SOCIAL AND BEHAVIORAL SCIENCES

DOI https://doi.org/10.51647/kelm.2021.1.2.4

UTWORZENIE KOMPLEKSU REHABILITACYJNEGO DLA DZIECI Z IMPLANTEM ŚLIMAKOWYM: INNOWACJE I PERSPEKTYWY

Olha Ivanchenko
aspirantka Katedry Filozofii Społecznej i Zarządzania
Zaporoskiego Uniwersytetu Narodowego (Zaporoże, Ukraina)
ORCID ID: 0000-0002-7148-0289
e-mail: onedo@ukr.net

Streszczenie. Celem publikacji jest analiza podstawowych założeń koncepcyjnych stworzenia i funkcjonowania kompleksu rehabilitacyjnego dla dzieci z implantem ślimakowym.

W procesie tworzenia artykułu wykorzystano metody analizy, syntezy, indukcji, dedukcji, narracji, typologii, porównawczego, logicznego, futurystycznego, prognozowania, wtórnego przetwarzania informacji, ankietowania online, wywiadu pogłębionego oraz analizy treści.

W artykule dowiedziono, że rehabilitację dzieci z implantacją ślimakową należy przeprowadzać w wyspecjalizowanej placówce – kompleksie rehabilitacyjnym – w których dzieci z implantem ślimakowym mają możliwość przejścia kursów słuchowych, mowy, psychospołecznej fizycznej rekonwalescencji, poprzez otrzymanie lekarskich, psychologicznych, poznawczych, animacyjno-kulturowych, fizjoterapeutycznych i socjalnych usług. Podkreśla się, że on przejawem syntezy ośrodka rehabilitacyjnego i parku, co stwarza warunki do łączenia zajęć typu szkolnego i zewnętrznego (plenerowego). Autorka zwraca szczególną uwagę na fakt, że podstawy procesu rehabilitacji dzieci z implantacją ślimakową na terenie placówki powinny opierać się na metodzie werbo-tonalnej, rytmice słuchowej, logorytmice, technikach estetoterapii oraz ekoterapii.

Słowa kluczowe: implantacja ślimakowa, kompleks rehabilitacyjny, metoda werbo-tonalna, arteterapia, estetoterapia.

THE CREATION OF THE CHILDREN'S COCHLEAR IMPLANT REHABILITATION COMPLEX: INNOVATIONS AND PROSPECTS

Olha Ivanchenko
Postgraduate Student at the Department of Social Philosophy and Management
Zaporizhzhia National University (Zaporizhzhia, Ukraine)
ORCID ID: 0000-0002-7148-0289
e-mail: onedo@ukr.net

Abstract. The purpose of the research is to analyze basic concepts of foundation and functioning of the children's cochlear implant rehabilitation complex.

To achieve the purpose there were used the methods of analysis, synthesis, induction, deduction, typology, forecasting, secondary information processing, online survey, in-depth interview and content analysis, as well as narrative, logical, comparative, futuristic and retrospective ones.

The article proves that the rehabilitation of children with CI should be carried out in a specialized institution – a rehabilitation complex – where children with CI can take courses in auditory, speech, psychosocial and physical recovery by receiving medical, psychological and cognitive, cultural animation, physiotherapy and social services. Logically, it is a synthesis of a rehabilitation center and a park creating conditions for combining indoor and outdoor types. The rehabilitation process of children with CI on its territory should be based on the verbotonal method, on hearing and logorhythmics, aesthetics and natural psychotherapy techniques.

Key words: cochlear implantation, rehabilitation complex, verbotonal method, art therapy, aesthetic therapy.

СТВОРЕННЯ РЕАБІЛІТАЦІЙНОГО КОМПЛЕКСУ ДЛЯ ДІТЕЙ ІЗ КОХЛЕАРНОЮ ІМПЛАНТАЦІЄЮ: НОВАЦІЇ ТА ПЕРЕСПЕКТИВИ

Ольга Іванченко
аспірантка кафедри соціальної філософії та управління
Запорізького національного університету (Запоріжжя, Україна)
ORCID ID: 0000-0002-7148-0289
e-mail: onedo@ukr.net

Анотація. Мета публікації полягає в аналізі базових концептуальних положень фундації та функціонування реабілітаційного комплексу для дітей із кохлеарною імплантацією.

Під час написання статті були використані методи аналізу, синтезу, індукції, дедукції, наративного, типології, порівняльного, логічного, футуруспективного, прогнозування, вторинної обробки інформації, онлайн-опитування, глибинного інтерв'ю та контент-аналізу.

У статті доведено, що реабілітація дітей із КІ має проводитися у спеціалізованому закладі – реабілітаційному комплексі, у якому діти з КІ мають змогу пройти курси слухового, мовного, психосоціального, фізичного відновлення шляхом отримання медичних, психолого-когнітивних, культурно-анімаційних, фізеотерапевтичних і соціальних послуг. Підкреслено, що він є синтезом реабілітаційного центру та парку, що створило б умови для поєднання занять кабінетного і вуличного (надвірного) типів. Особливу увагу авторка звертає на те, що в основу реабілітаційного процесу дітей із КІ на його території мають бути покладені верботональний метод, слухота логоритміка, техніки естето- та натурпсихотерапії.

Ключові слова: кохлеарна імплантація, реабілітаційний комплекс, верботональний метод, арттерапія, естетотерапія.

Introduction. The level of social work effectiveness and the support enforcement of children with disabilities have become the markers not only of the life quality but also of the social health of modern society. In present-day Ukraine, there are more than 160,000 children with special needs, with more than 30,000 hearing-impaired ones, making almost one fifth of the total number. In general, there are more than 230,000 people in Ukrainian society who are to some extent hearing-impaired. (Social protection of the population of Ukraine in 2019…, 2020: 61).

Despite the significant development of speech therapy, defectology and deaf education, the invention and vast implementation of hearing aids, teaching methods and rehabilitation technologies in the early 21st century are conceptually similar to those used at the turn of the 19th and 20th centuries. They are based on learning sign language, lip reading, acquiring social and professional norms, depending on the degree of hearing loss (Moroz, Ovsyanyk, Lutsko, 2008: 12). In addition, it should be taken into consideration that hearing-impaired children are beginning to integrate into mainstream preschools and schools. Although mass in the recent past, the school admission cases of hearing-impaired children without preschool training have now become isolated which indicates an insufficient efficiency level of medical institutions (Kachan, Kosenko, 2005: 47). Subsequently, it has resulted in a palpable rise of cases when hearing-impaired children being participants in the school inclusion programme but having received inappropriate preliminary training decided to return to specialized educational institutions.

