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METHODOLOGICAL ASPECTS OF INCREASING COORDINATION THROUGH MOVEMENT GAMES AT PRESCHOOL AGE

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Abstract:
When selecting games, the specific biological and psychological characteristics of different age groups should be respected. For pre-school children, for example, games should not be selected which require a great deal of effort or have a one-sided effect on the body, but rather games which do not divide the participants into teams, are imitative in nature, require a high level of support and do not place too great a demand on coordination and precision. The experiment consisted of 20 movement games over a period of eight months. We tested the preschoolers through a set of specific coordination tests before and after the application of the games.

Introduction

Co-ordination can be trained differently depending on age, gender and the level of possession and development of other skills, bearing in mind that it is one of the genetically determined, low trainability skills. Increasing the level of co-ordination is based on the acquisition of a wide variety of skills and is underpinned by the mental processes that ensure learning. There are a number of aspects that limit co-ordination training, including motor experience, the level of development of other skills, the fineness and accuracy of the senses and, last but not least, motor intelligence [1,3]

Coordination ability is largely influenced by the motor experience of each individual, by the large number of motor skills mastered. It is learnt in parallel with the process of learning new skills and motor skills. The level of development of the other skills (speed, strength, stamina and flexibility) influences the co-ordination of movements, along with motor experience. The fineness and accuracy of the sensory organs contribute, together with motor intelligence, to the manifestation of coordination. Coordination is not just a product of muscular activity, it is a manifestation of the action of the factors under the control of nerve activity and the sense organs that enable the components of co-ordination to manifest themselves. [2,6]

Coordination is mainly educated through repeated practice of motor skills under varied conditions, combinations and demands. The greater and more varied the motor skills acquired by the pupil/athlete, the more co-ordinated and efficient

his/her movements will be. Irrespective of the complexity of the skill, coordination is a skill that is learnt by practising simple or complex exercises, at first slowly and increasingly quickly, against a background of resting the body. [9,10]

Coordination is educated through the acquisition of a large number of basic motor skills, either utilitarian or sport-specific, through exercises for the acquisition of technique and through special applied exercises. The learning process is initially realised by executing movements with less precision, in a rigid form, with a high consumption of nervous (concentration and increased attention) and physical energy. These aspects are explained by the fact that the excitation of the motor area of the brain also extends to the areas that do not coordinate the movements of the body and its segments, and the execution of movements is carried out by permanent voluntary control. The action of permanent correction of the executions causes the cerebral area of excitation to be increasingly localised and restricted to the cortical area of movement. Long repetition allows the formation of conditioned reflexes and, with them, the manifestation of economical and precise co-ordination of movements and conscious control, mainly at the beginning and end of the execution. [7,8]

Coordination education begins at an early age, when the plasticity of the nervous system is high compared to that of adults, when the aim is to execute movements in a rational, nonchalant, economical, co-ordinated, purposeful, coordinated manner, appropriate to the goal, the objective pursued. [2,10]

In 2003, T. Badiu and M. Ion-Ene, taking into account the fact that coordination involves components that are largely of a nervous nature, drew attention to the fact that the training methodology must take account of the fact that it is not very trainable, but it should not be overlooked that tests have been and are designed to measure the activity of certain body segments in relation to complex or simple demands. [1,4,5]

Matherial and method

The research hypothesis assumes that the development of psychomotor activities of children aged 4-6 years in the preschool education system will allow to increase the influence of the educational-instructional process on the formation of the necessary motor skills and experience of preschoolers, as well as the formation of their need for movement, which will ensure their success in preparing them for school.

The hypothesis of the paper is to analyse coordination in sports at preschool age. In this context we aimed to perform a series of psychomotor tests to determine coordination ability in preschool children.

