

The Importance of Kinetic Treatment for Integrating Children with SEN into Education

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Abstract: *Any child may encounter learning difficulties at some time, but they are usually overcome due to the support and encouragement provided by parents and the educational establishments where children are enrolled depending on their age (kindergarten, school). The notion of children with special educational needs (SEN) is used to describe a category of people with learning problems in relation to age or with a handicap/ a disability/ an impairment compared to most of the population. For children with SEN, the intervention through kinetic means represents an effective therapy that can be equally used by parents and teachers in order to facilitate the integration of these children into mainstream education. The purpose of this paper is to carry out a bibliographic study regarding the improvement of the quality of life in children with SEN by applying specific kinetic means that consist of physical exercise and massage, but also by the intervention of other types of therapy, depending on the disability of each subject. Individualisation of physical activities is a general principle applicable to all participants and especially to people with SEN who suffer from various conditions. In conclusion, we claim that the beneficial effects of the movement performed in any form and in any context are undeniable for any child but particularly for those with SEN.*

Keywords: *special educational needs; kinetotherapy; physical activity.*

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Introduction

The term “special educational needs” (SEN) is used to describe any set of pedagogical measures that are applied to compensate for any difficulty that makes it hard for children to learn the curricular content corresponding to their age.

According to the European Commission (2019), child inclusion into the category of special educational needs must take into account the following aspects:

- the child has learning difficulties compared to most children of the same age;
- the child has a handicap that hinders their enrolment in mainstream education because the response to educational facilities would be difficult.

The categories of children with special educational needs include visual, hearing, mental, physical and language impairments, but also gifted children.

This is also the opinion of Borca (2010, p. 4325), who states that the typological categories of SEN include: emotional and behavioural disorders, failure/delay, mental/ physical/motor disabilities, visual impairments, hearing impairments, language disorders, learning difficulties, as well as gifted children.

The World Health Organization (WHO) reports 1 billion people worldwide with various types of disabilities.

Currently, the educational policy of European countries is focused on the integration of children with special educational needs into mainstream education. Van der Veen et al. (2010, p. 15) highlight that all children, “regardless of any perceived difference, disability or other social, emotional, cultural or linguistic difference”, must be provided the right to education.

International educational policies and practices are based on the measures adopted in Salamanca (Spain) since 1994 and contained in the International Salamanca Statement of 1994 by UNESCO, which emphasises “the importance of regular schools with inclusive orientation as the best means of building an inclusive society and achieving education for all” (Bines & Lei, 2011, p. 421). The document is based on the idea that “every child has the fundamental right to education and must be given the opportunity to achieve and maintain an acceptable level of learning”, considering their “unique characteristics, interests, abilities and learning

needs”. It has established that it is imperative for regular schools to adopt an inclusive orientation and grant access to children with SEN. This decision has entailed the adoption of a policy focused on the difficulties of children and represented the most effective way to combat discriminatory attitudes.

Taking into account the philosophy in this document, but also in other international documents (United Nations Convention, Amsterdam Treaty, etc.), Romania developed in 2010 the *National strategy on the education of people with special educational needs in the context of inclusive education*. The measures are planned in the short term (2012), medium term (2015) and long term (2020), depending on the priorities, and aim to bring the country, as a Member State of the European Union, into line with the European directions of action in the field of education.

According to the developed strategy, children with SEN in Romania can be guided towards special schools or can be integrated into mainstream education. In special schools, children will have to follow the curriculum adapted to their specific disabilities, while their integration into mainstream education involves either meeting all curricular requirements of regular education or learning in purposely created classrooms integrated into mainstream education. These legislative provisions are complemented by home schooling for a specified period if the person with SEN has a disability or schooling in a healthcare establishment if hospitalization is needed for a period longer than 4 weeks.

The European Commission (2019) states, in the article “Special Education Needs Provision with Mainstream Education”, that, in 2019, Romania has taken specific supportive measures for the education of children with SEN in mainstream schools. As a result, every Romanian county currently has at least two establishments that ensure the education of these children. The recommendations for our country are to further develop all conditions (be they human or environmental resources) that provide inclusive education to children with special educational needs.

