

# STUDY REGARDING PSYCHOMOTRICITY AND ITS ROLE IN THE SPORTING PREPARATION PROCESS OF THE BASKETBALL PLAYER

Elena MOLDOVAN<sup>1</sup> Răzvan ENOIU<sup>2</sup>

**Abstract:** *The athlete's psychomotric preparation has become progressively popular in theory and in practice to what sport is concerned. The entire process of formation and development cannot function without the psychomotric element. The fundamental goal that coaches, athletes and psychologists must always have in mind is the psychomotric development for increasing efficiency and also sporting performances. The present study contributes to the improvement of the basketball player's psychomotric preparation both in women and men teams, to the objectivity of the training process to what the psychomotric element is concerned and to the importance of such preparation in the basketball game. One has started from the premise that approaching this kind of element in the basketball training process gives the athlete significant progress in the preparation in question, such progress expressed through increased individual psychomotric indicators. Through adequate analysis and interpretation this article tries to prove exactly that.*

**Keywords:** *psychomotricity, sporting preparation, basketball player.*

## 1. Introduction

Today, the athlete's psychomotric preparation has become progressively popular in theory and in practice to what sport is concerned.

From the theoretical and methodic point of view, the fundamentals of the psychological preparation consist of *communicational, learning and leading*

activities. All of the three are efficient as long as the psycho behavioral mechanisms will become truly familiar to coaches, managers and even athletes.

The starting point for the athlete's psychological preparation and assistance lies in the need of constantly increasing the psychological capacity, as well as its adaptation to the limit requirements of the specific activities,

---

<sup>1</sup> *Transilvania* University of Braşov.

<sup>2</sup> *Transilvania* University of Braşov.

while the final point lies in the accomplishment of psychological “habits” that shall satisfy these needs in conditions of reliability to what the psycho behavioral system is concerned (Bontila G., 1995).

The sporting preparation process follows the latter’s adaptation to requirements, but not only to physical ones, but to psychological and psychosocial ones. The athlete’s adaptation is, actually, the adaptation of the psychological system to the socio-cultural system and the social-sporting one (Epuran M., 1990).

The psychological states of mind that the athlete is experiencing are diverse, some of the, normal, common and natural, whereas other less natural, the latter surpassing the need of balance with different situations taking place on the competition field. These states of mind can be surpassed only if the athlete has an adequate preparation or is helped by the circumstances he finds himself/herself in.

The entire process of formation and development cannot function without the element of *psychological preparation*.

In the sporting preparation and performance strategy the control of the athlete’s psychological states of mind is crucial (knowing and managing these states of mind).

A first effort is oriented towards forming certain self-fitting psychological mechanisms especially the negative ones for simultaneously accomplishing an adequate and independent conduct, where the athlete

is no longer dependent on his/her coach for such purposes.

The most important task given to the coach, the athlete and even the athlete is to remove the psycho-behavioral states of mind and to strengthen and activate positive states of mind for increasing performance and the efficiency to what preparation is concerned (Colibaba E., Bota I., 1998).

The psychological preparation is the one that follows the development of the athlete’s psychological capacity in successfully accomplishing his/her individual and social purposes.

The development of psychological qualities is crucial for it brings valuable educative contributions on the youngsters and children’s multilateral personality through the collective sporting education, the formation of conscious discipline, the development of initiative and will, the education of reasoning control and the formation of moral habits with ethical values (Fischer R., Borms J., 1994).

The paper in question addresses the current improving preoccupations to what the performance of the basketball is concerned. Moreover, it contributes to the following:

- Improving the basketball player’s psychomotric preparation;
- Objectifying the process of preparation regarding the psychomotric element;
- Integrating the individualized process of psychomotric preparation within the collective preparation;
- Proving the importance of the

psychomotric preparation in the basketball game.

As a sport, the basketball game follows, through its practice, the maximum development of the motric capacities. Furthermore, it represents a sporting discipline due to its pronounced character of competition and to the highly increased emotional degree that the game in itself implies.

