

## BASKETBALL GAME A WAY OF ADAPTING AND SOCIALLY INTEGRATING STUDENTS WITH INTELLECTUAL DISABILITIES

### БАСКЕТБОЛ ЯК ЗАСІБ АДАПТАЦІЇ ТА СОЦІАЛЬНОЇ ІНТЕГРАЦІЇ СТУДЕНТІВ З ІНТЕЛЕКТУАЛЬНИМИ ВАДАМИ

*Physical exercises are powerful genetic modulators that induce structural and functional changes in the brain, resulting in enormous benefit over cognitive functions (Effects of Physical Exercise on Cognitive Functioning and Wellbeing: Biological and Psychological Benefits / L. Mandolesi et al. Front Psychol. 2018. № 9. P. 509). Basketball is one of the most widespread team sports in the world, it is characterized by the fineness, precision and fantasy of the technical and tactical exercises, by the high waist, the special psychophysical qualities of the athletes, all involved in a sport game that demands spirit of team, social integration, nervous resistance and intelligence. Group activities and sports games can provide people with disabilities a pleasant and socially integrated way to combat discrimination and differences in sports performance. Participants in group activities and games are subject to the «partial participation principle». Many of the participants will need help, but such an activity will lead to an improvement in their self-image as well as an improved image of them in the community. The skills that are developed in the participants with disabilities are: mobility, ability, one hand-kick, kick by foot, use of wheelchair, non-verbal communication, team spirit, desire for performance.*

*The game of basketball contributes to the popularization of the sport in general for the students with intellectual disabilities, to the development of the educational and recuperative valences realized with the help of the games. Also, we want to make known the existence of our concerns in the investigation and elaboration of methodologies of particularization of the physical exercise in general and of the playful activity in particular, of recovery and improvement of certain behaviors and motor perceptual structures. The structures and the perceptual-motor behaviors that impose physical exercise are: the body diagram, the laterality, the orientation – the organization and the spatial-temporal structure. The game is the most appropriate way to test physical and mental parameters, laterality and disorders of the body scheme and to measure their progress.*

**Key words:** social integration, community, basketball, sport.

*Робота присвячена фізичній активності, зокрема баскетболу як засобу адаптації та соціальної інтеграції студентів з інтелектуальними вадами. Основні питання, що розглядаються у статті, такі: важливість заохочення учнів з інтелектуальними осо-*

*бливостями до навчання та тренування; систематичність у фізичних навантаженнях, які здатні покращити показники у процесі відновлення, удосконалити основні рухові навички, а також сприяти соціальній адаптації й інтеграції дітей з інтелектуальними особливостями; важливість вивчення теорії баскетболу та практичне проведення ігор у процесі навчання та в позаурочний час; фізична культура та спорт у рамках інтегративної програми; інтегративно-приспосувальні рухливі ігри, що відповідають запитам соціального середовища.*

*У статті теоретично обґрунтовано та практично підтверджено спосіб адаптації та соціальної інтеграції студентів з інтелектуальними вадами засобами гри в баскетбол. Дослідження у вигляді експерименту було проведено протягом 2018–2019 навчального року. Експериментальну групу склали шестеро учнів-хлопчиків, серед яких три учні із середньою інтелектуальною недостатністю та три учні з вираженою розумовою недостатністю. Під час дослідження за допомогою різноманітних тестів проаналізовано сфери можливих покращень у фізичному й інтелектуальному планах. В експериментальній групі були виявлені такі кондиції: відеопросторові й аудіовербальні розлади сприйняття, рухові розлади, пов'язані з координацією рухів, перцептивно-рухові розлади просторово-часової організації, орієнтації та структуризації, порушення складу тіла та відсталість, мовні розлади через порушення рухового апарату та порушення сприйняття. Практична частина присвячена системі фізичних навантажень у процесі навчання та позаурочний час. Усі деталі проведення експерименту розкрито у статті. У процесі дослідження учасники з обмеженими можливостями розвинули такі навички, як: рухливість, здатність виконувати удар рукою й удар ногою, виступання інвалідного візка у спортивних цілях, невербальне спілкування, командний дух, прагнення до виступу на змаганнях. Гра в баскетбол є одним із найкращих способів, щоб перевірити фізичні та психологічні дані, відсталість і розлади схеми тіла, оцінити їхній прогрес. Крім того, тренування на регулярній основі допомагають дітям покращити бачення самих себе та їхнього становища в суспільстві.*