The identification of children with special educational needs is important to be done as early as possible because the intervention must be applied from the very moment of including the person into this category. According to Heiskanen et al. (2018, p. 827), the identification of SEN is “a basis for planning effective educational support and meeting the individual educational needs of children”.

In the United States, people with special educational needs are grouped into 4 categories:

- mental disabilities – include: Down syndrome, autism, etc.;
- physical disabilities – include: muscular dystrophy, epilepsy, etc.;

- emotional/behavioural disorders – include: bipolar disorder, etc.;
- sensory impairments – include visual, hearing problems and more.

In Romania, the child is first assessed and included into a category of disability (mild, moderate or severe) and only then is enrolled either in special or mainstream education. Children with moderate disabilities (socioemotional or behavioural disorders, learning difficulties or language disorders) can be integrated into mainstream education, and those with motor, mental, visual, hearing or associated impairments can be enrolled in special schools.

According to Sices et al. (2007, p. 531), people with SEN also need to be provided educational services, like all other members of the community, but, in their case, special education engages a group with increased utilization of educational and medical services.

People with sensory impairments need to receive guidance to perform both physical activities and daily activities, with or without the involvement of a supportive person. In the article “Physical Activity and School-Age Individuals with Visual Impairments: A Literature Review”, it has been emphasised that visually impaired people have a low level of physical activity, which might be the consequence of “perceived participation barriers including the availability of appropriate opportunities rather than visual acuity or educational setting” (Haegele & Porretta, 2015, p. 68). In another article, “Hearing Impaired Children and Youth: A Review of Psychomotor Behavior”, Goodman and Hopper (1992, p. 214) state that studies in the field have found that people with hearing impairments have poor balance compared to visually impaired people. Regarding the level of physical activity in people with motor disabilities, it depends on the degree of existing (mainly neurological) and associated conditions; therefore, ensuring intervention through the means of kinetotherapy is essential to improve their living conditions and thus increase their quality of life. For people with mental disabilities, research points out that a high level of physical activity can have positive effects on brain function by increasing blood flow. This issue is also addressed in the article “Impact of Physical Exercise on Reactive Time and Cognitive Function in Mentally Deficient Adolescents” by Ridha et al. (2015, p. 206).

Children with special educational needs enjoy practicing physical activities in both mainstream and special schools, “although issues were raised in mainstream schools regarding bullying and the appropriateness of activities in physical education lessons” (Coates & Vickerman, 2010, p. 1517).

Physical activity for people with special educational needs during physical education lessons is highlighted by Smith (2004, p. 37) in the article “The Inclusion of Pupils with Special Educational Needs in Secondary School Physical Education”, where the author suggests that the tendency of teachers to prioritize traditional team games within physical education classes “serves to exclude, rather than facilitate the full inclusion of many pupils with SEN”.

We think that physical activity adapted to children with SEN requires paying more attention to the means used because all students participating in the physical education lesson must complete the tasks proposed by the teacher. We also believe that, in mainstream schools with mixed classrooms (made up of students with and without special educational needs), it is difficult for the physical education teacher to change the perception of healthy students about those with SEN so that they are not excluded from the activity carried out. However, we appreciate the constant effort of teachers, who, through persevering work, manage to instil empathy in normal students for their peers with special educational needs.

The integration of children with SEN into mainstream education involves:

- providing education for both healthy children and children with SEN;
- providing both categories with specialized services, such as psychological counselling or medical care, as part of the rehabilitation treatment;
 - developing competences in the teaching and managerial staff;
 - providing access for children with SEN to institutional facilities (library, gym, computer lab, etc.);
 - providing supportive programmes for children with SEN;
 - changing the mentality of both the classroom’s students and the parents of healthy children so as they accept children with SEN.

To better understand the integration of children with SEN in education, a multidisciplinary team is needed, which consists of:

1. an itinerant teacher – deals with the educational activity carried out in the mainstream establishment where children with SEN are enrolled;
2. a supportive teacher – deals with the educational and rehabilitative activities for children with SEN both at school and outside it.

