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CONSIDERATIONS ON PSYCHOMOTOR EDUCATION: PERCEPTUAL-MOTOR BEHAVIORS

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The psychomotor discipline stands at the crossroad of several sciences and at the same time, it is an active therapy or theory studying the growth and development, as well as the education and re-education of the child. Before children are able to speak, movement is their only mean of expression and the first instrument of their psyche. This study aims to show the importance of psychomotor education in the harmonious development of child.

Keywords: physical development, psychomotricity, education.

Body scheme. The ultimate synthesis of the body image development is the perception of one's own body as unique and different from that of the others, the perception of the self and object and subject.

In the opinion of the specialists, one acquires the body schemes in two phases [5]:

a. The precision of the body, of its unity, of its position as a whole in space allows – through the experience of the body – a global and immediate consideration of the perceptions. This way, an object is given a connotation, depending on the

cognitive baggage of the individual and on the representation formed. Hence, the object is valorized and then expressed through language and interiorization.

b. The first spatial rapports initiate the child in differentiating between the positions and movements of the limbs independently; the child reaches this purpose by starting from motor experiences throughout which he will make the connection between proprioceptive and exteroceptive elements. This explains the importance of the fact that – through language and the use of the mirror – the

child assimilates and mirrors several aspects. We mention here the information about the position of the body in space (forwards, backwards), the main body references (segments, joints), and the relative positions of the segments in relation to the body.

The following effects appear [1]:

a. The child becomes aware of the gestural space through various sedentary positions, executed in diverse postures (horizontal and vertical positions of the arms in the straight position, the position of the legs);

b. The child gets to know his body through manual contact (a priceless source of exteroceptive sensations) and through personal actions on his own body; the individualization of the body line always through manual contact personal actions on one's own body, with left-right discrimination, executed only by the child who already went through and passed the previous stages.

Elements of the body scheme [5]:

– Visual: recognizing the body segments and their position in space,

– Sensitive-exteroceptive (tactile): recognizing body segments in their relation to the sensible exogenous stimuli,

– Proprioceptive-kinaesthetic: knowing the body segments in motion,

– Vestibular: knowing the position of the body during fast or slow, rectilinear or rotational movements accelerate,

– Gnostic (knowledge-related): knowing the role of the body segments in the motor actions,

– Cognitive: recognising the body segments and their relation to the environment – acquiring the capacity to control them consciously.

Laterality refers to the dominant function of a hemisphere.

The brain has an anatomical symmetry, but it is characterized by a functional asymmetry which allows important emphasis' for the three-dimensional perception of space and for the psychic selectivity in general [4]. The repartition of the functions occurs in the left or in the right hemisphere and this represents the lateralization process [6]. The relative specialization of the hemispheres does not occur simultaneously; on the contrary, preferences will be expressed in childhood, and they will stabilize only afterwards.

Laterality is oscillatory until the age of one, with an initial domination of some primary forms of ambidexterity; subsequently, in of most children the right asymmetry will emerge after the age of one. This laterality depends on the progressive domination of one cerebral hemisphere upon the other. Unlike during the previous phase – when the lower, peripheral segments of the nervous system were dominant (made obvious by the instable and explosive character of behavioural expressions), – the upper segments of the nervous system, especially the cortex, become the dominant ones. They express the regulatory and sometimes inhibitory actions on the lower segments, permitting a better coordination, orientation, and control of the activity [2].

Depending on its nature, laterality can be normal and pathologic. Normal laterality appears after the localization of the brain command in the right or in the left hemisphere. The pathologic laterality

appears when, for example, there is damage to the left hemisphere and the command is taken over by the right hemisphere (or vice versa).

Depending on its intensity, laterality can be strong or weak. Strong laterality is characterized by the domination of functional asymmetry, while weak laterality includes the use of both hemispheres with the same effectiveness.