**Ключові слова:** соціальна інтеграція, співтовариство, баскетбол, спорт.

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**Material and method.** The premises from which we started in this study are the following:

- the desire to show that students with intellectual disabilities have training and encouragement;
- systematic in the field of physical exercises and can make leaps in the field of recovery and improvement of basic motor skills and skills, but also of social adaptation and integration;

- learning and practicing the place of basketball in a playful form, not only during education hours;
- physical, and in advanced-sport form within the integrative program;
- adaptation of the school syllabus for the proper learning of some physical exercises based on:
  - integrative-adaptive movement games to the demands of the social environment;

- integrating the drive technologies into motor images and mental actions as a form:
- the learning process on which the mental development and organization itself is based.

Watching carefully the path that the student goes through with a deficiency of intellect from his entry into the school and until the entry into production, the influence process to which he is subjected, we find the special complexity of this road, in which the interdisciplinary relations occupy an important place decisive.

Precisely from the point of view of interdisciplinarity, we will try to continue to address the role that basketball plays in the hours of physical education in the process of recovery and socio-professional integration of students in special education.

In the figure 1, below we have presented the scheme of distribution of physical education activities in one week (5 days), the calculation of the number of hours being done only for one class.

Figure 1 shows the fun activities that are performed with the whole group of students, daily (refreshment games, gear games, dynamic, fun games, competitions organized in breaks, in the morning and in the afternoon) totaling 45min / child / day, as and class hours, trainings, medical physical culture and psychomotor therapy, totaling 6 hours / class / week.

We considered that this system created and applied yielded, because it has had a sustained, rhythmic influence on the motility of students with intellectual disabilities, creating an objective fund for achieving interdisciplinary correlations.

Movement games also operate positively on the intellectual capabilities of the mentally challenged, stimulating initiative and inventiveness, defining features of the requirements of socio-professional integration.

Perceptual-motor skills, spatial organization and perceptual reasoning are indispensable for the formation of basketball-specific school acquisitions. Therefore, the availabilities that appear in this sphere give indications regarding the directions of educability for the social integration of the investigated ones.

Test «Rey Complex Figure» was proposed by Andre M. Rey in 1941, consists of a series of complex geometric figures, the child must reproduce the first memory (one time) and copy them (time this test highlights in an original way the difficulties of perceiving and representing the space in children with intellectual disabilities).

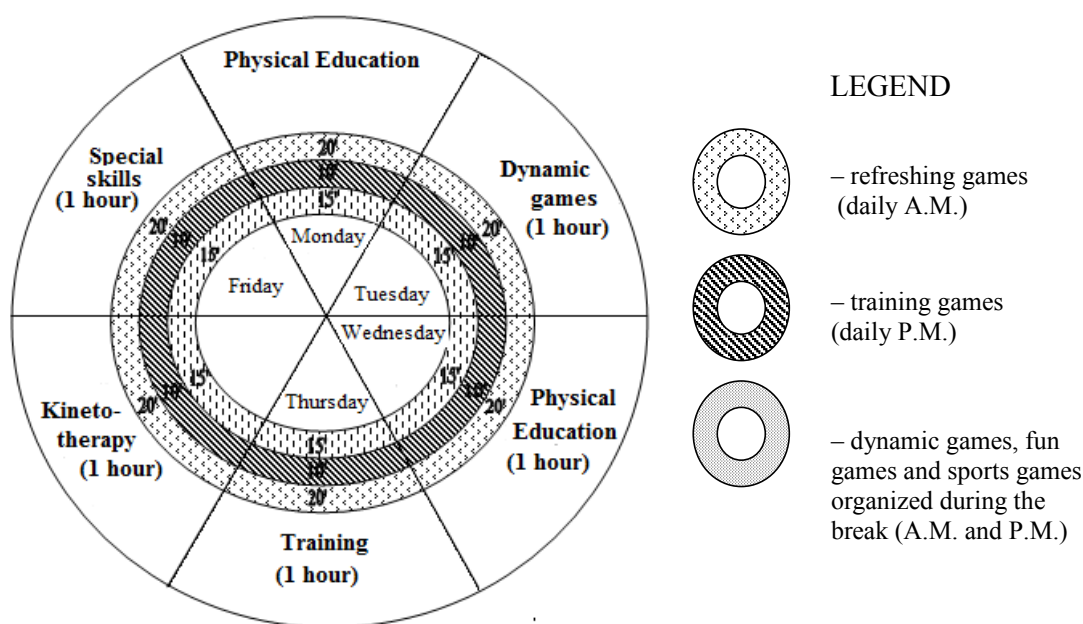
Visual perception is not just a simple sensory contact: it is about reactivating visual skills in relation to the reality of the stimulus. The visual exploration of the complex figure by the deficiencies of the intellect is characterized either by an uncoordinated and chaotic oculomotor activity, or by a reduced and inefficient activism, all of these negatively influencing the efficiency of the visual operational memory and the capacity of the students of perceptual-motor structure of the space.