Kinetotherapy sessions must be performed in the therapist-patient couple, because one of the basic kinesiology principles to be observed is treatment individualisation.

Kineto therapy involves using all means of medical kinesiology to achieve the functional somatic, motor and mental recovery of the individual. In the case of partially reversible or irreversible conditions, the therapeutic intervention aims at retraining secondary (compensatory) functions.

Kineto therapy has as purpose to ensure functional independence by restoring diminished or absent functions, thus helping the individual to carry out daily activities.

The main means used in kineto therapy sessions is physical exercise. It is a means for maintaining and improving health but also a movement therapy for various disorders affecting the human body. It can also be considered as a means for learning/re-learning movements, for recreation or physical and/or mental recovery. Any form of movement has positive effects on the human body by reducing the risk of cardiovascular disease, type 2 diabetes, degenerative brain disease (Alzheimer's), etc.

The purpose of this paper is to carry out a bibliographic study regarding the improvement of the quality of life in children with SEN by applying specific kinetic means that consist of physical exercise and massage, but also by the intervention of other types of therapy, depending on the disability of each subject.

Topic addressed

Movement therapy for children with SEN uses different forms of bodily activities based on exercises and games adapted to their abilities. Epuran (2013, p. 379) believes that these bodily activities are compensatory and aim to recover the physical, motor and mental potential of those with various conditions resulting from injury or illness, professional dysfunction or genetical background.

Each means selected and proposed in the kineto therapy session must comply with the general principles of both kineto therapy and pedagogy.

The applicability of kinetic treatment starts from the principle issued by the "Father of Medicine", Hippocrates: *Primum non nocere* (First, do not harm). The observance of this principle requires each kineto therapist to have appropriate (theoretical and practical) training in order to deal with any situation that may arise during the session. The kineto therapist must also inform the patient or legal guardians about the benefits of the therapy applied. Moreover, the kineto therapist must maintain in permanent dialog with the patient in order to gather information on treatment tolerance, but

also to watch the patient's mimicry because it can express various states (acceptance of therapy/specialist intervention, pain, resignation, etc.).

To obtain satisfactory results, the kinetotherapist must be part of a multidisciplinary team and collaborate with the school physician, family physician, psychologist, speech therapist, etc.

Kinetic treatment will be initiated as soon as the physician establishes the diagnosis. Early diagnosis allows the kinetotherapist to set the objectives of the proposed intervention and select the most appropriate means. Any delay in establishing the diagnosis aggravates the existing pathology, which will result in a longer period for therapy, the emergence of complications or the permanence of vicious postural attitudes.

Another principle that must be treated with responsibility by the kinetotherapist is that of progressive effort; the individual motor level is aimed here, and the kinetotherapist should not overestimate the patient's physical capability.

According to Cordun (1999, p. 24), treatment individualisation is particularly important because kinetotherapy is intended for the patient, not the pathology; the above author states that each patient has specific reactivity to disease, therefore diseases are not identical in two or more people, which means that the treatment applied cannot be identical either.

The patient benefits from complex treatment due to the fact that, besides the kinetic one, medication-based, orthopaedic-surgical treatment and not only can also be provided.

Any kinetotherapist must respect the principles of psycho-pedagogy. They involve the therapist-patient conversation focused on informing the patient about how the session will be conducted (duration, purpose, usefulness of the selected means), because in this way the patient will actively and confidently participate in the application of treatment. On the other hand, the patient has the obligation to perform the activity proposed by the kinetotherapist in their leisure time to obtain the expected results.

The pedagogical principles that must be respected in any kinetotherapy session are: from easy to difficult, from simple to complex, from known to unknown. Any exercise proposed to the patient will be based on the previously performed ones and will be adapted to the motor level or the momentary capability of the patient.

For the integration of children with special educational needs into mainstream education, the kinetotherapeutic intervention will also aim at their neuromotor development, which is delayed in most of them. At the same time, the most appropriate means will be selected to stimulate the involvement, socialisation and group emulation of students. Pratt and

Peterson (2015, p. 47) state that “the physical therapist may provide direct service to children receiving related services, indirect service to teachers and other staff by providing instruction or recommendations for children within the classroom setting, and consultation for staff and administration addressing issues that affect the student population as a whole”.