The basketball game equally develops the entire organism by its rich motric content and by various movement actions that trigger virtuosity which is reflected in handling the ball in different conditions of balance and adversity. The technical requirements lead to effects and accumulations that gather up in the psychological and morpho-functional area (Hirtz P., Sass H., 1990).

Among the multitude of the athlete's psychomotric aspects and manifestations, the study of the motric behavior is quite relevant for within the body actions the motric aspect is crucial. The motric responses are elaborate answers to certain stimuli (Horghidan V., 2000). Thus, it is quite natural the entire effect of the instructive and educative process to depend, to a certain extent, on the structure of personality in which psychomotric aptitudes have an essential role. The importance of the psychomotric education is given by its presence as one of the main specific objectives of the physical education (Manno R., 1996).

## 2. The purpose of the research

In performance sport, the psychomotric development weights quite a lot in obtaining the pre established results.

The work of a teacher or a coach comprises a number of tasks and functions from which some of them will be done willingly, whereas other less willingly, but following the same goal. The necessary psychomotric qualities of an athlete are the following:

- A. Aptitude qualities – they condition the assimilation of the technical and tactical baggage: kinesthesia, coordination, ideamotricity and temporal-spatial perceptions.
- B. Volitive qualities: they develop the self-regulation ability by orienting the actions towards the purpose: perseverance, decision, initiative, voluntary effort capacity, resolution and concentration.
- C. Attitude qualities:
  - Respect towards adversaries, referees, public;
  - Mutual help and working spirit;
  - Discipline.
- D. Intellectual (cognitive) qualities: attention, perceptions, specializations, creative thinking, memory, imagination, appreciation, decision.
- E. Affective qualities: affective balance and emotional balance.
- F. Personality qualities: temperamental and motivational. Starting from the premise that the human personality is essentially dynamic,

one can only assume that each of these quality categories can and must be shaped in a unitary system of means and methods, bearing in mind the age and sex particularities, as well as the level to which quality can be attained and the ideal model that one aspires to achieve.

The present study wishes to contribute to the following:

- Improving the basketball player's psychomotric preparation;
- Integrating the individualized process of psychomotric preparation within the collective preparation;
- Proving the importance of the psychomotric preparation in the basketball game.

### 3. The hypothesis of the research

During the high level competitions, the optimal degree of psychomotric preparation is becoming increasingly important in obtaining performance. To equal levels of technical and tactical preparation, psychomotric preparation, in certain situations, can supply the preparation faults to the other factors of preparation.

One starts from the premise that within the psychomotric preparation of the basketball player, one can obtain significant progress in the sporting preparation, expressed here through slightly increased individual psychomotric indicators, which will ultimately lead to the positive influence of the

individual performance, but also to the increase of team delivery.

In the basketball game, notorious athletes have a greater degree of conscience, motivation, better attention, will and memory that is a better affective stability.

### 4. The tasks of the paper

- a. Knowing the general characteristics of the basketball game.
- b. Knowing the aspects of the psychomotric preparation and the steps of the psychomotric development.
- c. Studying the development aspects of the psychomotric capacities of the basketball player.
- d. Assimilating the tests for the development level of psychomotricity.
- e. Analyzing and interpreting the data of the research.

### 5. The methods of research

The experimental study was effectuated on a sample of 12 basketball players (junior I) from the University Sporting Club of Brasov, on a period of 6 months, the average age being 16 years and 6 months. The preparation program was conceived by the titular coach of the group and consisted of 5 training sessions a week. The subjects had an average of 4 years

of sporting activity during the first testing.

The present research used tests regarding the psychomotric investigation of the subjects in question that is:

- The sensorial and motile coordination test;
- The general cunning test (the Denisiuk test);
- The general coordination test (the Matorin test – spinning to the left and to the right);
- The dynamic-balance measurement test (the Bass test).