At the same time, a remarkable breakthrough in solving the problem of deafness was witnessed in the late 20th century when cochlear implant surgery enabled to return almost 100% of hearing even to children completely deaf from birth. Such operations commenced to take place in Ukraine in the 1990s, and over the last decade, its annual number has hit 300, within the budget programme only. However, according to neurosurgeons, their share of success makes up mere 20%, with the rest being a hefty hard work of rehabilitators and parents. Therefore, it is urgent nowadays to address the issue of creating regional children's cochlear implant rehabilitation complexes, whose conceptual functional guideline development has become a focus study of the research paper in question.

The scientific accomplishments related to the theme of the given research paper can be divided into five groups of works, with data selection being formed in accordance with the research specialization criterion of the authors. The first group comprises the works directly related to the rehabilitation potential of cochlear implantation. The medical aspect of the latter is considered in the research papers of K.O. Semenova (2016) and V.M. Shevchenko (2013), whereas the general moments of social-psychological, correctional-pedagogical and social-rehabilitation character are studied in research works of T.A. Sokolovskaya (2013), L. Kachan (2005), E.Y. Bakhanova, A.E. Mitina and K.V. Larionova (2013). The abovementioned authors give credence to the usage expediency of certain listed methods and technologies for the rehabilitation of children with cochlear implant, but the fact remains that the issue is only sketchily outlined. In contrast, the latter has been turned into a core research point in the scientific works of the second group, including the research papers of L.M. Konovalova and O.V. Lastochkina (2006), I. Margulyan (2007), I. Sadova (2015), as well as the works of O. Shorokhova (2008) dedicated to fairy tale therapy, the works of V.I. Petrushina (2000), O.A. Novikovskaya (2005), G. Poberezhnaya (2008) on music therapy and logorythmics, the works of G.N. El (2007), O.A. Fediy (2009) on sand therapy, the works of T. Zinkevych-Evstigneeva and D. Kudzylova (2004) on isotherapy, the works of M.V. Kiselyova (2006), L.D. Kuzminskaya, T.I. Bulygina (2013), O.A. Fedii (2007) on art and aesthetic therapy. However, it should be noted that the object of rehabilitation in the research studies of the second group involves children with special needs being viewed generally, omitting children with CI from their study focus, which limits the search sphere application of the given techniques and technologies. Similarly, the authors of the third study group, including R.Ya. Levin (2005), A.A. Kolupaeva (2010), O.I. Halian and Z.T. Borisenko (2019) offer their readers the achievements in the field of social work with parents and families of children with special needs.

Identically to the second group in terms of problems and themes, it is possible to identify the fourth group of scientific works applied in writing the research paper in question. The difference between the latter is the focus on the description of rehabilitation methods of children with hearing aids and speech disorders, which in relation to children with CI can only be used as supplementary ones. In view of this, particular attention must be paid to the works of S.M. Lupinovich (2008), Z. Leniv (2010), M.K. Sheremet (2010), N.P. Yakovenko and I.O. Petryasheva (2013), B.S. Moroz, V.P. Ovsyanyk, K.V. Lutsko (2008), D.D. Romanovskaya and S.I. Sobkova (2009).

On the other hand, the latter, the fifth group combines the works of organizational and managerial, ergonomic, architectural and design directions, containing thorough research accomplishments on the foundation and functioning

principles of rehabilitation centers and parks. From this perspective, the developments of I.L. Kravchenko (2013; 2014), V.V. Nechiporenko (2006), E.G. Pozdnyakova-Kirbyatyeva (2017; 2018), I.E. Khrapko (2013), O.A. Chala (2013) proved to be of primary importance, having prompted the author of the given research paper to create a rehabilitation complex for children with CI (Ivanchenko, 2021).

Based on the analysis of scientific achievements correlated with the theme of the research paper in question, it is viable to formulate a hypothesis. Rehabilitation of children with CI is radically different from the rehabilitation of children with hearing aids or profoundly hearing-impaired children. As the former rely on "brain hearing", the technologies of their rehabilitation are aimed at stimulating the hemisphere brain areas responsible for hearing, including "listening" and the development of auditory and speech memory, with traditional techniques acting here as secondary or supplementary. It should be obligatory for not only audiologists, speech pathologists and deaf educators, but also for psychologists and field-specific experts in correctional pedagogy and social work to take part in the rehabilitation process.

The purpose of the research is to analyze the basic concepts of the foundation and functioning of the children's cochlear implant rehabilitation complex.

Data and methods. The starting point in writing this research paper was a retrospective analysis of the historical experience of Oleksandrivskyi school-farm for profoundly hearing-impaired children that existed in the early 20th century and its successor, a modern educational and rehabilitation centre "Dzherelo" (Zaporozhzhia, Ukraine). Within the study of the historical development stages of rehabilitation of hearing-impaired children and adolescents, we faced a problem of current state diagnostics of medical rehabilitation and social work, where cochlear implantation and social integration programme for children with CI have proved to be leading innovative approaches. While searching for information on effective innovative and innovational organizational forms, projects and programmes for the rehabilitation of children with CI, we used the methods of in-depth interviews with family members of the latter, along with employees of specialized medical and rehabilitation institutions. Moreover, an important role was played by the method of content analysis of children's cochlear implant parental group chat narrative on social networks, namely Facebook, Twitter, Telegram, Manor Park sites (Richmond, British Columbia, Canada), Chelsea (Georgia, USA), Ulan-Ude complex (Republic of Buryatia Russia), as well as the online survey conducted from the 2nd to the 28th of February, 2021. In addition, the following methods were used, i.e. the methods of analysis, synthesis, induction, deduction, typology, forecasting as well as narrative, logical, comparative, futuristic and retrospective ones, including secondary information processing.

Results. The fact that hundreds of cochlear implant surgeries are conducted every year in Ukraine has revealed an acute deficiency of qualified specialists for rehabilitation of children with CI. The vast majority of the aforementioned specialists are currently employed at the Institute of Otolaryngology and a specialized private center "SUVAG", "Good Hearing Workshop", "I want to hear" (Kyiv). As a result, the training of implanted children from other country regions are either held in sessions, or on-site. The duration of such meetings is 1-2 weeks according to the scheme "parent training + child training – child training at home with parents – checking the completed tasks during the next visit" (Leniv, 2010: 16).

