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ASSESSMENT AND PLANNING – ESSENTIAL COMPONENTS OF THE STRATEGIC MODEL OF MOTOR RECOVERY OF PRESCHOOLERS WITH ICP

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Abstract

The strategic model for planning the motor recovery process of preschoolers diagnosed with infantile cerebral palsy (ICP) consists in substantiating the methodological content of recovery process of their motor functions, through the interaction and systematization of the means of physical education in association with those of kinetherapeutic recovery, a fact that would ensure the necessary premises for the successful adaptation of the children from the respective contingent to the subsequent school, usual and general social conditions. The recovery process is to be determined, on the one hand, by the character and degree of deviation (distortion, underdevelopment) of motor activity, and on the other hand, by the motor development goals, to be achieved. For effective treatment of motor disorders of preschoolers with infantile cerebral palsy is rational to use the systemic approach, oriented towards the proposed goals, which involves the complex action of physical exercises both on the basic physiological systems of the child's body and on the development of his motor capacities, via the formation of a rational scheme of movement.

Keywords: recovery, motricity, preschoolers, cerebral paralysis, strategic planning

1. Introduction

Neuromotor impairments affect the motor components of the person, being mainly determined by the damage to the neural structures at the central or peripheral level, but also by the quality of the mental processes that influence the control and operation of the neuromuscular mechanism (Gherguț, 2013). Research related to child development has shown the fact that the rate of human learning and development is the fastest in the preschool period. The intervention period becomes extremely important when the child is at risk of losing an opportunity to learn, during the period in which he/she is in a state of maximum training. If the most suitable moments of appropriation are not taken into account, the child can have difficulty in the formation a specific skill at a later time (Mic & Cârnu, 2016, p. 17).

The techniques used in active kinetherapy recovery start from the idea that each muscular element of the human body is connected to a certain neuroenergetic source, which has an exit on the surface of the body and which "leads" to a certain organ. In general, kinetic recovery practices are applied to five diagnostic-therapeutic areas, which involves nervous, lymphatic, vascular, cerebrospinal systems (Popovici, 2012, p. 167).

Analysing literature data and modern trends in physical recovery of preschoolers with ICP, we developed a strategic model of planning and control of the instructive-educational process within motor recovery activities of

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preschoolers. At the base of the elaboration of this model was found the premise adapting the means used in motor rehabilitation to the needs of the environment in which children with ICP interact. The practical experience of several years led us to use systems theory in modelling the instructional-educational process in motor recovery activities. Thus, the strategic model developed by us contains 4 basic components and a series of functional subcomponents, which determines the strategic applicative modality for carrying out a program of recovery activities within the preschool system (fig. 1):

1. Assessment
2. Planning the instructional-educational process
3. Motor rehabilitation process:
 - The forms and methods of deployment
 - Selection of means of motor recovery
 - Methodical guidelines for recovery
 - The technical and material means
4. Control of the instructional-educational process
 - Re-evaluation and correction
 - Correlation of means of motor recovery

