



Educational materials developed as a part of the project:

”Against the flowing wave”. Improving the competences of people working with youth with intellectual disabilities in the field of teaching safe use of water (swimming pool, lake, sea, etc.)

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**Impact of physical activity in water for improvement
quality of life and psychomotor functioning of moderately
disabled intellectually disabled people - study**

Movement classes in water are one of many forms of adapted physical activity that explicitly takes into account the needs of people with mobility, developmental, sensory, mental and other problems. Today, many changes are taking place in stereotypical thinking on the subject of disabled people. The prevailing view is that they, like other people, should enjoy everyday life, develop the capabilities of their body and mind, stay in a friendly and accepting environment. Physical activity in water is a relatively new interdisciplinary theory of therapy, focusing on recognizing and solving the problems of people with disabilities.

Based on the implementation of the project "Opposing a flowing wave" among intellectually disabled youth from the Special School Complex, a study was conducted to examine the impact of this specific physical activity.

Aims of the study:

1. Assessment of the impact of intensive and systematic therapy of exercises in water on the overall functional efficiency of intellectually disabled adolescents with motor dysfunction.
2. Analysis of the impact of therapy on the level and psychosocial adaptation of the exercising group.

Study group

The study included a group of young people with intellectual disabilities. All study participants were students with intellectual disabilities of the Stewards or people with intellectual disabilities from the Apertus Association, the beneficiary of the Erasmus + "Opposing Flowing Wave" program.

During almost 3 months of therapy, observation and diagnostic tests were carried out, with which they were shared with the Icelandic partner and other entities with a similar profile of activity.

The group consisted of 16 people with diagnosed autism; Down syndrome; cerebral palsy; persons with various factors determining their belonging to a group with a reduced intellect. The motor skills and the level of social adaptation of all participants were analyzed.

The study group consisted of boys and girls between the ages of 16-24.

The physical characteristics that characterized the group of subjects before the start of the series of classes and at the very beginning of their duration could include, among others:

- abnormal body shape - mostly stooped;
- balance and gait disorders;
- decreased / increased muscle tone;
- movement coordination disorders;
- lack of elasticity of movements;
- lack of dexterity;
- reduced endurance

To assess the level of adaptation and psychosocial functions, AWO (multidisciplinary assessment sheet) and an interview and observation card were used. The interview, observation card and AWO were used for the initial examination, while AWO was abandoned during the final examination, while the interview and observation card used information on the frequency of performing, among others, such activities as:

bathing, performing self-service activities, interest in body care activities, interest in own appearance, establishing friendly contacts, making independent exits to the city or to the store, improvement of movement, development of interests.

For the assessment of psychosocial functions, a survey was also used among parents / guardians and educators, and a subjective assessment of the achievements of the participants of the activity was asked.

The results of the diagnosis carried out at the beginning

At the beginning of the study, its participants did not have the ability to navigate independently in the aquatic environment and exhibited many motor disorders hindering functioning on the water surface. The main problems concerning the examined people were: disturbed muscle tone, decreased muscular strength, disturbed body silhouette, pathological gait, reduced elasticity and flexibility of movements, impaired coordination of limb movements. The respondents showed a low level of independence related to moving in a new place they did not know. Not all charges had sufficiently developed hygiene habits and self-service skills (care for possessing cleaning products, bathing, order of performing changing clothes or being able to use cloakrooms). Interactions between individual participants and the willingness to cooperate in a group varied. Participants rarely or not talked to each other at all, did not try to make contact with each other. They showed fear of entering the water or descending the ladder into the pool. They rarely took the initiative to spend their free time and leave the house.

The results of the diagnosis after the end of the systematic series of classes

As a result of therapy and the related independence training during extracurricular activities at the pool, a significant change was observed in the frequency of independent daily activities, care for hygiene, and attention to your aesthetic appearance. Interactions between the members of the study group and cooperation in the group have improved. The long duration of classes (almost 3 months) caused the formation of strong emotional ties between study participants. There were reactions of mutual support, cheering on exercises and even competing. Swimmers took the initiative in ordering the tasks they performed, they did the exercises themselves.

A positive change also appeared in such skills as independent movement between the class and the gym, swimming pool during normal educational activities. The skill of making contact with strangers operating the indoor swimming pool in which the classes took place was

noted. Participants also learned to use a public place, demonstrating behavior appropriate to the situation. An example would be waiting in the waiting room to start classes, where there is crowds and chaos. Initial nervousness and uncertainty gave way to quiet conversations and planning exercises. There was a nice, joyful atmosphere. It was also analyzed whether this translated into situations of behavior at home, development of interests, independence.

Results of the survey conducted using the "subjective achievement assessment" survey

The survey was intended to provide a subjective view of participants on their own skills. All respondents positively answered the question about pleasure derived from swimming pool activities. 87% of respondents said that their contact with colleagues had expanded due to participation in classes, and 96% met with encouragement from other people to perform activities in the water. 85% said their fear of water had decreased. 98% replied that they felt a member of this social group.

On-line discussion

The personality of people with intellectual disabilities raises the interest of many oligophrenopedagogues, special educators, and psychologists working with these people on a daily basis.

The exchange of experiences, good practices, observations allows deepening knowledge and searching for new solutions, working methods, modifying what we already know in order to achieve the best effect of therapy, revalidation and education.

Knowing that people with intellectual disabilities absorb new efforts with great effort rules and change existing habits together with the Icelandic partner and special educators invited to discuss online, we came to the conclusion that the main problem for our participants is. In addition, fear of the task hinders the social adaptation of these people. In new situations, they experience more failures than successes, which affects the low level of expectations of people with disabilities by society. It certainly weakens motivation and even a lack of self-confidence. However, we have noticed a huge role that positive reinforcement plays in shaping the perception of ourselves and our future by our youth. At the time of praise their aspirations also increased significantly. From the subjective assessment of participants, we also learned that almost everyone feels a member of this social group. It proves that participation in sport activities prepares people very well for the role of a member of a community. During the three-month series of classes, positive relationships and even friendships were established between the subjects, the hierarchy of positions occupied. The results obtained during the study confirm the increase in the level of integration and the existence of the need to promote physical activity among people with intellectual disabilities. In the discussion, we put forward the thesis that it is particularly important to encourage families of children and young people with intellectual disorders to systematically exercise and team therapies.

Conclusions

The obtained results allowed us to formulate the following conclusions:

1. Participation in therapy conducted in the aquatic environment and in related training of self-service activities significantly improves motor function and psychosocial adaptation of people with intellectual disabilities, which significantly improves the quality of life in this group.
2. The regularity of conducting classes increases the level of social fitness of the studied group, increases the physical capacity of the examined people.
3. The goal of targeted development of physical fitness should be to encourage physical activity and to develop habits conducive to mental health.
4. Even consolidation and continuation are necessary.