The experiment involved a sequence of actions:

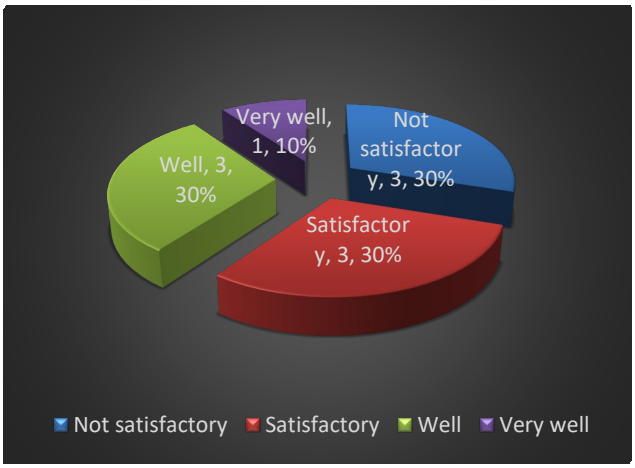
- formation of hypotheses and setting of tasks;

- organisation of the experiment: designation of subjects (experimental group and control); determination of the content of the experiment and the means of recording its conduct and the influences exerted on the subjects;
- research of the experimental results (recording, processing and analysing the data using mathematical-statistical methods)

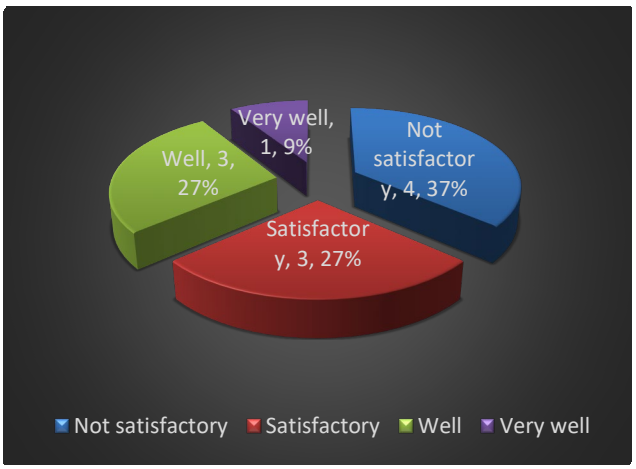
The experiment consisted of 20 movement games over a period of eight months. We tested the preschoolers through a set of specific coordination tests before and after the application of the games. We recorded the results in order to verify the confirmation or refutation of the hypothesis. The tests applied were: 'Matorin Test' and 'Bruininks - Oseretsky Test' of segmental coordination.

Table no. 1 - Initial results "Matorin Test" age group 4-5 years

Nr. crt.	Name and surname	LEFT				RIGHT			
		180°	180°-270°	270°-360°	360°	180°	180°-270°	270°-360°	360°
1.	A. D.	N						B	
2.	C. V.			B			S		
3.	D. A.	N				N			
4.	D. C.		S			N			
5.	F. G.			B			S		
6.	I. R.		S			N			
7.	J. I.			B				B	
8.	J. M.	N					S		
9.	P. A.		S			N			
10.	P. P.				FB				FB