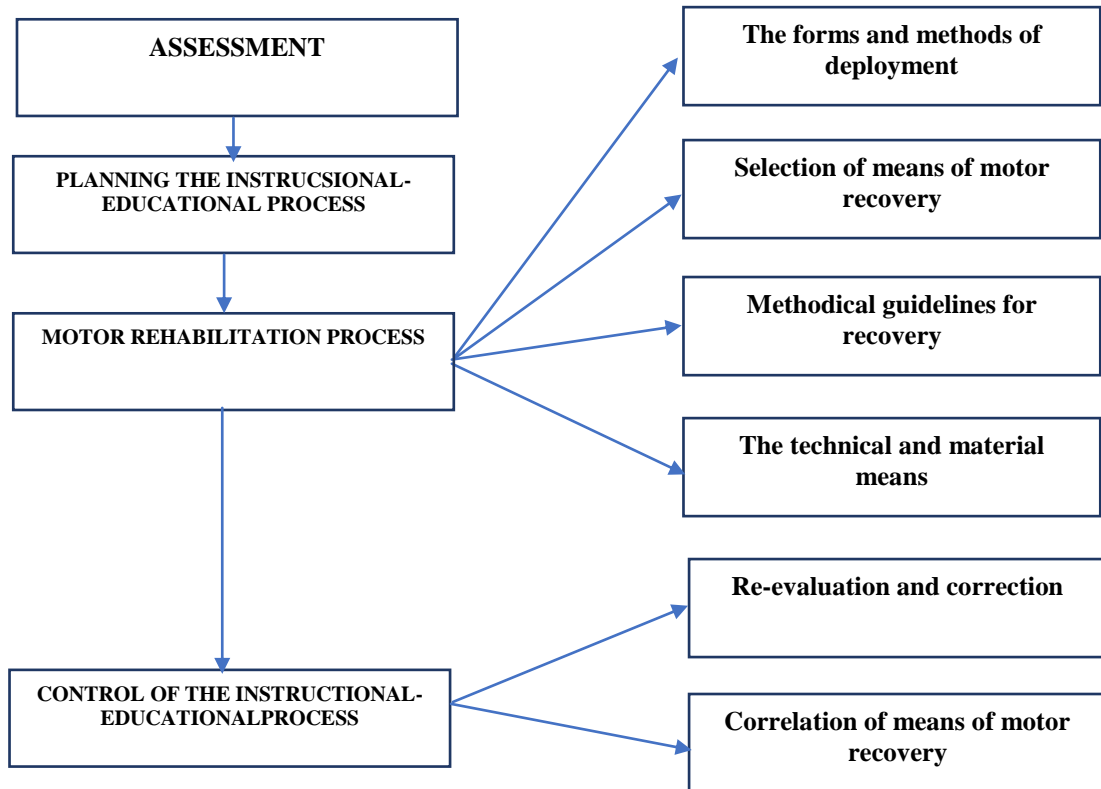


Fig. 1. Strategic model of recovery

2. Material and method

1. Assessment

At the moment, the assessment process of preschoolers with ICP occur in several directions, depending by the covered specialization in the recovery process of preschoolers with ICP, each specialization having a well-defined purpose. The medical evaluation aims at the clinical and somato-functional status, kinetotherapy having the task of determining the analytical functionality of the motricity (mobility, muscular effort etc.), but the occupational therapist determines the level (degree) of psychomotor development. All specializations have independent tasks, specific defined purposes. In the instructive-educational process, in recovery activities, we propose a multidisciplinary assessment form for an overall approach of the motor rehabilitation process. Thus, we determine 3 distinct areas, according to which the motor recovery program of preschoolers with ICP will be planned (fig. 2):

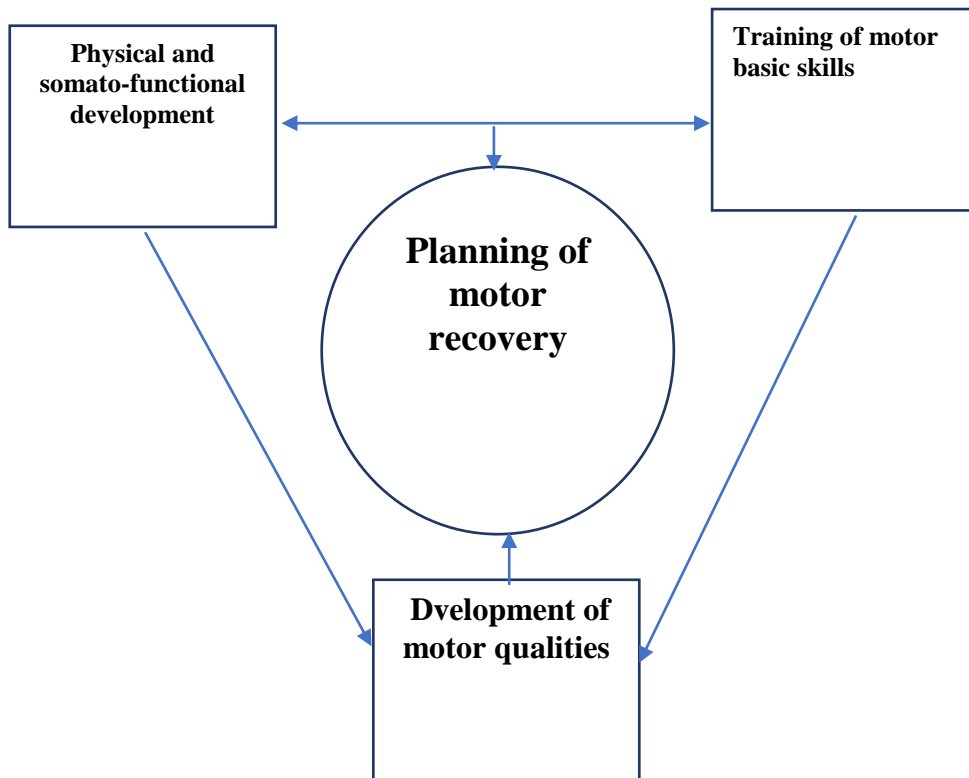


Fig. 2. Planning of motor recovery program

Such kind of assessment model will allow the determination of the main vectors, of the cause, influence, interaction of pathogenic factors, somato-functional indices, the degree of physical development, the quality of the movement scheme application and the training of motor skills. Certain components can be made by the interested specialists, others will be selected from medical files. Taking into account all aspects of the multidisciplinary assessment and mutual interactions, based on the data obtained, decisions will be made regarding the selection of running means and forms, the motor density and environmental conditions for elaboration of motor recovery program of preschoolers with ICP.