Normal children are drawn first and foremost to a central structure, around these details they place the external details and the interior details.

This test highlights the difficulty of children with intellectual disabilities in acquiring movements within the model games. Intensive exercise, systematic repetition remain ways of assimilating information and gesture baggage.

Other tests used to calculate the age of psychomotor are:

– **Ozeretski-Guilmain test** – the five chapters cover the dynamic coordination of the hands, the general dynamic coordination, the balance, the speed, the orientation in space;



Pic. 1

– **Suzanne Naville test** – includes body diagram, movement education, global motor skills (1. C. Păunescu 241).

The experimental group that makes the subject of this study presents the following groups of conditions:

- a) video-spatial, audio-verbal perception disorders;
- b) motor disorders related to the coordination of movements;
- c) perceptual-motor disorders of spatial-temporal organization, orientation and structuring;
- d) disorders of body layout and lateralization;
- e) language disorders due to motor and perceptual impairments.

The experiment was conducted during a school year 2018–2019. The experimental group consisted of 6 pupils, boys, representing students of a class V (A) with medium intellectually deficient (DIM) – 3 pupils and severe intellectually deficient (DIS) – 3 pupils (Table 1).

The experiment was conducted as follows:

In the first semester when the sports activities were carried out on the school sports ground, the sample under investigation was checked for establishing the individual physical particularities, the modes of action and recovery of the psychomorality.

The initial evaluation and the final (summative) evaluation of the general motility was performed with the help of a complex targeting the 50m speed run, the 250 m endurance run and the orientation in space

(left – right). After carrying out the initial test, the students followed a training and recovery program with the objectives of influencing and improving the physical, mental but also social parameters throughout the first semester, and in the second semester the efficiency of the physical activity and of social-cultural integration were considered. in the community.

The chosen recovery programs had as purpose the formation of a debasket team that represented the school on various occasions, the students having I. Q. from 20 to 55.

**Description of control samples:**

- a) global motricity:
  - if he is able to go on a route;
  - if he is able to run;
  - if he is able to jump over obstacles;
  - if he is able to go on the scale with alternative steps;
  - if he’s able to throw a basketball,
  - if he’s able to grab and throw a running ball;
- b) specific motricity and visual-motor coordination:
  - if he is able to voluntarily catch or drop small objects;
  - if he is able to reach the teacher’s left or right hand;
  - if he is able to show his left hand, right, left eye, right to his own person;
  - if he is able to show the left side, the right side, a field, a football gate, a building, a street;