The given cycle has not proved to be always effective, as well as the replacement of specialists at home by speech therapists, speech pathologists and parents with successful experience of self-rehabilitation. Therefore, the practice of social self-organization of parents of children with CI in the Internet space has become widespread in this spehere, when the parents are able to share information and experience in chat rooms. Nevertheless, it has not completely excluded the cases of successfully performed operations followed by inexpert rehabilitation. This necessitated the analysis and systematization of modern scientific and practical experience in the rehabilitation of children with disabilities. Among the innovative forms of the latter, the most common are the activities of rehabilitation centers and rehabilitation parks, whose quality and effectiveness are now the subject of research diagnostics and of a relatively lively discussion among both theorists and practitioners. In this vein, a children's rehabilitation complex is anticipated as a feasible innovation with its social mission being distiguished as rehabilitation of children with cochlear implant (Ivanchenko, 2021: 44).

A rehabilitation complex is a specialized medical and social institution where children with CI have the opportunity to take courses in auditory, speech, psychosocial and physical recovery by receiving medical, psychological and cognitive, cultural animation, physiotherapy and social services. Functionally, it is a harmonious combination of a rehabilitation center (Kravchenko, 2013) and a park (Pozdnyakova-Kirbyateva, 2017). The buildings of the former are designed for medical, treatment-and-prophylactic, physio-therapeutic procedures, individual and group classes with speech therapists, speech pathologists, deaf educators, psychologists, social workers, relaxation, nutrition and accommodation. The nearby territory of the latter should consist not only of the green area, but first and foremost of specialized locations, zones, areas for natural and aesthetic therapy, logorythmics, physical education and corresponding activities. The above-mentioned outdoor site classes are logically considered to be subsequent to indoor classes (Kravchenko, 2014: 256), which not only enhances the rehabilitation effect, but also presents opportunities for recovery and development of children with CI carried out in a recreational environment. The samples of both medical and health care institutions for children with hearing impairments built in the Soviet period, and specialized rehabilitation centers that emerged within the period of Ukrainian independence could provide a basis for the creation of a rehabilitation complex in Ukraine. For instance, on the territory of Zaporizhzhia, the following institution can be based on a modern educational and rehabilitation centre "Dzherelo", a historical successor of the Oleksandrivskyi school-farm for profoundly hearing-impaired children. Rehabilitation complexes

for children with CI are to be subject to the Ministry of Health, executive bodies of local self-government, as well as to collaborate with public and charitable institutions.

When creating a children's cochlear implant rehabilitation complex, it is logical to adhere to the following requirements, namely a) the compliance of its territory and buildings with the principles of functionality, harmony, ergonomics, integrativeness, optimization, accessibility; b) the combination of indoor and outdoor subsystems of rehabilitation of children with CI; c) the logical integration of domestic and foreign experience in the construction and operation of rehabilitation institutions; d) the feasibility of rehabilitation process cyclicity with an obligatory consideration of the improvement potential for the predominant architectural forms and locations; e) the support of comfortable conditions for rehabilitation and recreation by means of recreational, park and landscape design (Incluziya of buildings and strukches, 2007: 3). It is assumed that the aesthetic content of both indoor and outdoor locations should be aimed at strengthening the therapeutic, hygienic and social rehabilitation environment of specialized classes held there (Samoilenko et al., 2013: 161). The design of locations for children's cochlear implant rehabilitation classes are supposed to produce sedative, distracting and activating effects, including cathartic ones. (Bakhanova, Mitin, Larionova, 2013: 22). Accordingly, the very nature of the park area should become a background component implemented in the complex of rehabilitation techniques.

The complex provides the rehabilitation for children aged from 2 to 8 years. According to the established practice, the full course lasts 5–6 years and it is carried out in accordance with the content of the IPR corrected in relation to the obtained intermediate results. Within the given period, children with CI annually visit the complex for 3–4 week's sessions. The number of the latter equals three per each year of rehabilitation. The sessions include both individual and group classes held indoors and outdoors, respectively. As the rehabilitation involves homework for the intersessional period, the presence of parents on the territory of the institution is recognized as mandatory. They are supposed to learn the exercises for their children's home rehabilitation, and simultaneously to undergo psychotherapy courses themselves. It should be noted that children's training can possibly be commenced immediately after the first setup of the language processor.

The concept-forming core of rehabilitation of a child with CI based on a specialized complex is obviously to comprise the verbotonal method, phono- and logorythmics, as well as particular techniques of aesthetic and natural psychotherapy. Among the latter, due to the specificity of the rehabilitation programme content, the decisive role plays sand-, bolus-, fairy-tale, music-, iso-, pet- and laughter therapy. The principle of mandatory allocation of office and park areas for the above-named teaching methods would create conditions for conducting children's cochlear implant rehabilitation specialized classes aimed at the development of hearing, speech, memory, intelligence, psychic, social qualities and self-motivation. Changing children's attitude to the general and immediate natural and social environment, occuring during the sessions, will contribute to the restoration and progressive development of internal personal strengths (Lupinovych, 2008: 29).

The verbotonal method is considered to be the most efficient in the rehabilitation of children with CI. A professor from Croatia, Petar Guberina, specializing in linguistics and language perception, proved to be its founder. The method was developed during the 1950s and, since 1961, has provingly widespread. The technique is predicated on stimulating the auditory centers of the child's brain with the simultaneous language formation. The basis of the correctional and rehabilitation process is the development of both auditory and tactile-vibrational perception of speech and non-speech sounds with the help of special exercises related to phonetic rhythmics. The verbotonal technique belongs to the group of external ones, enabling the paced formation of auditory memory and speech in children with CI, with the achieved results being successfully fixed, owing to the fact that the auditory picture is formed in the cerebral cortex. The skills, knowledge and abilities acquired during verbotonal rehabilitation do not vanish, being, however, preserved within an entire person's life.

The basis of the verbotonal method is that a child with CI is supposed to undergo the similar stages of language formation as a child with normal hearing. During the classes, all the senses and the vestibular apparatus are involved. Particular attention is paid to the development of body motility through phono- and logorythmics, music and other activities. Within the latter, a child must feel the rhythm, intonation, tempo of speech, resulting in the development of personal language skills, correct pronunciation and the habit of attentive listening. Consequently, there is virtually no difference between the rehabilitated children with CI, having received intensive stimulation of the development of auditory and speech brain areas, and their peers with hearing "norm". Furthemore, they gain social skills, becoming sociable and ready to communicate properly. Due to aforementioned reasons, a wide range of specialists from doctors, deaf educators, psychologists and speech therapists to teachers and social workers are involved in the implementation of the components of the verbotonal technique (Sokolovskaya, 2013: 92).