Assessment, planning and rehabilitation must be carried out as early, as persistently as possible, appropriate to etiological processes. An early treatment is the one started at the age of 6-7 months, giving the child better chances; motor centres are not fully developed, therefore motor functions can be influenced more easily. To this age there is rarely a true spasticity, movements can be easily influenced. An early treatment prevents the installation of contractures and distortions, prevents mental retardation (Constantinescu, 2019, p. 33).

2.Planning

Practice in the field of physical rehabilitation determines 2 main forms of carrying out the instructive-educational process:

- group activities
- individual activities

Group activities are made of children collectively for the development of coordination and speed, but also to track the modification of acquired skills, their improvement and consolidation.

Individual activity are exercises performed individually by each child. In these activities the instructor is responsible for surveillance and guidance, and the child works independently.

However, taking into account the complexity of the interaction and classification of motor and somato-functional disorders, it is recommended to use the individualized form of carrying out the instructive-educational process. For planning motor recovery program, based on the study of specialized literature and practice in the field, we determined a series of peculiarities and principles, which must be taken into account in the individualization and planning of the instructional -educational process, both in individual activities and group:

- Peculiarities of the somato-functional status (general state of the CNS, cardiovascular, respiratory, digestive, excretory, immune, the presence of allergies);
- The peculiarities of motor development (degree of motor development, severity of motor disorders, degree of disability);
- Peculiarities of mental development (CNS type, behavioural disorders, mental disorders);
- The degree of intellectual development (normality, retardation);
- The state of sensory functions (severity of sensory disturbances);
- Peculiarities of speech development (norm, forms of speech disorders);
- Comorbidities (hydrocephalus, heart failure);
- Child's age (gender characteristics).

Out of these particularities, which must be taken into account in planning motor recovery program, it is necessary to elaborate a structure, based on essential parameters, which determine the qualitative, quantitative and methodological content of motor recovery program:

- Determining long and short duration purpose, as well as of recovery objectives;
- Orientation of the recovery process (normal or compensatory biomechanical schemes, formation of new motor skills or consolidation of acquired motor skills);
- Duration of the recovery program (1 month, 3 months, 1 year);
- Dynamics of recovery program (carrying forms, volume, intensity, motor density);
- Succession of recovery means (therapeutic exercises, balneophysiotherapy, drug treatment);
- Staging of the motor recovery program.

Depending on development motor level and the degree of severity of motor disorders, several stages of the motor recovery process of children with ICP were determined:

PRIMARY STAGE (early recovery) takes place during the first two years of life of the child with ICP and is the most effective stage of recovery. In this stage, motor development is assessed and, depending on the determined deficit, the purpose, objectives and means of intervention are established. Prioritizing, at this stage, the means of

kinetotherapy are applied, which are oriented to somato-functional recovery and motor skills that the child with ICP must acquire in the first two years of life (from the doll's posture, maintaining the body in different positions, lying down rolling, crawling, sitting position, to independent walking).

THE SECONDARY STAGE (training and motor development) is a continuation of the previous stage. It starts from preschool age and continues until middle schooler age. At this stage, the role of physical education means and the instructive-educational process begins to primary increase, oriented to the development, training and correction of motor qualities and skills. In this process, two strategic objectives are pursued:

- Development of motor skills (mobility, strength, coordination, balance, motor control, speed and endurance).
- Training and correction of basic motor skills and abilities (basic postures, crawling, walking, climbing, running, jumping and motor skills in daily living activities).

THE LATE STAGE (maintenance and adaptation) – goals and main purpose at this stage consist in adaptation of the physical condition to the conditions of the environment in which the child with ICP interacts, in order of improving motor skills, training of compensatory movement schemes depending on motor task, making sure that the motor skills correspond with the necessary level of qualitative and sufficient execution for daily activities, fact would ensure the integration of the child with ICP in the school environment. Under these conditions, the main form of the instructive-educational recovery process represent the adaptive physical education. During the course of this stage, it is important maintaining the results of the motor recovery obtained in the previous stages, improving or correcting previously formed motor skills and adapting to the demands of the environment.

Every child has an individual rhythm development. The child whose rate of development is lower than the typical level can benefit of intervention programs as early as possible. The aim of motor assessment and rehabilitation processes is to help the child achieve his potential as best as possible (Popovici, 2012, p. 167).

3. Conclusions

Based on the strategic and methodical principles stated above, it can be developed a program motor recovery individually or in minigroups, where the purpose and objectives should be well defined, the instructive-educational means and methodical guidelines should be rigorously selected, according to the recovery stage (determining the program structure, duration, intensity, consecutiveness, frequency of implementation). This recovery program can be developed in correlation with the strategic model for planning the motor recovery process. Methodical recommendations for the practical implementation of the motor recovery program must be elaborated in correlation with individual characteristics of the child with ICP or target group.

From those mentioned above, it follows the importance of the planning component, which, in fact, determines the strategy and tactics of the entire recovery process of preschoolers with ICP.

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