Table 1

**General information on the subjections of the 5<sup>th</sup> class  
6 boys – i. q. = 20–55**

№ crt.	Name and surname	Chronological and mental age	Waist weight	Somato-scopic examination	Neuromotor examination	Functional diagnosis	Objectives
1.	L.G.	13 years 10 years	140 cm 37 kg	Physical development of puberty, short neck, shoulders detached, normal walking, without spine deviations	Low muscle tone, poor coordination	Low muscle tone, poor coordination; Q.I. = 52	harmonious development of the chest; formation reflex of the right attitude
2.	B.I.	13 years 12 years	144 cm 40 kg	Normal physical development, without deviations of the spine	Medium muscle tone	Moderate deficiency Q.I. = 55	general training of the body
3.	M.C.	12 years 10 years	146 cm 42 kg	Omoplați asimetrici	Tonus muscular medium	Deficiență mintală moderată Q.I. = 50	general training; formation of the correct attitude reflex
4.	M.P.	12 years 11 years	142 cm 41 kg	Low joint mobility, poor limb trunk coordination	Rachitis	Severe deficiency Q.I. under 20	Maintaining and stimulating the tone muscular
5.	C.V.	13 years 10 years	150 cm 49 kg	Good joint mobility, Mild form of scoliosis of type “C” major deficiencies in the coordination of movements	Reduced muscle tone	Severe mental deficiency Q.I. = 25–39	Exercise correction of spinal deficiency
6	M.O.	12 years 11 years	153 cm 50 kg	Poor coordination, ocular-motor	Medium muscle tone	Severe deficiency Q.I. = sub 20 dyslalia, dysgraphia	Exercises for developing coordination in space, but also motor coordination

– standing crouched on the tip of the feet (with the side arms, the knees apart, the heels close, the ends pointed, the eyes closed) unsuccessful attempt in: falling forward on the hands or back on the seat; laying on heels on the ground, lowering the arms; eyes open;

– reproduction of the movements according to certain schematic figures – 8 movements to be executed with the following explanations: you will do the same as the one in your drawing, with the same hand and with the same foot and vice versa;

– reproduction of movements according to the teacher's model, at his command, or on musical background taking into account rhythm;

– exercises with a character of skill, mobility, in correct and corrective positions, favorable to the growth and development processes.

#### 1. *Coordination exercises:*

**initial position** – Standing:

t1 – step forward with the left foot with the right arm forward, left to the shoulder, looking left;

t2 – changing the position of the arms, looking to the right;

t3 – step back with the left foot with the arms up, looking up;

t4 – return to the initial position.

4 x 4t.

#### 2. *Exercises for the legs: bending, stretching, balancing, arching, with positions or movements of the arms:*

**initial position** – Standing with hands on hips:

t1 – lateral fusion with the left with the diagonal arms leading, the upper left;

t2 – change of the fusion to the right, the arms diagonal, straight up;

t3 – stretching the right leg while standing away with the hands on the shoulders;

t4 – return to the initial position.

4 x 4t.

It aims at the correct execution of all the elements.

#### 3. *Jumping – on both legs or one with different arm positions or movements. These exercises energetically mobilize the great functions and are dosed based on the number of repetitions, the timing but also the difficulty of the actions.*

**Initial position** – Standing:

t1–2 – jumps in the distance with the hands to the shoulders;

t3–4 – jumping with the feet close, with the lateral arms leading;

t5 – jump on the right foot with the hug of the left knee to the chest;

t6 – jumps on both legs;

t7 – jump on the left foot with the hug of the right knee to the chest;

t8 – return – by jumping – to the initial position.

4 x 8t.

**Results.** Following the application of the experiment and by carrying out activities to improve the psy-

chomotor activity, the students with intellectual deficiency made progress by increasing the speed and achieving a high homogeneity of the group, although initially the group subjected to the experiment had an average homogeneity.

Following the application of the experiment and by carrying out activities to improve the psychomotor activity, the students with intellectual deficiency made progress by increasing the resistance and achieving an average homogeneity of the group.

Initially, the group undergoing the experiment lacked homogeneity.

Initially, none of the students with intellectual disabilities subjected to the experiment had a good orientation in the field, did not know which is the left or right side of the basketball court and from this situation did not retain their place in the field, they ran all over the field without any strategy, they ran where the ball was.

Students with intellectual disabilities in 5th grade did not know the left or right side of a building, even the street, and hardly noticed the left or right side of the person in front of them,

Multilateral development develops through the psychic preparation along with the acquisition and improvement of the correct technique of the basketball game. In fact this is an important requirement in the harmonious development of the main muscle groups, the gradual lifting of the effort capacity (of the respiratory and circulatory devices), the gradual development of the specific basic physical qualities through the acquisition of the efficient technique.

We have used competitions on a large scale, as a method of great importance in the training of the physical, mental and technical qualities required in the performance sport. But also as a method of social integration Without a doubt that the competition, together with the training, is the engine of progress in performance sports in general and in football in particular and especially is very important for social integration.