### 6. The sensorial and motile coordination test

The coordination capacity is the “core nucleus” of resolution which is considered to be the “backbone of motricity”. On one hand, it is correlated

to the movement capacity and, on the other hand, it depends on the other motric qualities (for example, the detent). If the purpose of the physical preparation is the biological adaptation, the “coordination preparation” influences the process of movement leading and regulation. Improving itself through practice, coordination gradually becomes the sub layer of learning and improvement process to what motric actions are concerned having a decisive role in forming and improving the new motric habits, as well as in the habit transfer process, in surpassing the negative interferences and in correcting the wrong directions. Being a conscious movement of the muscles in relation to the international movement, coordination must be understood as a process of manipulation and regulation.

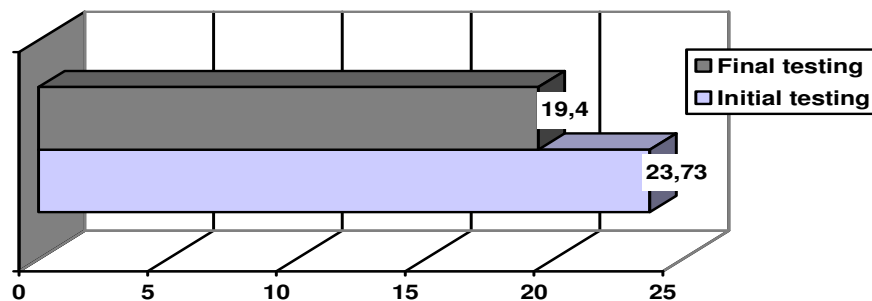


Fig. 1 *The result dynamic to the sensorial and motile coordination test*

*Interpreting the results:* analyzing the evolution of the arithmetic average to the sensorial and motile coordination, one can notice better results of the investigated subjects to the final testing, 19,4 cm (a very good epithet)

in comparison to 23,73 cm (a good epithet) to the initial testing.

Following the average evolution of the two testings, one can notice a decrease value with 4,33 cm. We mention that to this trail, in particular,

the best results, in value, are the lowest ones.

We have learned that the majority of subjects (11) have made a progress, in the sense that they have managed to coordinate themselves better, surpassing by a little the terminus point to the final testing. Thus, 11 subjects have managed to improve their sensorial and motile coordination and only a sole subject has experienced a downfall. Regarding this test, we can state the following: bearing in mind that the coordination capacity is the determinant factor in the learning and improvement process of the specific motric actions, one can conclude that athletes that have well developed coordination capacities manage to learn and assimilate the specific technical

elements and procedures of the basketball game much easier.

#### 7. The general cunning test (the Denisiuk test)

*Interpreting the results:* analyzing the average evolution of the general cunning test, one can notice better values of the investigated subjects to the final testing, 15,91 sec. in comparison to 16,4 to the initial testing. Following the average evolution of the two testings, one can notice a performance improvement to the investigated subjects of 0,49 sec.

We mention that to this trial, in particular, the best results, in value, are the lowest ones.

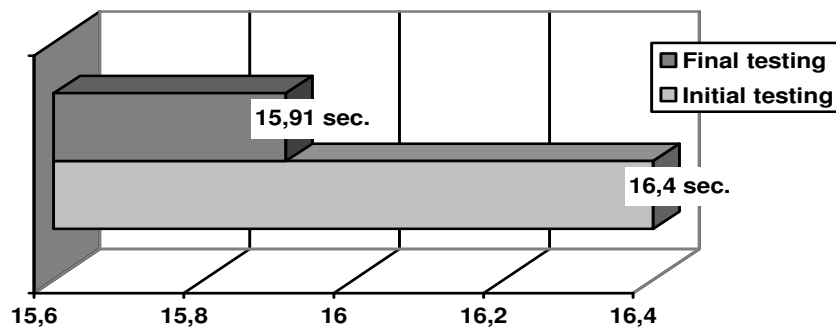


Fig. 2 The result dynamic to the general cunning test

#### 8. The general coordination test (the Matorin test)

The Matorin test measures the general coordination, as well as the balance and

consists of a back-kick jump around the body's longitudinal axis (to the left and to the right). Calibrating it, Matorin assimilated the performance of over 360° with the "very good" epithet.