Phono- and logorythmics occupy a key position among the methods of rehabilitation of children with CI and, subsequently, must be included in the programme of activities of the rehabilitation complex, as they unite sound, word, music, movement into a single system. Finger, speech and music movements, as well as communicative games have here been ascertained as integral components, whereupon, the impact is on both child's non-speech and speech processes. (Sheremet, 2010: 394). Conducting the classes in question aims to overcome phonemic, speech, psychomotor, motor disorders. Therefore, phono- and logorythmics are frequently defined as forms of active therapy, which are used to overcome speech and related disorders through the development and correction of non-speech and speech mental functions.

Since any action disintegrates without rhythm, it is logically substantiated that the motor nature of the sense of rhythm causes a positive reaction of children with CI to the influence of special exercises. The movements,

hearing and speech combined by rhythm are able to create a certain microsystem of interactions. On the one hand, a child with CI strengthens the musculoskeletal and vestibular apparatus, the development of respiration, motor, sensory functions of the body, which produces a positive impact on hearing and speech. On the other hand, language, as an integral element in motor-spatial exercises, promotes the development of coordination, fine and gross motor skills, i.e. during rhythmic and appropriate poetic exercises, not only the correct speech rate and breathing rhythm are formed but hereafter language memory and hearing receive the further development (Novikovskaya, 2005: 23). As a result of phono- and logorythmic classes, thus, there is a development of phonemic perception, development of melodic intonational and prosodic components, improvement of general and fine motor skills, clarification of articulation, expansion of vocabulary, development of auditory attention and motor memory, development of clear, coordinated movements in relation to speech, creative thinking and imagination.

It bears mentioning that the techniques of natural psychotherapy and aesthetic therapy in the rehabilitation of children with CI are acknowledged to be of relatively the same importance. Hence, art therapy techniques, as a defining component of the latter, should play a separate role in the activities of the rehabilitation complex. Their influence is aimed at the development of hearing, speech and attention of children, being simultaneously a system of psychological and pedagogical impacts produced to overcome negative emotional and sensory states (anxiety, aggression, fears, shyness, hyperactivity, etc.) along with creating special conditions for personal creative development by means of art (Fedii, 2007: 162). According to experts, the highest level of efficiency in dealing with children with CI is achieved through sand-, bolus-, fairy tale-, music-, isotherapeutic techniques. Due to their application during the classes conducted both in classrooms and on specialized locations of the park area, children with CI can acquire communication skills by developing speech and language comprehension; moreover, they can learn to properly engage in the process of interaction, maintain communication, can assisst in overcoming psychological barriers and establishing interaction through imitation of adult skills (Romanovskaya, 2009: 106). In addition, the use of aesthetic therapy techniques during classes in the rehabilitation complex enables to create an atmosphere of friendliness, emotional warmth, empathic communication between adults and children. The given conditions fulfilled, young patients will inevitably have a sense of security, psychological comfort, success and joy, which stimulates the healing potential of their emotional sphere, helps to correct their self-perception and improves their self-esteem.

Sand therapy is one of the most effective types of aesthetic therapy applied to a child with CI, which is based on an established form of performance, i.e. playing with the sand. Being a natural material combined with water in the form of a mixture, the latter has a unique ability to evoke images of a certain nature (El, 2007: 34). Thanks to sand games, not only educational and correctional, but also psychological tasks can be solved. The former plays a major role within the activities of the rehabilitation complex, as their achievement is aimed at the development of phonemic hearing, the ability to feel and discern separate sounds and sound combinations, appropriate sound reproduction (Leniv, 2010: 18). The latter ones, in turn, are focused on the formation of communication skills and feelings of satisfaction during classes with a child with CI, relieving emotional stress, restoring mental integrity, collecting a unique image of the world. At the same time, children's desire to discover new objects and ideas, to experiment, to work independently is significantly strengthened, and the development of subject-game and plot-role activity is improved (Fedii, 2009: 97).

Similarly, bolus (clay) therapy is applied in the rehabilitation of children with CI for the development of auditory memory, "manual intelligence", the improvement of communication quality, independence skills, self-sufficiency and self-confidence. The classes where such plastic natural material as clay is applied during the rehabilitation sessions are also aimed at maintaining the dynamics of the inner world of the young patient. Since clay modelling transforms mental image and emotions into a real form, such classes are a complex, deep, conscious work that creates opportunities to look inside the self. (Kiseleva, 2006: 122). That is, within the classes in sand and clay therapy, combined with active play, speech causes a positive motivation of a child with CI for rehabilitation.

Unformed combinatorial forms of imagination are always characteristic of children with hearing and speech impairments (Samoilenko et al., 2013: 321). A course of isotherapy is directed towards overcoming the given three problems, combined into a single one, after the cochlear implant surgery has been performed. Numerous classes using this technique, being logically based on a single concept and included in the programme activities of the rehabilitation complex, will encourage the child with CI to associate a painted image or scenario with a word, later a phrase and a sentence. Thus, the formation of the vocabulary will proceed in the process of using words denoting the properties of the certain material and ways of dealing with it. In view of the fact that during isotherapy classes there is a continuous conversation between the teacher and the children about the method and sequence of work, it will hereinafter stimulate the language activity of the latter, will cause language imitation; promote dialogues with characters, adults and children. The volume of both passive and active vocabulary will increase gradually, from words denoting objects and phenomena to phrases and sentences denoting actions and plots. In parallel, there will be the development of initiative, independence, creativity, logical and abstract thinking, imagination, observation, visual evaluation of form, spatial orientation, sense of light and color, further formation will acquire labour skills and emotionally positive attitude to activity (Zinkevich-Evstigneeva, Kudzilov, 2004: 96). At the same time, the obligatory components of the course should be palm-, finger- and fist- painting, only afterwards followed by brush painting, pencil and chalk drawing. (Kuzminskaya, Bulygina, 2013: 106).

Cochlear implant surgery provides children with the opportunity to not only hear and speak, but also to sing, dance, play musical instruments. "Listening" of children with CI in rehabilitation centers such as "SUVAG" always begins with the programme "Little Mozart". Over the years, it has proven its effectiveness, because it enables a child

with CI to develop not only musical hearing, but also the ability to listen carefully to various sounds, prepares for the perception of language and its understanding (Petrushin, 2000: 48). Music, from the point of view of hearing, is the most convenient sound signal, because it is much wider in frequency and dynamic range (Poberezhna, 2008: 11). During its sounding, the brain of a child with CI reflexively pays attention to various aspects: volume, duration, height and others. Therefore, it is quite logical to include music therapy classes in the sessions of the rehabilitation complex, which will promote the development of proper breathing, speech skills, singing and similar activities.