Settling on the field for the basketball game, different types of running with meaning change: forward-backward, left-right, knowledge of cardinal points in relation to the times of the day (morning-east or east, left-north, right-south, evening – west-west), the expression of laterality in an open field such as the basketball court or other spaces, the achievement of psychomotricity based on running on a predetermined route with a left-right bypass, have decisively contributed to the formation of the spatial orientation as follows:

– 4 students have acquired information, formed spatial orientation skills through various games, and have an important knowledge useful for social integration;

– 2 students have made insignificant progress, they can orient themselves in the field, but they only keep their place without knowing on which part of the land they are at a certain moment, they do not know

which is the right or left side of a building, but I know to perceive in concrete form by comparison which is the right or left side of a person in front of them.

No student has managed to learn to know the clock.

Through the games of motility development, through the achievement of tips or through the basketball game, students with intellectual deficiency have acquired important knowledge of spatial orientation and laterality, sustained through the hours of training and personal and social autonomy.

Discussions. People with disabilities are an integral part of the society, their task being to provide them with an environment with the same rights and responsibilities as people without disabilities, participating fully and equally in all social activities, allowing them to maximize their capabilities and talents and ensure their integration into community life.

In practicing in special education with students with intellectual disabilities, I considered the study of psychomotor activity, ways of recovering and improving motor skills and skills through the game of basketball, to be considered as important as possible for social integration.

Disorders of motor skills have been considered which is a complex problem due to the fact that insufficient attention on the recovery of children with intellectual disabilities has as a consequence the apparent impossibility of social and professional adaptation.

In order to acquire the knowledge and skills that are needed for a job – students with intellectual disabilities are required to have adequate motor skills and skills, whose training and development mainly depends on physical education.

Physical education by its means, exercise structures, dynamic and sports games develops in students with intellectual deficiency, punctuality, precision, coordination, laterality – elements that will ensure the work of children with the same characteristics – which have become defining traits of the attitude towards work.

In the organized competitions, students with and without disabilities participated alongside and not infrequently the victory was on the part of the intellectually deficient. The participation of students from different schools as referees or officials in these competitions has given new dimensions to the integrative process of students from special schools. Students with intellectual disabilities may not be referees or officials but they may be aware (as a role play) that this posture may be favorable to them.

The participation of children with disabilities in Romania in the specific Olympics, in the World Championships, etc., requires a sustained preparation process, which should be carried out only under the guidance of the knowledgeable people of the specific problems of the activity with each type of disability.

After analyzing the results obtained by conducting the experiment, it can be stated with certainty

that basketball is one of the most used recreational means of education, the game with a high index of socialization-community integration, but also for recovery purpose.

The working hypotheses are confirmed. Although the progress made by these students seems small in terms of acquisitions, they can still be considered as important if we compare them to their psychomotor activity. The specific elements of basketball will be taught and demonstrated so that they become therapeutic tools for educating and re-educating the psychomotor skills of children with mental disabilities.

They work in teams due to the different execution possibilities depending on I. Q. the individual pace and the slow pace imposed by it.

In general, the method used with these students is the classic one: analytical (on parts), the global use can be used after working individually and the whole team correctly executes all the elements.

It is necessary to first create an overview of the entire complex of movements and then their cursive execution, followed by the soundtrack. The movements used will have a very simple structure, grouped on operations necessary for learning.

Using the game of basketball in physical education lessons conducted with students with mental disabilities I found:

- improving the overall motor skills, but also improving the lateral disorders (leftness, preferentially using all the segments belonging to the left half of the body);
- stimulation during the game has led to an increase in confidence in one's own possibilities;
- leaving school within various competitions or partnerships with schools in the city increased the degree of adaptability to new, optimized the attitude of tolerance of the spectators, they were highlighted by a sustained basketball game;
- influence the development of movements to increase the thoracic elasticity, the possibility of apnea, thus contributing to better pulmonary ventilation, ensuring a better oxygenation of the tissues and cerebral cortex with stimulating effects on the intellectual activity but also on the great organic functions.

Physical education teachers as well as specialists from special schools have a duty to initiate sports activities in collaboration with other high schools or those from mass education, thus contributing to a much faster social insertion.

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