Grafic nr.1 - Initial results "Matorin Test" age group 4-5 years - LEFT

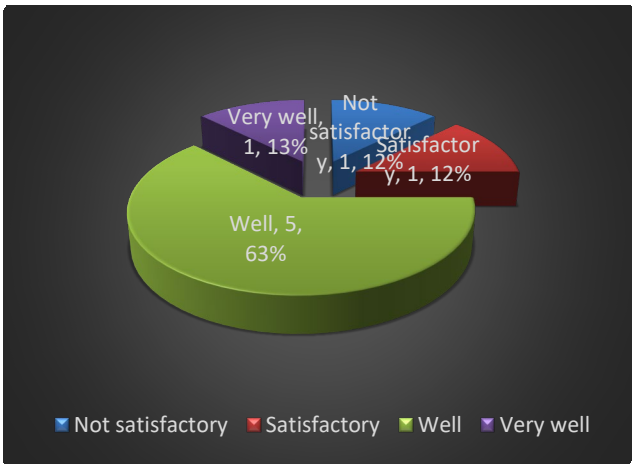


Grafic nr.2 - Initial results "Matorin Test" age group 4-5 years - RIGHT

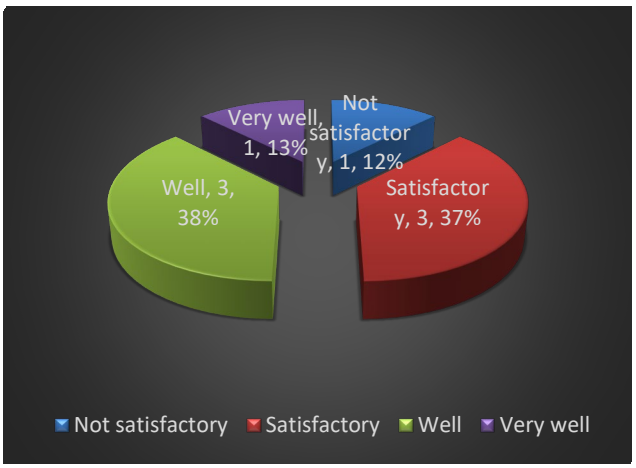
Table no. 2 - Final results "Matorin Test" age group 4-5 years

Nr. crt.	Name and surname	LEFT				RIGHT			
		180°	180°-270°	270°-360°	360°	180°	180°-270°	270°-360°	360°
1.	A. D.			B					FB
2.	C. V.				FB			B	
3.	D. A.		S				S		

4.	D. C.			B			S			
5.	F. G.				FB			B		
6.	I. R.			B		N				
7.	J. I.			B						FB
8.	J. M.		N					B		
9.	P. A.			B			S			
10.	P. P.				FB					FB



Grafic nr.3 - Final results "Matorin Test" age group 4-5 years - LEFT



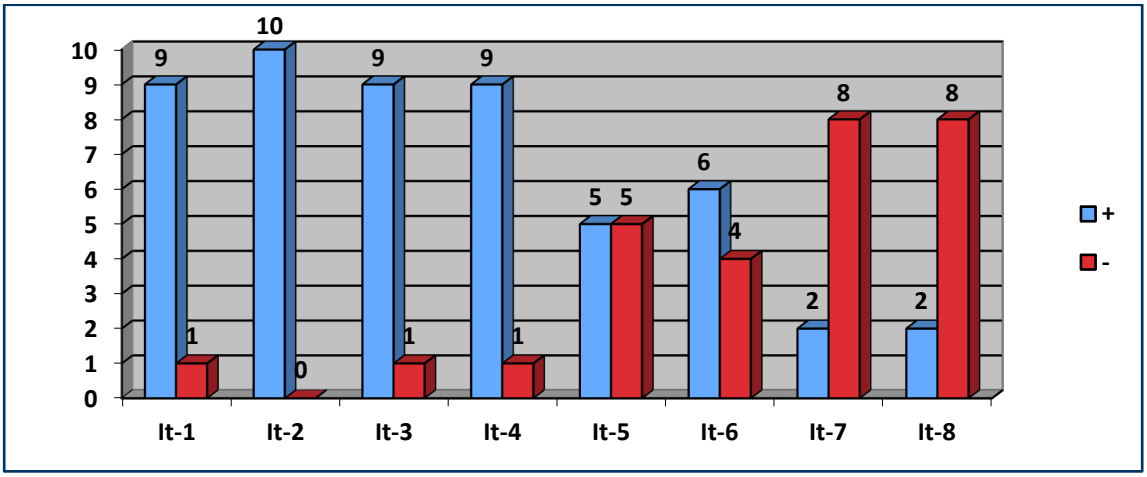
Grafic nr.4 - Final results "Matorin Test" age group 4-5 years - RIGHT