The casuistry of children with special educational needs is diverse, and the kinetotherapeutic approach must be complex and supported by the use of specific, non-specific and complex kinetic means.

Regarding the sensory impairments of children with SEN, we propose some particular approaches to the therapeutic intervention during the kinetotherapy session as follows:

- For children with visual impairments
 - avoiding the hyper-protective tendency during the kinetotherapy session;
 - guiding the body segment/segments through the tactile-kinaesthetic intervention of the kinetotherapist in order to perform the required movement;
 - compensatory use of valid analysers (mainly the auditory one) in order to decode the orders given by the kinetotherapist;
 - using objects with acoustic signals (for example, bell balls);
 - using verbal cues to facilitate the spatial orientation of children;
 - avoiding activities that involve sudden changes of direction.

- For children with hearing impairments
 - exercise demonstration by the kinetotherapist and explanations given through mimetic gestural language;
 - using the entire area of the kinetotherapy room to perform the therapeutic programme;
 - performing exercises for the development of balance (which is poor in children with hearing impairments);
 - using percussion instruments during physical activity classes.

- For children with mental disabilities
 - practicing movement games based on simple and clear rules;
 - repetition of simple exercises;
 - exercise demonstration without long and complex explanations;
 - development of coordination abilities.

For successful kinetotherapy sessions, children with special educational needs will be encouraged and praised so that they become

confident, actively participate in the programme and attend therapy lessons with pleasure instead of feeling compelled to do this.

It is also very important to select the kinetic means depending on the established therapeutic objectives, which must comply with the diagnosis and individual abilities of the child and consist in:

- stimulating motor development;
- improving coordination ability;
- increasing muscle tone;
- increasing muscle strength;
- stimulating proprioception;
- preventing or correcting disorders of the musculoskeletal system (kyphosis, lordosis, scoliosis, genu varum, genu valgum, flat foot, etc.);
- developing body schema;
- improving balance, etc.

In addition to physical exercise, massage is another means specific to kinetotherapy, which can be applied to children with special educational needs; it involves the methodical mechanical handling of the soft body parts through a set of manual and/or instrumental procedures that are manually or electrically performed (Cordun, 2016, p. 13). Massage can be prophylactic, hygienic or therapeutic, and its purpose depends on the techniques used.

Nowadays, besides the kinetic therapy applied by specialists, children with SEN also benefit from the direct support of their parents. After special training, parents joined the therapeutic intervention team and turned from passive participants into active participants, becoming co-therapists, which led to increased effectiveness of the therapeutic intervention. Obviously, information, permanent dialog with specialists, knowledge of parents' possibilities and limitations, all of this must be constantly taken into account.

Parent training can begin since the first kinetotherapy session with some simple movements, initially performed under the direct guidance of the kinetotherapist. The kinetotherapist will provide parents with information about the programme applied, the means used and will plan with them a balanced programme in which the effort made by the child with SEN is progressive, and the objectives of kinetic treatment are found in both rehabilitation sessions and daily activities performed at home.

The global policy of parent training and participation in the kinetic therapy of their children is also highlighted in the article "Parental Experience of Participation in Physical Therapy for Children with Physical Disabilities" by Jansen et al. (2003, p. 58), who state that this practice has started being implemented as early as the 1980s and they describe it as follows: "parents became a sort of co-therapist, meaning that while

therapists decided on the treatment goals and methods, parents were expected to perform the treatment activities at home in cooperation with the treatment activities of the therapist in the clinic”.

Lately, unconventional therapies have been commonly used in the rehabilitation of children with special educational needs, for instance animal therapy (horse-assisted therapy, dolphin therapy or pet therapy, especially canine therapy).

Trained horse-assisted therapy (hippotherapy) is beneficial for children with special educational needs, mainly for those with Down syndrome, autism spectrum disorders and not only. The effects consist in increasing self-confidence as well as affection for both pets and people around them. This therapy also contributes to developing motor, emotional and cognitive abilities of the child with SEN.