The addition of fairy tale therapy classes to the rehabilitation process of children with CI is also mandatory, but this should take place only if there is an accumulation of sufficient passive and active vocabulary. To facilitate the understanding of the plot, to fix learned and newly acquired words in the memory, the elements of puppet therapy could be recommended (Shorokhova, 2008: 57). Dealing with young patients of the rehabilitation complex, the technique in question can produce a speech-hearing effect, along with educational and socializing ones. Cardinally, the difference between therapeutic fairy tales and ordinary ones is that their plot lines should take into account the peculiarities of a child with CI; their main characters must look like these children, must experience the same problems and emotions (Margulyan, 2007: 23); such tales should offer ways to overcome the problem, contain a positive end, encourage active speech development. Hence, the essence of the fairy tale therapy is to create a special, to some extent, magical atmosphere that fulfills the dreams of the children with CI, allows them to face their fears, experiences, psychological barriers and complexes. The development of personal qualities, teaching universal norms and values, purposefulness, skills and logical thinking abilities, overcoming anxiety, fears, aggression are no less important tasks of the "fairy tale healing" technique (Sadova, 2015: 294).

Along with the methods of aesthetics, some areas of natural psychotherapy (nature therapy) have been proved to be effective in the rehabilitation of children with CI. In this connection, animal and pet therapy should be worth examining. The reasons for this being the fact that animals are stimulators of children's attention, smiles, and often laughter. Tactile contact with them relieves stress, actualizes positive emotions (Fedii, 2007: 209). The interaction with animals, even at the subconscious level, provokes the child to pronounce sounds or exclamations, stimulates to sound imitation and, concisely, to form an active and passive vocabulary, build cause-and-effet chains, construct a worldview (Sokolovskaya, 2013: 93). Taking into account these points, after each regular setup of the language processor and within the sessions with parents and children with CI, the experts from the Prof. Kolomiychenko Institute of Otolaryngology of the National Academy of Medical Sciences of Ukraine strongly recommend the former to visit the facing Kyiv Central Zoo. The capital's private rehabilitation centers, in turn, use a specialized computer programme where the child has to match the images of animals with their sounds and names. This experience of animal therapy techniques should be appicable within both indoor and outdoor classes conducted in the rehabilitation complex. Undoubtedly, it is appropriate for a child to produce visual and tactile correlation of a painted or computer animal image with the one in a natural environment behind the fence of a small contact zoo. As for pet therapy, classes organised in accordance with this method stimulate motor skills, attention, responsibility, ability to follow instructions, train memory of the children with CI, which triggers further intensification of speech activity, formation of communicative and social norms (Pozdnyakova-Kirbyateva, 2017: 162). Therefore, it is of significant importance for the young patients of the rehabilitation complex to have a systematic contact with pets, such as dogs, cats, guinea pigs, chinchillas and other animals.

Correspondigly, the object of social work in the rehabilitation complex should not be only the children with CI, but their parents as well. The first step here is to identify the personal characteristics of the father and the mother. Attention should be paid to intellectual, emotional, spiritual, communicative, social qualities, values, motivation, character accentuation and characterological deviation, the level of stress, anxiety, neurosis, parental psychopathy (Kolupaeva, 2010: 86). It is expedient to determine the type of parent-child relationship and the model of upbringing peculiar for the family (Halian, Borysenko, 2019: 45). This approach enables, on the one hand, to proceed to psychological rehabilitation and social support of parents, and, on the other hand, to teach them techniques, teaching methods and exercises that they will have to apply outside the rehabilitation complex in everyday life. It is also logical to create a website of the rehabilitation complex for children with CI, chats on social networks, where parents could receive counselling services by specialized experts of the institution within the intersessional periods.

The buildings of the rehabilitation complex for children with CI can be divided according to their functional purpose into four groups, namely rehabilitation, leisure, residential and administrative ones. The rooms of the first group should house the offices of deaf educators, speech pathologists, speech therapists, audiologists, psychologists, correctional teachers, social workers, massage, and exercise therapists, as well as rooms designed for the above-mentioned classes in aesthetic therapy. The second group should consist of a library, a multifunctional assembly and music hall, a dining room and a cafeteria. If the complex is created on the basis of a rehabilitation center, the bedrooms should not be concisely refurbished; it is hence advisable to take into account only the possibility of parent's round-the-clock stay. However, if the complex is erected from zero cycle, the relevant foreign experience should be taken into account. Administrative and economic buildings, according to architectural norms, are located separately, behind the purpose-oriented buildings (Nechiporenko, 2006: 438).

In addition, such light architectural forms as pavilions, summerhouses, rotundas must be constructed in the park area. Their functional purpose is to conduct classes in aesthetic therapy, psychocorrection and relaxation, which should enhance the restorative and developmental effect obtained during indoor classes and procedures. Therefore, the interior of these buildings should comprise a table in the middle with benches around the perimeter, occupying the area of approximately nine square meters (Chala, 2013: 719).

These architectural forms must be harmoniously integrated into the environment of flowerbeds, playgrounds, locations, lawns, trees and other green areas. As a rule, they are designed in ancient Greek, Roman, Swiss, Chinese, Russian or Renaissance styles (Kravchenko, 2014: 256). The materials used during their construction must be of natural origin and comply with environmental standards (Incluziya of buildings and strukches, 2007: 14). Aesthetics, lightness, openness to sunlight and air currents make the space of these buildings accessible and acceptable for the psychology of the child.

The functional lawns, playgrounds are to be designed and located in the park area in order to enhance the rehabilitation and health, correctional and pedagogical, medical and social, aesthetic and nature therapeutic, socializing and educational effects of indoor classes and procedures of rehabilitation. Being favourable for free communication and motion of children with CI, the target locations can have different area and shape and, thus, can be easily placed throughout other segments of the park area. Logically, their covering, depending on functional purpose, can be both grass, and asphalt. Besides, there should be the boxes for non-stationary equipment and rain canopies, with a separate place in the park allocated for a tactile zoo.