Depending on the roles and tasks of a hemisphere, the following situations can occur: *homogeneous* character of a hemisphere (a preference for the right or left eye, hand, and leg), *crossed* (preferences for the right eye and the left arm and vice versa) or *undetermined* (at small children and persons with sever mental disorders).

1. Spatio-temporal orientation

Space and time are fundamental forms of the existence of moving matter because all phenomena and relations take place in space and time [7]. It is clear that this psychomotor element represents the structure of the environment by relating to the self as referential element and then to other objects within the environment.

The body scheme is an important factor in the psychomotor development and – through its content – it has the role of forming the cognitive organization of space and time. Furthermore, laterality will have a high influence on the orientation in space, by altering the dominant role of the cerebral hemispheres.

Spatial organization starts from the sensorimotor level of the perceptions related to action and it's based on the knowledge of the body scheme.

Temporal structure and orientation

Time perception allows us to assess the duration and to organize the actions. In the daily activity of an individual, time perception reflects the relations between various phases or moments of a phenomenon.

In the case of pre-school children, the development of time perception evolves in two phases:

- The time defining phase,
- The phase of verbal orientation in time.

Program for the education of psychomotor behaviours

Education/development of motor behaviours.

Intermediary objectives:

a. *Organization of the body scheme and formation of the self image*

Learning activities

– Children will have to identify the main body segments through boards, dummies, toys, and their own persons.

– Game of identifying the missing elements (toys without arms or legs, boards with missing elements, with a progressive degree of difficulty).

– Children will put together and then take out the segments of the body (with a progressive degree of difficulty).

– Children will identify their own person in drawings, photos, and videos of the various events in their lives.

– Game-exercises will be organized for children to learn their first and last name and to use to personal pronoun.

– Each children will be given a ball (none of the same colour); they will gather and mix them, and, at the sign of the therapist/kinesiotherapist, they

will have to recover theirs; by this way, they will learn possession.

b. Formation and development of the correct body postures

Learning activities

– Exercises will be organized in order to learn the basic positions of the body including the following: movements of the head, of the arms, of the legs, and of the torso.

c. Education/development of basic motor behaviours

Learning activities

– exercises for learning the fundamental motor abilities of the legs: walking, running, leaping, throwing, climbing/going down.

– exercises for learning the fundamental movements of the upper limbs: for the arms, forearms, for the fingers: «windmill», «the wind blows the leaves», «let's draw geometrical figures by moving the arms», etc.

d. Education of specific, age-adapted motor qualities

Learning activities

– Exercises to develop/educate speed, force, ability, resistance in motor activities: «*The first wins*», «*Let's string beads*», «*Let's throw the basketball*», «*The shuttle*», «*Let's seed and harvest the potatoes*», etc.

e. Education of balance.

Learning activities

– exercises to form and educate static balance (biped and on one leg: standing on something high/inclined plane; leaning on both legs, maintaining position as much as possible; standing on one leg, etc).

– exercises to form and educate balance when passing from the static to the dynamic (stop/motion).

– exercises to form and educate the dynamic balance necessary to an easy independent movement (if such an activity is required).

– exercises to educate the dynamic balance with progressive degrees of difficulty (in running, walking, and jumping).

Education/development of manual abilities

Intermediary objectives:

Education/development and consolidation of the fundamental manual gestures

Learning activities

– *prehension exercises*: objects of various sizes will be used; they will be put in children's hands, thus stimulating their grabbing reflex (a cane, a small ball, a paper wad or a toy).

– stimulating the interest for a toy (by manipulating it) and repeatedly offering attractive toys with different sizes, weights, and textures; the children will be encouraged to grab them (initially using both hands, then only the palm as a claw – the thumb opposed to the palm).

– exercises of holding the toy on purpose, so that the child has to pull it in order to get it.

– exercise games to educate the control of the grabbing reflex: handing over the toy, *exchanging toys*.

– exercises of grabbing small objects/elements using tweezers (for both hands).