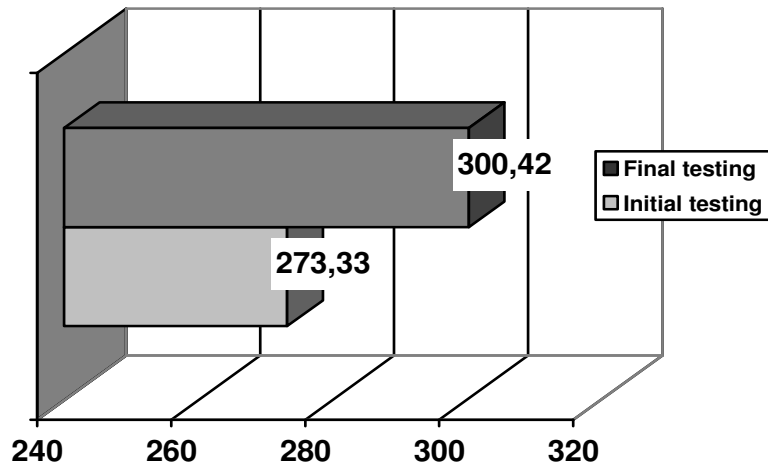


Fig. 3 The average evolution to the Matorin test (right hand)

*Interpreting the results (right hand):* analyzing the average evolution of the measured parameters, one can notice higher increases to the final testing, 300,42° in comparison to 273,33° to the initial testing, the difference being of 27,09°.

We mention that to this trial, in particular, the best result, in value, are the highest one.

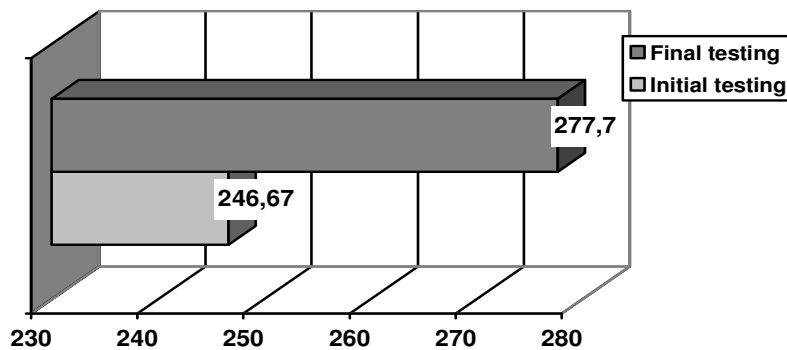


Fig. 4 The average evolution to the Matorin test (left hand)

### 9. Measuring the dynamic balance (the Bass test)

*Materials:* a timer, 11 marks of 2,54 cm x 2 cm (they can be made out of gummed paper or adhesive paper) and a metric band.

*Interpreting the results:* analyzing the average evolution of the measured parameters, one can notice higher accumulated points to the final testing, 90,58 points in comparison to 79,25 points to the initial testing, the difference being of 11,33 points.

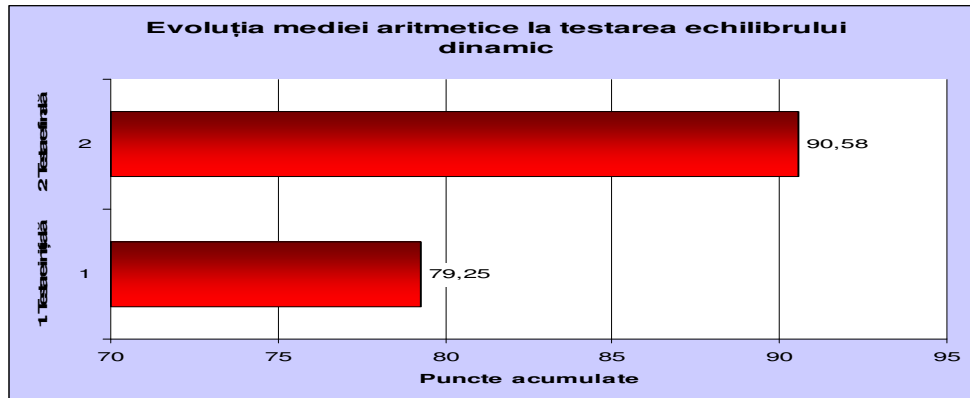


Fig. 5 The average evolution to the dynamic balance test

We mention that to the final testing, 6 subjects managed to raise the maximum score, 100 points and no subject experienced any downfall.