In the aesthetic and natural therapeutic spectrum, the issue of landscaping the rehabilitation complex for children with CI is of paramount importance. Its solution should be subject to the norms of architectural and landscape design, according to which the latter should occupy at least 50% of the park area (Pozdnyakova-Kirbyateva, 2018: 60). Accordinly, the distance between tall trees and main buildings should be not less than 10-15 m. Particular attention should be paid to the creation of green zones, lawns free for access of young patients, the placement of ornamental flowerbeds and bedding design. In general, if the complex is aimed at the rehabilitation of less than 80 children with CI, the area allocated for its creation is subject to a standardized proportion, 160 square meters per patient. The latter figure rises upto 200 square meters in case of an approximate simultaneous stay of more than 80 children on the territory of the institution (Kravchenko, 2014: 259).

Conclusions. Thus, the projection and prolongation of the historical experience of zemstvo charity at the organizational level has worthy prospects in terms of creating the children's cochlear implant rehabilitation complex. The continuity is traced herewith through the activities of the Oleksandrivskyi school-farm for profoundly hearing-impaired children, the boarding school created on its basis in Soviet times, and the current educational and rehabilitation centre "Dzherelo" Consequently, paralleling between the past and the present enables to identify similarities in not only social mission, tasks, principles, methods of social work, integration, speech therapy, deaf and correctional pedagogy, but also in the fundamental idea, being a combination of indoor and outdoor rehabilitation classes.

However, the innovative, for the early 20th century, techniques of sign language teaching and lip reading can be only used as secondary and supplementary in dealing with children with CI. Due to the specificity of neurosurgery, children after cochlear implantation have the opportunity to develop and fully reproduce hearing and speech, with the preceeding rehabilitation being obligatory based on the verbotonal method, hearing and logorythmics, techniques of aesthetic and natural psychotherapy.

The fundamental principles and factual material of the paper are related to the dissertation research on the role of the practices of zemstvo charity in the social work of modern Ukraine, which can be applied in the development of courses in theory and technology of social work. In addition, this could equivalently contribute to developing and implementing a municipal project of the foundation and functioning of the children's cochlear implant rehabilitation complex. A promising direction for further development of the discussed theme is to study the possibility of creating similar complexes for children with other health problems, involving charitable institutions and patrons into the process, improving the technology of social work with parents and children with CI.

Bibliography:

1. Баханова Е.Ю., Митин А.Е., Ларионова К.В. Использование физических упражнений в слухоречевой реабилитации детей после кохлеарной имплантации. *Ученые записки университета имени П.Ф. Лесграфта.* 2013. № 12 (106). С. 22–26. DOI: 10.5930/issn.1994-4683.2013.12.106.
2. Галян О.І., Борисенко З.Т. Психологічні аспекти супроводу батьків дітей з особливими освітніми потребами. *Теорія і практика сучасної психології.* 2019. № 2 (2). С. 44–49.
3. Зинкевич-Евстигнеева Т., Кудзилов Д. Психодиагностика через рисунок в сказкотерапии. Санкт-Петербург : Речь, 2004. 144 с.
4. Іванченко О.О. Соціальні чинники формування місії реабілітційного комплексу для дітей з кохлеарною імплантацією. *Модернізація освітньої системи: світові тенденції та національні особливості в умовах пандемії* : матеріали IV Міжнародної наукової конференції (м. Каунас, Литва, 19 лют. 2021 р). Каунас, 2021. С. 43–47.
5. Інклюзивність будівель і споруд. Київ : Мінрегіон України, 2018. 70 с. URL: https://www.minregion.gov.ua/wp-content/uploads/2019/01/V2240-2018.pdf (дата звернення: 20.04.2021).
6. Качан Л., Косенко О. Усі різні – усі рівні. *Соціальний захист*. 2005. № 10. С. 46–51.
7. Киселева М.В. Арт-терапия в работе с детьми. Санкт-Петербург : Речь, 2006. 160 с.
8. Кравченко І.Л. Особливості планування ділянок центрів медично-соціальної реабілітації дітей з вадами розвитку. *Містобудування та територіальне планування. Науково-технічний збірник.* 2014. Вип. 51. С. 254–260.
9. Кравченко І.Л. Принципи архітектурно-планувальної організації центрів медично-соціальної реабілітації дітей та підлітків з фізичними вадами : автореф. дис. … канд. арх. наук : 18.00.02 / КНУБА. Київ, 2013. 21 с.
10. Кузьмінська Л.Д., Булигіна Т.І. Арт-терапевтичні методи в соціальній роботі з дітьми-інвалідами. *Актуальні проблеми психології*. 2013. Т. 7, вип. 31. С. 104–109.
11. Левін Р.Я. Соціальні проблеми сімей з дітьми, які мають функціональні обмеження. *Український соціум*. 2005. № 2/3. С. 114–133.