– manipulation exercises: activities in co-action or by imitation (moving the toys from one hand to

another, rotational movements, exploratory exercises them with the fingers, shaking and squeezing in the fist, grabbing two objects at the same time and squeezing and hitting them one against the other, placing them side by side or one on top of the other).

Education/development of the control and psychomotor coordination

Intermediary objectives

a. Educating the bi-manual coordination

Learning activities

– stringing exercises (stringing beads with different sizes and diameters on a thread, following a model or based on the children's creativity),

– exercises of buttoning/unbuttoning a jacket or unzipping a shoe (hook and loop, snap, buttons, zipper),

– exercises of tying shoelaces, with different degrees of difficulty, tying/untying,

– exercises of rolling/twisting materials with different sizes/thicknesses,

– exercises of screwing on/screwing off (building games),

– exercises of interlacing (with two or three threads of different thicknesses).

b. Educating and developing the eye-hand coordination

Learning activities

– building games involving placing side by side, overlapping, combining,

– games involving throwing/catching objects with different sizes, target throwing with a progressive degree of coordination,

– games involving hitting suspended objects, fixed or mobile,

– pregraphic and plastic coordination exercises, using various working instruments (pointing, drawing a line in a labyrinth, uniting two points forming an image, following a contour, filling a contour, executing pre-graphic signs, cutting, sticking).

c. Educating/developing the eye-hand-foot coordination

Learning activities

– cycling.

– football.

d. Educating/developing the auditory-motor coordination

Learning activities

– movement games on simple rhythms,

– free or directed dance.

Education of the perception and spatio-temporal orientation capacity

Intermediary objectives

a. Educating/developing the spatial orientation capacity.

Learning activities

– game-exercises for the perception of positions,

– game-exercises for the perception of directions,

– exercises of recognizing the familiar spaces and of orienting on the main routes in order to get from one place to another.

b. Educating the temporal orientation capacity

Learning activities

– game-exercises meant to identify the main moments of the day depending on certain specific actions,

- exercises to anticipate the moments of the day depending on the kindergarten schedule,
- game-exercises meant to identify the day-and-night, weekdays, and seasonal sequence,
- game-exercises to learn the chronological ordering of daily routine sets, with a progressive degree of difficulty.

Conclusions. Psychomotricity is the result integrating education and maturation of motor and mental functions, and, regarding the movements, it refers to their determination (will, affection, needs, and impulses). Hence, psychomotricity

speaks about the influence of the physical processes on the body (processes that shape the body), and about the influence of the motor actions on the human psyche. Harmonious physical development depends on good psychomotor education.

Păunescu C. [8] states that the body is «the most natural human communication instrument», ensuring «the adaptation, the homeostatic and psychosocial regulation, through symbolic arrangements set by the social group by defining the allowed or prohibited attitudes, the meaning of gestures, positions or movements».

References:

1. Albu A., Albu C. «Psihomotricitatea la vârsta de creștere și dezvoltare», Iași, Editura Spiru Haret, 1999, p. 8.
2. Golu P., Verza E., Zlate M., Psihologia copilului. București, Editura Didactică și Pedagogică, 1993.
3. Gordon W. A. «Structura și dezvoltarea personalității», București, Editura Didactică și Pedagogică, 1991, p. 107.
4. Neveanu P. Dicționar de psihologie, București, Editura Albatros, 1978.
5. Ochiană G. «Ludoterapia on recuperarea disabilităților psiho-neuro-motorii ale copiilor», Iași, Editura Performantica, 2006, p. 60.
6. Parain D., Moscato M. «Lateralisation et organisation cerebrale on Lateralisation et lateralite chez l'enfant» de Dailly și Moscato, M, Pierre Mordaga Editeur, 1984, p. 79.
7. Pósztai Z. «Kinetoterapie on neuropediatrie», Oradea, Editura Arionda, 2004, p. 157
8. Păunescu C. «Agresivitatea și condiția umană», Ed. Tehnică, București, 1994, p. 19.