Table no. 3 - Initial results "Bruininks - Oseretsky Test" age group 4-5 years

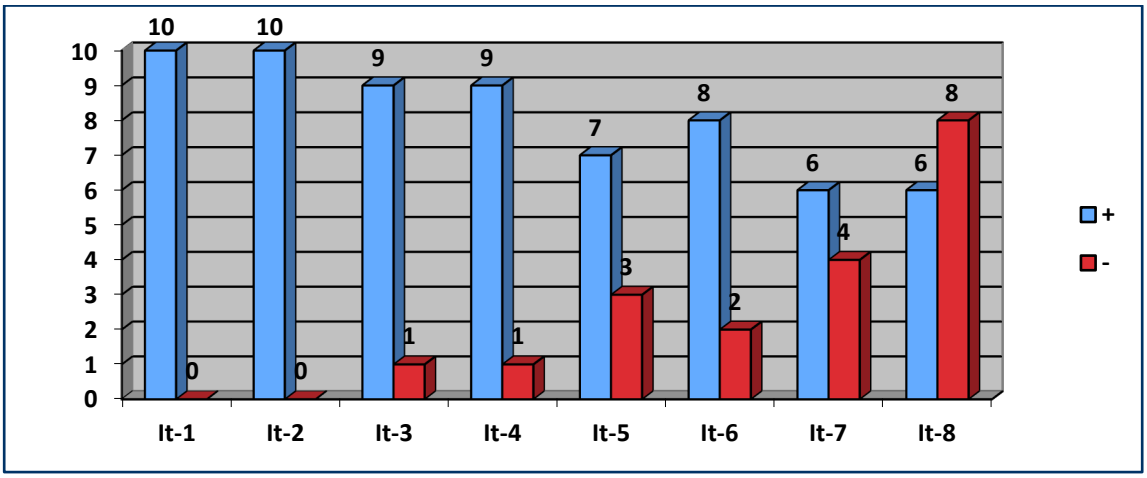
Nr. crt.	Name and surname	It-1	It-2	It-3	It-4	It-5	It-6	It-7	It-8
1.	A. D.	+	+	+	+	-	+	-	-
2.	C. V.	+	+	+	+	-	+	-	-
3.	D. A.	+	+	+	+	+	-	-	+
4.	D. C.	+	+	+	-	+	+	-	-
5.	F. G.	+	+	+	+	-	+	-	-
6.	I. R.	-	+	+	+	-	+	-	-
7.	J. I.	+	+	+	+	+	-	-	+
8.	J. M.	+	+	-	+	+	-	+	-
9.	P. A.	+	+	+	+	+	-	-	-
10.	P. P.	+	+	+	+	-	+	+	-

Table no. 4 - Final results "Bruininks - Oseretsky Test" age group 4-5 years

Nr. crt.	Name and surname	It-1	It-2	It-3	It-4	It-5	It-6	It-7	It-8
1.	A. D.	+	+	+	+	+	+	+	+
2.	C. V.	+	+	+	+	-	+	-	-
3.	D. A.	+	+	+	+	+	+	+	+
4.	D. C.	+	+	+	-	+	+	-	+
5.	F. G.	+	+	+	+	-	+	+	+
6.	I. R.	+	+	+	+	-	+	+	-
7.	J. I.	+	+	+	+	+	-	-	+
8.	J. M.	+	+	-	+	+	-	+	-
9.	P. A.	+	+	+	+	+	+	-	-
10.	P. P.	+	+	+	+	+	+	+	+



Grafic nr.5 – Initial results "Bruininks - Oseretsky Test" age group 4-5 years



Grafic nr.6 – Final results "Bruininks - Oseretsky Test" age group 4-5 years

Conclusions

When choosing a movement game, it should be borne in mind that movement is the main component of the game, ensuring that children's attention is focussed on the goal. Bearing in mind that the game has an important instructive-educational role, the teacher must pay great attention to the choice, organisation and development of the game, taking into account certain pedagogical principles and psycho-pedagogical and physiological tasks that ensure the success of the activity.

In general, in the framework of the teaching tasks, the leader can aim, in particular through the game, to:

- the formation and development of basic motor skills (locomotion and manipulation), utilitarian-application skills or skills specific to certain branches of sport;
- development of motor skills (speed, dexterity/coordination, strength, stamina, mobility/suppleness);
- development or probing of psychological qualities (attention, concentration, positive or negative emotional experiences);
- checking previously learnt elements;
- developing a sense of organisation and game management.
- developing the spirit of co-operation and social integration.

In view of these tasks, it is best to avoid the selection of games that do not contain natural movements, nor games that could have a negative effect on the body or that could cause trauma or various injuries.

Movement games should also be selected on the basis of location, material conditions and weather conditions, as these factors also contribute to the success of the tasks to be achieved.

Movement games are extremely varied in their content. The content is made up of the movements that make up the game. Children often organise games by repeating or combining familiar movement games.

The high motor density during the activity ensures that children maintain discipline and respects the need for movement, a particularity of pre-school age. Therefore, the dosage of effort is designed to have beneficial effects on children's bodies and should be judiciously adjusted. Necessary breaks are needed between games to allow the body to recover.

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