12. Ленів З. Корекція порушень усного мовлення у дітей старшого дошкільного віку засобами арттерапії : автореф. дис. ... канд. пед. наук : 13.00.03 / НПУ ім. М.П. Драгоманова. Київ, 2010. 21 с.
13. Лупінович С.М. Довідник учителя-логопеда. Тернопіль : Мандрівець, 2008. 112 с.
14. Логопедія : підручник / за ред. М.К. Шеремет. Київ : Слово, 2010. 672 с.
15. Маргулян І. Казкотерапія для малят. *Психолог*. 2007. № 28. С. 23–24.
16. Медична і соціальна реабілітація / В.Б. Самойленко та ін. Київ : «Медицина», 2013. 464 с.
17. Мороз Б.С., Овсяник В.П., Луцько К.В. Корекційні технології у слухопротезуванні дітей. Київ : Вабос, 2008. 147 с.
18. Нечипоренко В.В. Становлення освітньо-реабілітаційного закладу нового типу. *Життєтворчість особистості: концепція, досвід, проблеми* : науково-методичний збірник / ред. І.Г. Єрмаков, Г.М. Несен. Запоріжжя : Хортицький навчально-реабілітаційний багатопрофільний центр, 2006. С. 429–435.
19. Новиковская О.А. Логоритмика: для дошкольников в играх и упражнениях : практическое пособие. Санкт-Петербург : Корона принт, 2005. 272 с.
20. Петрушин В.И. Музыкальная психотерапия: Теория и практика. Москва : ВЛАДОС, 2000. 176 с.
21. Побережна Г. Педагогічний потенціал музикотерапії. *Мистецтво та освіта*. 2008. № 2. С. 9–12.
22. Позднякова-Кирбят'єва Е.Г. Методологічні аспекти структурування концепції реабілітаційного парку. *Нова парадигма*. 2017. Вип. 131. С. 153–166.
23. Позднякова-Кирбят'єва Е.Г. Взаємозв'язок соціального призначення та планування території реабілітаційного парка. *Грані*. 2018. № 7. С. 53–63.
24. Путівник для батьків дітей з особливими освітніми потребами / ред. А.А. Колупаєва. Київ : «Літопис-ХХ», 2010. 363 с.
25. Романовська Д.Д. Психологічний супровід процесу інтеграції у суспільство дітей з особливими потребами. Психологічний та соціально-педагогічний супровід навчання і виховання «особливої дитини» у школі / ред. Д.Д. Романовська, С.І. Собкова. Чернівці : Технодрук, 2009. С. 104–109.
26. Садова І. Казкотерапія – сучасний метод роботи з дітьми, які мають особливі потреби. *Актуальні питання гуманітарних наук*. 2015. Вип. 11. С. 293–298.
27. Семенова К.О. Кохлеарная имплантация как средство помощи глухим детям. *Международный журнал гуманитарных и естественных наук*. 2016. Т. 7, № 1. С. 38–42.
28. Соколовская Т.А. Особенности речевого развития детей после кохлеарной имплантации. *Специальное образование*. 2013. № 2 (30). С. 91–97.
29. Федій О.А. Естетотерапія. Київ : Центр навчальної літератури, 2007. 256 с.
30. Федій О.А. Пісочна терапія у просторі професійної діяльності сучасного вчителя початкових класів. *Вісник Житомирського державного університету*. 2009. Вип. 43. С. 96–101.
31. Храпко І.Є. Мережа установ соціального захисту населення України. *Економіка. Управління. Інновації*. 2013. № 1. С. 1–13. URL: http://nbuv.gov.ua/UJRN/eui_2013_1_63 (дата звернення: 20.04.2021).
32. Чала О.А. Засоби ландшафтної архітектури та вимоги до них в безбар'єрному середовищі. *Містобудування та територіальне планування.* 2013. № 50. С. 718–721.
33. Шевченко В.М. Умови та фактори ефективного використання методу кохлеарної імплантації. *Педагогічна освіта: теорія і практика*. № 15. С. 121–125.
34. Шорохова О. Играем в сказку: сказко-терапия и занятия по развитию связной речи дошкольников. Москва : Сфера, 2008. 208 с.
35. Эль Г.Н. Человек, играющий в песок. Динамичная песочная терапия. Санкт-Петербург : Речь, 2007. 208 с.
36. Соціальний захист населення України у 2019 році. Статистичний збірник. Київ: Державна служба статистики України, 2020. 115 с. URL: http://ukrstat.gov.ua/druk/publicat/kat_u/2020/zb/07/zb_szn_2019.pdf (дата звернення: 20.04.2021).

References:

1. Bakhanova, E.Yu., Mitin, A.E., Larionova, K.V. (2013). Ispolzovanie fizicheskikh uprazhnenii v slukhorechevoi reabilitatcii detei posle kokhlearnoi implantatcii [Application of physical exercises for the audio-verbal rehabilitation of children after cachlear implantation]. *Uchenye zapiski universiteta imeni P.F. Lesgafta, 12* (106), 22–26. DOI: 10.5930/issn.1994-4683.2013.12.106. [in Rusian].
2. Chala, O.A. (2013). Zasoby landshaftnoi arkhitektury ta vymohy do nykh v bezbariernomu seredovyshchi [Means of landscape architecture and requirements to them in a barrier-free environment]. *Urban Planning and Spatial Planning, 50*, 718–721 [in Ukrainian].
3. El, G.N. (2007). Chelovek, igraiushchii v pesok. Dinamichnaia pesochnaia terapiia *[Man playing in the sand. Dynamic sand therapy]*. Saint Petersburg: Rech. [in Rusian].
4. Fedii, O.A. (2007). *Estetoterapiia [Aesthetic therapy]*. Kyiv: Center of Educational Literature [in Ukrainian].
5. Fedii, O.A. (2009). Pisochna terapiia u prostori profesiinoї diialnosti suchasnogo vchitelia pochatkovikh klasiv [Sandplay in a Space of Primary School Modern Teacher's Professional Activity]. *Zhytomyr Ivan Franko State University Journal, 43*, 96–101 [in Ukrainian].
6. Halian, O.I., Borysenko, Z.T. (2019). Psykholohichni aspekty suprovodu batkiv ditei z osoblyvymy osvitnimy potrebamy [Psychological aspects of the support to parents of children with special educational needs]. *Theory and Practice of Modern Psychology, 2* (2), 44–49 [in Ukrainian].
7. Incluziya of buildings and strukches (2018). Kyiv: Ministry of Regional Development of Ukraine Retrieved from: https://www.minregion.gov.ua/wp-content/uploads/2019/01/V2240-2018.pdf
8. Ivanchenko, O.O. (2021). Sotsialni chynnyky formuvannia misii reabilittsiinoho kompleksu dlia ditei z kokhlearnoiu implantatsiieiu [Social factors in the formation of the mission of the rehabilitation complex for children with cochlear