Dolphin therapy is an uncommon form of therapy used for more than 30 years in various countries around the world (Spain, Mexico, United Arab Emirates, etc.). Dolphins help children with special educational needs regain self-confidence and better react to environmental stimuli (they show curiosity and interest in exploring the environment). The beneficial effect of this therapy is thought to be induced by the waves emitted by the dolphin's sonar (they improve the activity of the nervous system, stimulate attention and self-control). The therapy is indicated for children with neuropsychomotor disease (spastic tetraparesis, autism spectrum disorders, Down syndrome and other severe genetic disorders).

Dolphin therapy is an aquatic therapy that should not be confused with dolphin swimming packages for tourists. In addition to the positive effects presented above, we also mention: improved communication and verbal and nonverbal language, increased social interaction ability, muscle tone regulation, cognitive ability stimulation, etc. For best results, dolphin therapy sessions should take place over a period of at least two weeks.

Another form of animal therapy applicable to children with special educational needs is *canine therapy*. As we know, the dog is man's best friend, which is why this animal can be found in almost any home. However, the dog must be specially trained to be used in therapeutic activities. In the first assisted-therapy sessions, a connection must be established between the dog and the child, which will act as a motivating element in the sessions to come. The benefits of canine therapy consist in increasing the child's degree of autonomy, socialisation ability, responsibility, self-esteem and even creating some team spirit.

We believe that the various animal therapies (with horses, dolphins or dogs) should complement the kinetic treatment for the motor, mental and social development of children with special educational needs.

National policies for the integration of children with special educational needs into mainstream education should go forward through the implementation of continued training programmes for teachers and support staff. Only in this way can discriminatory attitudes be combated, welcoming communities can be created, and an inclusive society providing education for all can be built.

Conclusion

The European Union promotes a Europe without barriers, which means equal opportunities and access for people with disabilities to any activity, as in the case of healthy people.

People with special educational needs should be accepted by all members of the community as a result of eliminating biases and discriminatory attitudes.

The development of national and international strategies can lead to promoting the economic, social, political and cultural integration of these people into society.

The integration of children with special educational needs into mainstream education complies with the European Directive on the right to equal opportunities.

We believe that the beneficial effects of the movement performed in any form and in any context are undeniable for any child but particularly for those with SEN.

Kinetotherapy aims to restore optimal functioning of the body systems through various means of rehabilitation that are intended to increase self-confidence in children with special educational needs, because most often they feel different from and inferior to their peers, and even more, they consider themselves a burden to their families.

The importance of kinetic treatment for people with special educational needs lies in promoting, maintaining and optimising their health status at any stage of life through the selection and adaptation of the therapeutic intervention to individual abilities.

Parent involvement in the kinetic programme applied to children with SEN should be promoted because the therapeutic decision of the parent-kinetotherapist couple has maximum efficiency.

Animal therapies (horses, dolphins or dogs), together with kinetic treatment, contribute to improving the living conditions of people with SEN.

To facilitate the integration of people with special educational needs into mainstream education, the existing infrastructure should be adapted to the specificities of these children, thus opening a door to special education in inclusive schools.

We believe that, in order to stimulate the collaboration between teachers and kinetotherapists, each Romanian school should work with a kinetotherapist, whether we talk about mainstream education or special education. Currently, kinetotherapists are employed only in special schools. The advantage of having kinetotherapists in all educational establishments will reflect on the entire population because bad posture can thus be detected in time, and children with special educational needs will benefit from additional treatment, apart from the classes provided in the curriculum.

Increased attention should be paid to this category of children who need facilitated access to any form of physical activity in order to ensure equal opportunities for all, regardless of individual differences or difficulties. Thus, the quality of life increases and the principle of social inclusion of people with special educational needs is promoted.

Improving educational systems should be a political and budgetary priority for all European states in order to facilitate the inclusion of all children (any child has the right to education) and support the development of special education as an integral part of all curricula.

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