We mention that to this trial, in particular, the best results, in value, are the highest ones.

Table 1

The results obtained by athletes to the psychometric tests  
Initial testing

<i>Tested indicators</i>	<i>Arithmetic average</i>	<i>Standard aberration</i>	<i>Variability factor</i>	<i>Average error</i>	<i>Importance interval</i>
The sensorial and motile test;	23,73	25,04	106,05%	7,23	15,91
The general cunning test (the Denisiuk test);	16,4	9,16	57,18%	2,28	5,14
The general coordination test – the Matorin test (to the right);	273,33	23,05	3,91%	7,94	8,05
The general coordination test – the Matorin test (to the left);	246,67	16,24	7,99%	4,38	16,06
The dynamic balance measurement test (the Bass test)	79,24	21,56	27,20%	5,21	9,06



Table 2

*The results obtained by athletes to the psychomotric tests  
Final testing*

<i>Tested indicators</i>	<i>Arithmetic average</i>	<i>Standard aberration</i>	<i>Variability factor</i>	<i>Average error</i>	<i>Importance interval</i>
The sensorial and motile test;	19,4	21,04	105,05%	5,23	11,23
The general cunning test (the Denisiuk test);	15,91	8,09	58,18%	2,82	6,20
The general coordination test – the Matorin test (to the right);	300,42	21,05	6,91%	6,94	11,32
The general coordination test – the Matorin test (to the left);	277,7	14,24	4,57%	5,38	15,23
The dynamic balance measurement test (the Bass test)	90,58	23,45	25,88%	5,69	10,21

## 10. Conclusions

Upon the effectuated investigations, one can state the following:

To what investigating the basketball player's psychomotric capacity, such capacity constituting the sub layer of the learning and improvement process of the specific motric actions with the decisive role in the forming and development of new motric habits, as well as in the habit transfer and in surpassing negative interferences and correcting wrong directions, one can notice that all the subjects recorded positive values to the final testing in comparison to the initial one and not one subject experienced a downfall.

Upon the researched data, one can notice that the values of the variability factor in the sensorial and motile test and in the general cunning one are high which proves that the values recorded by the group members were slightly

different than the average showing an excessive dispersal of individual values, a heterogeneous collective. Regarding the standard aberration and the variability factor in the general coordination and Matorin tests, one can state that the obtained values are normal.

To what these tests are concerned, one can state that psychomotricity, being a determinant factor in the learning and improvement process of the specific motric actions, is essential for athletes who have developed psychomotric capacities have had great results which ultimately determines the easier assimilation of specific technical elements and procedures to what the basketball is concerned.

All the preparation factors have the indisputable role of obtaining performance, but the psychomotric factor occupies a crucial role in the basketball game helping the athlete to become more efficient.

**References**

1. Bontila, G.: *Culegere de teste psihologice de nivel si aptitudini*. Bucuresti: Editura Universul, 1995.
2. Colibaba Evulet, D., Bota, I.: *Jocuri sportive. Teorie și metodică*. Bucureşti: Editura Aladdin, 1998.
3. Epuran, M.: *Modelarea conduitei sportive*. Bucureşti: Editura Sport–Turism, 1990.
4. Fischer, R., Borms, J.: *In căutarea excelenței sportive. Sportul pentru copii și juniori*. Bucureşti: CCPPS, 1994.
5. Hirtz, P., Sass, H.: *Jocurile sportive – solicitări psihomotrice și de coordonare – calități de coordonare*. C.C.E.F.S. Nr. 3 (82) / 1990.
6. Horghidan, V.: *Problematica psihomotricității*. Editura Globus, 2000.
7. Manno, R.: *Bazele teoretice ale antrenamentului sportiv*. Bucureşti: C.C.P.S., 1996.