1).

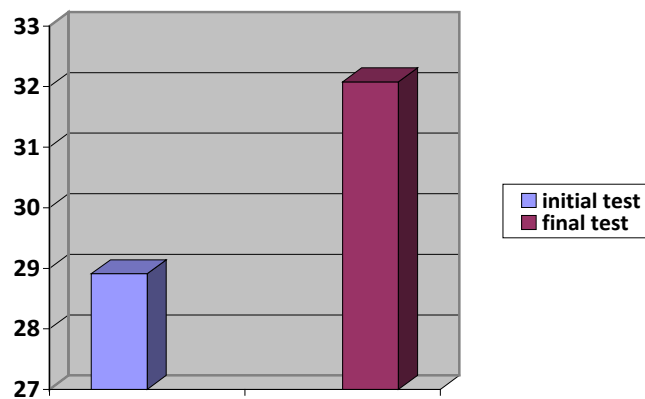


Chart 1. *Interpretation of the initial test and final test 1 - control group*

In relation to the maximum height reached from the position of the squat (registered using Optojump), the experimental group it is found that the

initial testing has obtained a performance of 29,08 cm, and to the final testing an index of 35,16 cm, such a progress of 6,08 units (Chart 2) .

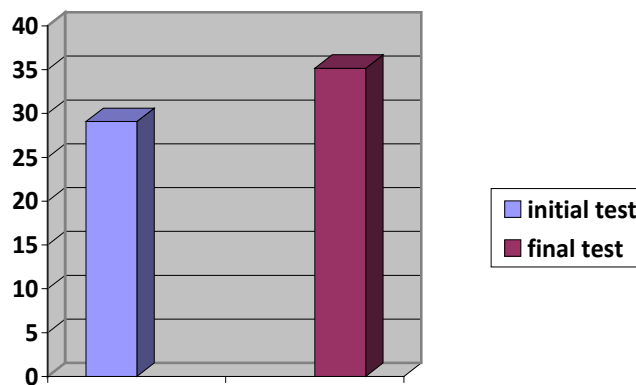


Chart 2. *Interpretation of the initial test and final test 1 - experimental group*

The results recorded on the free jump made using the Optojump, to the group of control it is found that the initial testing has obtained a performance of 33,83 cm, and to the final testing an index of 40,75 cm, such a progress of 6,92 units (Chart 3).

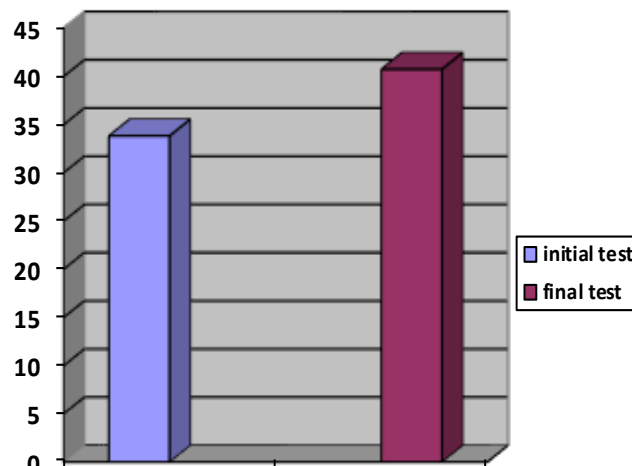


Chart 3. Interpretation of the initial test and final test 2 - control group

With regard to the maximum height after free jump, the experimental group at the first tests we got a performance of 33,75 cm, and to the final testing an index of 45,83 cm, such a progress 12,08 units (Chart 4).

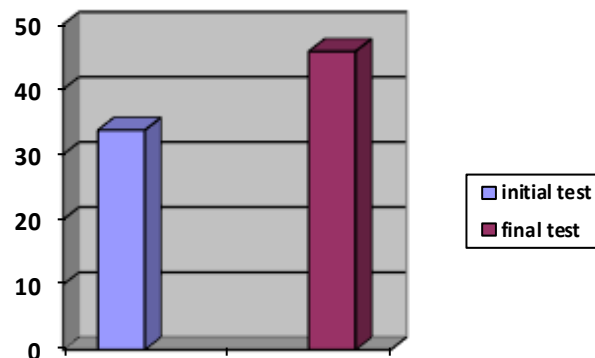


Chart 4. Interpretation of the initial test and final test 2 - experimental group

5. Conclusions

After the completion of the research I reached the following conclusions and recommendations:

- the specific physical training should be a priority objective for practicing sport games;

- detent represents a requirement of sports games, indispensable for their successful practice;

- detent is a complex motric quality what requires a special approach in the process of training, being conditional on the quality of the training.

- the results of the experiment shows that the practice of the physical exercise after a model of training can increase the sport performance of the amateurs players.

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