implantation]. *Modernization of the educational system: world trends and national peculiarities in a pandemic, 1*, 43–47 [in Ukrainian].
9. Kachan, L., Kosenko, O. (2005). Usi rizni – usi rivni [All different – all equal]. *Social protection, 10*, 46–51 [in Ukrainian].
10. Khrapko, I.E. (2013). Merezha ustanov sotsialnoho zakhystu naselennia Ukrainy [The network of social welfare Ukraine]. *Economics. Management. Innovations, 1*, 1–13. Retrieved from http://nbuv.gov.ua/UJRN/eui_2013_1_63
11. Kiseleva, M.V. (2006). *Art-terapiia v rabote s detmi [Art therapy in working with children]*. Saint Petersburg: Rech. [in Rusian].
12. Kolupaeva, A.A. (2010). *Putivnyk dlia batkiv ditei z osoblyvymy osvitnimy potrebamy [A guide for parents of children with special educational needs]*. Kyiv: Litopys-XX [in Ukrainian].
13. Kravchenko, I.L. (2013). Pryntsypy arkhitekturno-planuvalnoi orhanizatsii tsentriv medychno-sotsialnoi reabilitatsii ditei ta pidlitkiv z fizychnymy vadamy [Principles of architectural and planning organization of medical and social rehabilitation centers for children and adolescents with physical disabilities]. *Extended abstract of candidate's thesis*. Kyiv [in Ukrainian].
14. Kravchenko, I.L. (2014). Osoblyvosti planuvannia dilianok tsentriv medychno-sotsialnoi reabilitatsii ditei z vadamy rozvytku [Features of planning areas of medical and social rehabilitation centers for children with disabilities]. *Urban planning and spatial planning. 51*, 254–260 [in Ukrainian].
15. Kuzminskaya, L.D., Bulygina, T.I. (2013). Art-terapevtychni metody v sotsialnii roboti z ditmy-invalidamy [Art-therapeutic methods in social work with children with disabilities]. *Actual Problems of Psychology, 7* (31), 104–109 [in Ukrainian].
16. Leniv, Z. (2010). Sotsialni problemy simei z ditmy, yaki maiut funktsionalni obmezhennia [Correction of speech disorders in older preschool children by means of art therapy]. *Extended abstract of candidate's thesis*. Kyiv [in Ukrainian] .
17. Levin, R.Ya. (2005). Sotsialni problemy simei z ditmy, yaki maiut funktsionalni obmezhennia [Social problems of children with special needs]. *Ukr. socìum, 2–3* (7–8), 114–133. DOI: 10.15407/socium2005.02-03.114 [in Ukrainian].
18. Lupinovych, S.M. (2008). *Dovidnyk uchytelia-lohopeda* [*Handbook of a speech therapist*]. Ternopil: Mandrivets [in Ukrainian].
19. Margulyan, I. (2007). Kazkoterapiia dlia maliat [Fairy tale therapy for kids]. *Psychologist, 28*, 23–24 [in Ukrainian].
20. Moroz, B.S., Ovsyanyk, V.P., Lutsko, K.V. (2008). *Korektsiini tekhnolohii u slukhoprotezuvanni ditei [Corrective technologies in children's hearing aids]*. Kyiv: Vabos [in Ukrainian].
21. Nechiporenko, V.V. (2006). Stanovlennia osvitno-reabilitatsiinoho zakladu novoho typu [Formation of a new type of educational and rehabilitation institution]. *Life-creating personality: concept, experience, problems.* I.G. Ermakova, G.M. Nesen (Ed.). Zaporizhzhia: Khortytsya training and rehabilitation multidisciplinary center [in Ukrainian].
22. Novikovskaya, O.A. (2005). *Logoritmika: dlia doshkolnikov v igrakh i uprazhneniiakh: prakt. posobie dlia ped. i roditelei [Logorhythmics: for preschoolers in games and exercises: practical. manual for teachers and parents]*. Saint Petersburg: Korona print [in Russian].
23. Petrushin, V.I. (2000). *Muzykalnaia psikhoterapiia: Teoriia i praktika [Musical Psychotherapy: Theory and Practice]*. Moscow: Vlados [in Russian].
24. Poberezhna, G. (2008). Pedahohichnyi potentsial muzykoterapii [Pedagogical potential of music therapy]. *Art and Education, 2*, 9–12 [in Ukrainian].
25. Pozdnyakova-Kirbyateva, E.G. (2017). Metodolohichni aspekty strukturuvannia kontseptsii reabilitatsiinoho parku [Methodological aspects of structuring the concept of rehabilitation park]. *New paradigm, 131*, 153–166 [in Ukrainian].
26. Pozdnyakova-Kirbyateva, E.G. (2018). Vzaiemozviazok sotsialnoho pryznachennia ta planuvannia terytorii reabilitatsiinoho parka [Interconnection of social purpose and planning of the territory of the rehabilitation park]. *Grani, 21* (7), 53–63 [in Ukrainian].
27. Romanovskaya, D.D. (2009). Psykholohichnyi suprovid protsesu intehratsii u suspilstvo ditei z osoblyvymy potrebamy. [Psychological support of the process of integration into society of children with special needs]. *Psychological and socio-pedagogical support of education and upbringing of a "special child" at school*. D.D. Romanovska, S.I. Sobkova (Ed.). Chernivtsi: Technodruk [in Ukrainian].
28. Sadova, I. (2015). Kazkoterapiia – suchasnyi metod roboty z ditmy, yaki maiut osoblyvi potreby [The fairytale therapy as a modern method of working with children with special needs]. *Humanities science current issues, 11*, 293–298 [in Ukrainian].
29. Samoilenko, V.B., Yakovenko, N.P., Petriashev, I.O., Manaenkova, O.D., Vinograd, L.V., Zaitseva, V.P., Kononenko, O.M., Aharkova, L.V., Lutsenko, B.O., Rudnytska, B.B. (2013). *Medychna i sotsialna reabilitatsiia [Medical and social rehabilitation]*. Kyiv: "Medicine" [in Ukrainian].
30. Semenova, K.O. (2016). Kokhlearnaia implantatciia kak sredstvo pomoshchi glukhim detiam [Cochlear implantation as a means to help deaf children]. *International Journal of Humanities and Natural Sciences, 1* (7), 38–42 [in Russian].
31. Sheremet, M.K. (2010). *Lohopediia* [*Speech therapy]*. Kyiv: Slovo [in Ukrainian].
32. Shevchenko, V.M. (2013). Umovy ta faktory efektyvnoho vykorystannia metodu kokhlearnoi implantatsii [Conditions and factors of effective use of cochlear implantation method]. *Pedagogical Education: Theory and Practice, 15*, 121–125 [in Ukrainian].
33. Shorokhova, O. (2008). *Igraem v skazku: skazko-terapiia i zaniatiia po razvitiiu sviaznoi rechi doshkolnikov [Let's play a fairy tale: fairy-tale therapy and classes on the development of coherent speech of preschoolers]*. Moscow: Sphera [in Russian].
34. *Sotsialnyi zakhyst naselennia Ukrainy u 2019 rotsi. Statystychnyi zbirnyk [Social protection of the population of Ukraine in 2019. Statistical collection]*. (2020). Kyiv: State Statistics Service of Ukraine. Retrieved from http://ukrstat.gov.ua/druk/publicat/kat_u/2020/zb/07/zb_szn_2019.pdf [in Ukrainian].
35. Sokolovskaya, T.A. (2013). Osobennosti rechevogo razvitiia detei posle kokhlearnoi implantatcii [Features of children's speech after cochlear implantation]. *Special education, 2* (30), 91–97 [in Russian].
36. Zinkevich-Evstigneeva, T., Kudzilov, D. (2004). *Psikhodiagnostika cherez risunok v skazkoterapii [Psychodiagnostics through drawing in fairy tale therapy]*. Saint Petersburg: Rech [in Russian].